Macro commands A-Z

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A

{ABS}
Equivalent to F4 (ABS).

{ADDIN-LOAD *add-in*}
Reads an add-in into memory.

{ADDIN-REMOVE *add-in*}
Removes an add-in from memory.

{ADDIN-REMOVE-ALL}
Removes all add-ins from memory.

{ALERT *message*;[*buttons*];[*icon-type*];[*results-range*];[*x*];[*y*]}
Displays a message box and waits for the user to click OK or Cancel.

{ANCHOR}
Equivalent to F4 in Ready mode.

{APP-ADJUST *x;y;width;height*}
Moves the 1-2-3 window so that the top left corner of the window is *x* pixels from the left and *y* pixels from the top corner of the screen, and sizes the 1-2-3 window to be *height* pixels high and *width* pixels wide.

{APPENDBELOW *target-location;source-location*}
Copies the contents of *source-location* to the rows immediately below *target-location*.

{APPENDRIGHT *target-location;source-location*}
Copies the contents of *source-location* to the columns immediately to the right of *target-location*.

{APP-STATE *state*}
Minimizes, maximizes, or restores the 1-2-3 window.

B

{BACKSOLVE *formula-cell*;*target-value*;*adjustable-range*}
Finds values for one or more cells that make the result of a formula equal to a value you specify.

{BACKSPACE}
Equivalent to BACKSPACE.

{BACKTAB}
Equivalent to CTRL+LEFT.

{BEEP}
Sounds the system beep.

{BIGLEFT}
Equivalent to CTRL+LEFT.

{BIGRIGHT}
Equivalent to CTRL+RIGHT.

{BLANK *location*}
Erases the contents of *location*. {BLANK} does not change the formatting of the cells in *location* and does not force recalculation.

{BRANCH *location*}
Transfers macro control from the current macro instruction to *location* and does not return to the calling macro.

{BREAK}
Clears the edit line when data is being entered or edited, or leaves the current dialog box during selection of a 1-2-3 command, and returns 1-2-3 to Ready mode. In any other situation, {BREAK} has no effect.

{BREAKOFF}
Disables CTRL+BREAK while a macro is running.

{BREAKON}
Restores the use of CTRL+BREAK, undoing a {BREAKOFF} command.

{BS}
Equivalent to BACKSPACE.

C

{CALC}
Equivalent to F9 (CALC).

{CE}
Equivalent to ESC in 1-2-3 Classic edit line.

{CELL-ENTER *data*;[*target-location*]}
Enters *data* in *target-location*

{CHART-ASSIGN-RANGE *range*;*method*}
Assigns all data ranges for the current chart.

{CHART-AXIS-INTERVALS *axis*;[*major*];[*minor*];[*major-interval*];[*minor-interval*]}
Changes the intervals between x-axis, y-axis, or 2nd y-axis tick marks in the current chart.

{CHART-AXIS-LIMITS *axis*;[*upper*];[*lower*];[*upper-limit*];[*lower-limit*]}
Creates, for the current chart, a scale for the x-axis, y-axis, or 2nd y-axis that displays only the data that falls between (and includes) *upper-limit* and *lower-limit*.

{CHART-AXIS-SCALE-TYPE *axis*;*type*}
Specifies the type of scale to use for an axis in the current chart.

{CHART-AXIS-TICKS *axis*;[*major*];[*minor*];[*space*]}
Specifies major and minor tick marks for an axis in the specified chart.

{CHART-AXIS-TITLE *axis*;[*title*];[*title-cell*]}
Changes an axis title in the current chart.

{CHART-AXIS-UNITS *axis*;[*manual-calculate*];[*manual-title*];[*exponent*];[*title*];[*title-cell*]}
Changes the magnitude of the axis units and the axis-unit titles for the current chart.

{CHART-DATA-LABELS *series*;[*label-range*];[*position*]}
Creates labels for data points or bars in the current chart, using data in *label-range* as the labels.

{CHART-FOOTNOTE [*line1*];[*line2*];[*position*];[*cell1*];[*cell2*]}
Adds chart footnotes to the current chart.

{CHART-GRID *axis*;[*major*];[*minor*]}
Displays or hides grid lines for an axis in the current chart.

{CHART-LEGEND *series*;[*legend*]; [*position*];[*legend-range*]}
Creates legend labels that identify the colors, symbols, or patterns of the current chart's data series.

{CHART-NEW *location*;[*type*];[*style*];[*name*]}
Draws a chart at *location*, using data from the currently selected range.

{CHART-PIE-LABELS [*values*];[*percentage*];[*x-range*];[*c-range*]}
Creates labels for the current pie chart.

{CHART-PIE-SLICE-EXPLOSION *explosion-type*;[*all-by-%*]}
Explodes slices in the current pie chart.

{CHART-RANGE *series*;[*series-range*];[*series-type*];[*2y-axis*]}
Sets the data range, series type and 2nd y-axis flag for a data series in the current chart.

{CHART-RANGE-DELETE *series*}
Deletes the *series* from the current chart.

{CHART-RENAME *old-name*;*new-name*}
Renames a chart.

{CHART-TITLE [*line1*];[*line2*];[*position*];[*cell1*];[*cell2*]}
Adds chart titles to the current chart.

{CHART-TYPE *type*;[*style*];[*orientation*];[*value-tables*];[*auto-position*]}
Sets the type of chart for the current chart.

{CHOOSE-FILE *file-type*;*results-range*;[*title*];[*x*];[*y*]}
Displays a dialog box that contains a list of files and waits for the user to select one.

{CHOOSE-ITEM *list-range*;*results-range*;[*prompt*];[*title*];[*x*];[*y*]}
Displays a dialog box that contains a list of data items, waits for the user to select one and then choose OK or Cancel, and enters the index number for the user's choice in the sheet.

{CHOOSE-MANY *choices-range;results-range*;[*prompt*];[*title*];[*x*];[*y*]}
Displays a dialog box and waits for the user to select one or more check boxes and then choose OK or Cancel.

{CHOOSE-ONE *choices-range;results-range*;[*prompt*]; [*title*];[*x*];[*y*]}
Displays a dialog box and waits for the user to select an option and then choose OK or Cancel; then runs the macro associated with the option.

{CLEARENTRY}
Equivalent to ESC in 1-2-3 Classic edit line.

{CLOSE}
Closes the text file opened with an {OPEN} command and saves any changes made to the file.

{COLUMN-WIDTH *width*;[*range*]}
Adjusts each column in *range* to a specified *width* in the default font and size.

{COLUMN-WIDTH-FIT-WIDEST [*range*]}
Adjusts columns to the width of the widest entries included in *range*.

{COLUMN-WIDTH-RESET [*range*]}
Returns each column in *range* to the default width.

{-- *comment*}
Puts a comment into a macro. This macro keyword is two - (hyphens) with no spaces between them.

{COMMIT [*driver-name*];[*database-name*]}
Commits (finalizes) pending external database transactions.

{CONTENTS *target-location;source-location;*[*width*];[*format*]}
Copies the contents of *source-location* to *target-location* as a label.

D

{D}
Equivalent to DOWN.

{DATABASE-APPEND *source-range*;*database-table*}
Adds new records to *database-table*.

{DATABASE-CONNECT *driver-name*;[*driver-user-id*];[*driver-password*];[*connection-string*];*db-name*;[*db-user-id*];[*db-password*];[*owner-name*];*table-name*;[*range-name*]}
Establishes a connection to an external database table so you can use the table with other 1-2-3 commands.

{DATABASE-CREATE-TABLE *driver-name*;[*driver-user-id*];[*driver-password*];*db-name*;[*db-user-id*];[*db-password*];[*owner-name*];*table-name*;[*range-name*];[*creation-string*];*model-table*}

Sets up the structure for and connects to a new table in an external database.

{DATABASE-DELETE *database-table*;*criteria*}
Deletes the records from *database-table* that meet *criteria*.

{DATABASE-DISCONNECT *range-name*}
Disconnects an external table, ending all data exchange between 1-2-3 and the external table.

{DATABASE-FIND *database-table*;*criteria*}
Locates and selects records in *database-table* that meet *criteria*.

{DATABASE-SEND-COMMAND *driver-name*;[*driver-user-id*];[*driver-password*];[*connection-string*];*db-name*;[*db-user-id*];[*db-password*];*command*}
Sends a command to an external database.

{DATA-TABLE-1 [*output-range*];[*input-cell-1*]}
Substitutes values for one variable in one or more formulas and enters the results in *output-range*.

{DATA-TABLE-2 [*output-range*];[*input-cell-1*];[*input-cell-2*]}
Substitutes values for two variables in one formula and enters the results in *output-range*.

{DATA-TABLE-3 [*output-range*];[*input-cell-1*];[*input-cell-2*];[*input-cell-3*];[*formula*]}
Substitutes values for three variables in one formula and enters the results in *output-range*.

{DATA-TABLE-RESET}
Clears the ranges and input-cell settings for all what-if tables in the current file.

{DEFINE *location1;location2;...;locationn*}
Specifies where to store arguments passed to a subroutine in a {*subroutine*} command. You must include a {DEFINE} command in any subroutine to which you pass arguments, and the {DEFINE} command must come before the point in the subroutine where the arguments are used.

{DEL}
Equivalent to DEL.

{DELETE}
Equivalent to DEL.

{DELETE-COLUMNS [*range*];[*delete-selection*]}
Deletes all of each column that includes cells in *range*, or deletes only the part of the columns covered by *range*.

{DELETE-ROWS [*range*];[*delete-selection*]}
Deletes all of each row that includes cells in *range*, or deletes only the part of the rows covered by *range*.

{DELETE-SHEETS [*range*]}
Deletes all of each sheet that includes cells in *range*.

{DIALOG *range*}
Displays a custom dialog box created with the Lotus Dialog Editor.

{DIALOG?[*name*]}
Displays a 1-2-3 dialog box, and waits for you to click OK or press ENTER.

{DISPATCH *location*}
Performs an indirect branch by transferring macro control to the cell whose name or address is entered in *location*.

{DISTRIBUTION [*values-range*];[*bin-range*]}
Creates a frequency distribution that counts how many values in *values-range* fall within each numeric interval specified by *bin-range*.

{DOWN}
Equivalent to DOWN.

E

{EDIT}
Equivalent to F2 (EDIT).

{EDIT-CLEAR [*selection*];[*property*]}
Deletes data and related formatting from the sheet without moving it to the Clipboard.

{EDIT-COPY [*selection*];[*format*]}
Copies data and related formatting from the sheet to the Clipboard.

{EDIT-COPY-FILL *direction*;*[range*]}

Copies the contents of one row, column, or sheet in a range to all of *range*, based on a specified *direction*.

{EDIT-CUT [*selection*];[*format*]}
Cuts data and related formatting from the sheet to the Clipboard.

{EDIT-FIND [*search-for*];*[look-in*];[*search-through*]}
Finds the first instance of specified characters in labels, formulas, or both.

{EDIT-FIND?}
Displays the Edit Find & Replace dialog box. After the user leaves the dialog box, 1-2-3 continues the macro.

{EDIT-GOTO *name*;[*part*];[*type*]}
Selects all or part of a range, query table, chart, or other drawn object, and then scrolls to it. Any items in the same file that were previously selected become unselected.

{EDIT-OBJECT [*verb*]}
Executes either the primary or secondary *verb* for the currently selected OLE embedded object.

{EDIT-PASTE [*selection*];[*format*]}
Copies data and related formatting from the Clipboard into the current file.

{EDIT-PASTE-LINK [*destination*];[*format*];[*reference*]}
Creates a link between a 1-2-3 Workbook file and the file referenced on the Clipboard.

{EDIT-PASTE-SPECIAL [*destination*];[*property*]}
Inserts data on the Clipboard into the sheet.

{EDIT-QUICK-COPY *destination*;[*source*]}
Copies data and related formatting from the *sourc*e range to the *destination* range, without using the Clipboard.

{EDIT-QUICK-MOVE *destination*;[*source*]}
Moves data and related formatting from the *source* range to the *destination* range, without using the Clipboard.

{EDIT-REPLACE [*search-for*];[*look-in*];[*replacement*];[*search-through*]}
Finds the first instance of specified characters in labels, formulas, or both, and replaces them.

{EDIT-REPLACE-ALL [*search-for*];[*look-in*];[*replacement*];[*search-through*]}
Finds all instances of specified characters in labels, formulas, or both, and replaces them.

{END}
Equivalent to END.

{ESC}
Equivalent to ESC.

{ESCAPE}
Equivalent to ESC.

F

{FC}
Equivalent to CTRL+HOME.

{FF}
Equivalent to CTRL+END HOME.

{FILE}
Equivalent to CTRL+END.

{FILE-CLOSE [*discard*]}
Closes the current file.

{FILE-COMBINE [*how*];*file-name*;[*password*];[*source*]}
Combines data and number formats from a 1-2-3 Workbook (.WK*, .123) file into the current sheet starting in the current cell.

{FILE-EXIT [*discard*]}
Ends the 1-2-3 session.

{FILE-EXTRACT *file-name*;[*file-type*];[*password*];[*backup*];[*extract-range*];[*properties*]}
Saves a range to another file.

{FILE-GET-RESERVATION}
Gets the reservation for the current file if it is available and no one saved the file since you read it into memory. When you get the reservation, you are the only person who can save changes to the file.

{FILE-IMPORT [*read-text-as*];*file-name*;[*character-set*]}
Combines data from a text file with the current workbook.

{FILE-NEW [*file-name*];[*where*];[*smartmaster*]}
Creates a new file in a window and makes the window current.

{FILE-OPEN *file-name*;[*password*];[*read-only*];[*where*];[*read-text-as*];[*character-set*]}
Reads a file into memory, makes it the current sheet, and moves the cell pointer to the cell it was in when you last saved the file.

{FILE-OPEN?}
Displays the File Open dialog box.

{FILE-RELEASE-RESERVATION}
Releases the reservation for the current file.

{FILE-RETRIEVE *file-name*;[*password*];[*read-only*];[*read-text-as*]}
Replaces the current file in memory with a file from disk, and moves the cell pointer to the cell it was in when you last saved the file.

{FILE-SAVE [*file-name*];[*file-type*];[*password*];[*backup*]}
Saves the current file.

{FILE-SAVE-ALL}
Saves all active files.

{FILE-SAVE-AS?}
Displays the File Save As dialog box.

{FILE-SEAL [*password*]}
Controls the reservation for the current file and seals the file.

{FILESIZE *location*}
Counts the number of bytes in an open text file and enters the number in *location*.

{FILE-UNSEAL [*password*]}
Unseals the current file and releases its network reservation setting.

{FILE-UPDATE-LINKS}
Recalculates formulas in the current file that contain links to other files.

{FILL [*range*];[*start*];[*step*];[*stop*];[*units*]}
Enters a sequence of values in a specified range.

{FILL-BY-EXAMPLE [*range*]}
Fills *range* with a sequence of data. 1-2-3 creates a pattern for the sequence, based on data you include in the *range*.

{FIRSTCELL}
Equivalent to CTRL+HOME.

{FIRSTFILE}
Equivalent to CTRL+END HOME.

{FOR *counter;start;stop;step;subroutine*}
Creates a for loop; it repeatedly performs a subroutine call to *subroutine*.

{FORBREAK}
Cancels a for loop created by a {FOR} command.

{FRAMEOFF}
Has no effect in 1-2-3 Release 4 or later.

{FRAMEON}
Has no effect in 1-2-3 Release 4 or later.

G

{GET *location*}
Suspends macro execution until you press a key, and then records the keystroke as a left-aligned label in *location*.

{GET-FORMULA [*prompt*];*result*;[*default*];*[title*];[*x*];[*y*]}
Lets the user enter a formula. {GET-FORMULA} enters the formula in the sheet rather than evaluating the formula and entering the result as a number, like {GET-NUMBER}.

{GET-LABEL [*prompt*];*result*;[*default*];*[title*];[*x*];[*y*]}
Lets the user enter anything that you want 1-2-3 to store in the sheet as a label.

{GET-NUMBER [*prompt*];*result*;[*default*];*[title*];[*x*];[*y*]}
Lets the user enter a number or a numeric formula. {GET-NUMBER} enters the number in the sheet, or evaluates the formula and enters the result as a number.

{GET-RANGE [*prompt*];*result*;[*default*];*[title*];[*x*];[*y*]}
Lets you enter a range name or address. {GET-RANGE} enters the name or address in the sheet or as a left-aligned label.

{GETPOS *location*}
Enters a number in *location*. This number reports the current byte-pointer position in the open text file.

{GOTO}
Equivalent to F5 (GOTO).

H

{HELP}
Equivalent to F1 (HELP).

{HIDE-COLUMNS [*range*]}
Hides all columns in *range*.

{HIDE-SHEETS [*range*]}
Hides all worksheets in *range*.

{HOME}
Equivalent to HOME.

I

{IF *condition*}
Evaluates *condition* as true or false. If *condition* is true, 1-2-3 continues with the next instruction immediately following the {IF} command in the same cell. If *condition* is false, 1-2-3 goes immediately to the next cell in the column, skipping any further instructions in the same cell as the {IF} command.

{INDICATE [*text*]}
Displays *text* in the title bar until 1-2-3 reaches another {INDICATE} command or until you end the 1-2-3 session.

{INS}
Equivalent to INS.

{INSERT}
Equivalent to INS.

{INSERT-COLUMNS [*range*];[*number*];[*insert-selection*]}
Inserts one or more blank columns in the current sheet, or inserts only the part of the columns covered by *range*.

{INSERT-OBJECT *object-type*;*[location*]}
Creates and places in the sheet an OLE embedded object.

{INSERT-ROWS [*range*];[*number*];[*insert-selection*]}
Inserts one or more blank rows in the current file, or inserts only the part of the rows covered by *range*.

{INSERT-SHEETS [*where*];[*number*];[*range*]}
Inserts one or more blank sheets in the current file.

J

K

L

{L}
Equivalent to LEFT.

{LASTCELL}
Equivalent to END CTRL+HOME.

{LASTFILE}
Equivalent to CTRL+END END.

{LAUNCH*command;*[*window*];[*switch-to*]}
Starts and optionally switches to a Windows application.

{LC}
Equivalent to END CTRL+HOME.

{LEFT}
Equivalent to LEFT.

{LET *location;entry*}
Enters a number or left-aligned label in *location*.

{LF}
Equivalent to CTRL+END END.

{LINK-ASSIGN *link-name;range;*[*clear-styles*]}
Specifies a range to make an OLE link to a destination range.

{LINK-CREATE *link-name;app-name;topic-name;item-name*;[*format*];[*mode*];[*branch-location*]}
Without using the Clipboard, creates a link between the current file and another application that supports OLE as a server.

{LINK-DEACTIVATE [*link-name*]}
Deactivates an OLE link in the current file, but leaves the link intact. When a link is inactive, 1-2-3 does not update values in the destination range.

{LINK-DELETE *link-name*}
Deletes an OLE link in the current file, but leaves the values obtained through the link in the file.

{LINK-REMOVE *link-name*}
Removes the currently used destination range for an OLE link, but does not delete the data in the range.

LINK-UPDATE [*link-name*]}
Updates OLE links, or activates and updates links deactivated with {LINK-DEACTIVATE}.

{LOOK *location*}
Checks the type-ahead buffer for keystrokes and records the first keystroke (if any) as a left-aligned label in *location*. If the buffer is empty, 1-2-3 enters ' (apostrophe label-prefix character) in *location*.

M

{MAP-NEW *location*;[*map-type*]}
Draws a map at *location*, using data from the currently selected range.

{MAP-REDRAW}
Redraws all maps in the current file.

{MATRIX-INVERT [*matrix-to-invert*];[*output-range*]}
Inverts a square matrix.

{MATRIX-MULTIPLY [*matrix1*];[*matrix2*];[*output-range*]}
Multiplies the matrix in *matrix1* by the matrix in *matrix2* to create a matrix in *output-range* that contains the results.

{MENU}
Equivalent to / (slash) or < (less than).

{MENUBRANCH *location*;[*x*];[*y*]}
Displays a dialog box that contains a list of menu commands, waits for you to select one and then click OK or Cancel, and then branches to the macro instructions associated with the command you select.

{MENUCALL *location*;[*x*];[*y*]}
Displays a dialog box that contains a list of menu commands, waits for you to select one and click OK or Cancel, and then performs a subroutine call to the macro instructions associated with the command you select.

{MENU-CREATE *menu-description-range*}
Replaces the current 1-2-3 menu bar with a customized menu bar.

{MENU-COMMAND-ADD *menu-description-range*;*menu-index*;*command-index*}
Adds a command to a pull-down menu.

{MENU-COMMAND-DISABLE *menu-index*;*command-index*}
Disables a command in a custom menu. Disabled commands appear dimmed.

{MENU-COMMAND-ENABLE *menu-index*;*command-index*}
Enables a command disabled with {MENU-COMMAND-DISABLE}.

{MENU-COMMAND-REMOVE *menu-index*;*command-index*}
Removes a command from a pull-down menu.

{MENU-INSERT *menu-description-range*;[*menu-index*]}
Adds a custom pull-down menu to the default 1-2-3 menu bar.

{MENU-RESET}
Displays the default 1-2-3 menu bar.

{MODELESS-DISMISS}
Closes the open modeless dialog box. If no modeless dialog box is open, {MODELESS-DISMISS} has no effect.

{MODELESS-DISPLAY *message*;[*title*];[*on-top*];[*x*];[*y*]}
Displays a modeless dialog box until 1-2-3 reaches another {MODELESS-DISPLAY} command, a {MODELESS-DISMISS} command, or the end of the macro.

N

{NAME}
Equivalent to F3 (NAME).

{NAMED-STYLE-USE *style-name*;[*range*]}
Applies a named style to a range.

{NEXTFILE}
Equivalent to CTRL+END CTRL+PG UP.

{NEXTSHEET}
Equivalent to CTRL+PG UP.

{NF}
Equivalent to CTRL+END CTRL+PG UP.

{NS}
Equivalent to CTRL+PG UP.

O

{ONERROR *branch-location*;[*message-location*]}
Traps and handles errors that occur while a macro is running.

{OPEN *file-name;access-type*}
Opens a text file for read-only processing or for read-and-write processing, depending on the type of access you specify.

P

{PAGE-BREAK-COLUMN *on-off*}
Inserts or deletes a vertical page break to the left of the column containing the current cell.

{PAGE-BREAK-ROW *on-off*}
Inserts or deletes a horizontal page break above the row containing the current cell.

{PANELOFF}
Freezes the control panel until 1-2-3 encounters a {PANELON} command or the macro ends.

{PANELON}
Unfreezes the control panel.

{PARSE [*parse-range*];[*output-range*];[*format-line*]}
Converts long labels from an imported text file into separate columns of data of one or more types (values, dates, times, and labels).

{PF}
Equivalent to CTRL+END CTRL+PG DN.

{PGDN}
Equivalent to PG DN.

{PGUP}
Equivalent to PG UP.

{PLAY *filename*}
Plays a .WAV file.

{PREVFILE}
Equivalent to CTRL+END CTRL+PG DN.

{PREVSHEET}
Equivalent to CTRL+PG DN.

{PRINT [*what*];[*from*];[*to*];[*start*];[*copies*]}
Prints the current file according to the current page settings.

{PRINT-NAME-ADD *page-setting-name*}
Saves the current page settings as a named print style.

{PRINT-NAME-USE *page-setting-name*}
Makes a named print style current.

{PRINT?}
Displays the File Print dialog box.

{PRINT-RESET}
Replaces the currently selected Margins, Print titles, Header, Footer, Options, Compression, and Orientation settings with the default page layout for the current file.

{PROTECT [*range*]}
Turns protection back on for a range that has been unprotected.

{PS}
Equivalent to CTRL+PG DN.

{PUT *location*;*column-offset*;*row-offset*;*entry*}
Enters a number or left-aligned label in a cell within *location*.

Q

{QUERY}
Equivalent to F7 (QUERY).

{QUERY-ADD-FIELD *field*}
Adds a field to the currently selected query table. The field is displayed as the last field in the query table.

{QUERY-AGGREGATE *function*;*field-name*}
Performs calculations on groups of data from a query table.

{QUERY-CHOOSE-FIELDS [*field1*];[*field2*];...;[*field15*]}
Specifies the fields that you want to appear in the currently selected query table.

{QUERY-COPY-SQL}
Copies to the Clipboard the SQL command equivalent to the current query.

{QUERY-CRITERIA [*criteria*]}
Specifies criteria to determine which records appear in a new or currently selected query table.

{QUERY-DATABASE-TABLE *database-table*}
Changes the database table for the currently selected query table.

{QUERY-JOIN [*join-criteria*]}
Allows you to query multiple database tables that contain a common field.

{QUERY-NAME *new-name*}
Assigns a new name to the currently selected query table.

{QUERY-NEW *database-table*;*output-range*;[*criteria*];[*query-name*];[*record-limit*];[*field1*];[*field2*];...;[*field10*]}
Creates a query table that contains the records you extract from a database table.

{QUERY-OPTIONS *option*;*on-off*;[*record-limit*]}
Specifies options for manipulating data in the currently selected query table.

{QUERY-REFRESH}
Updates records in the currently selected query table to reflect changes made to the database table, query options, criteria, or aggregate.

{QUERY-REMOVE-FIELD *field*}
Removes a field from the currently selected query table.

{QUERY-SHOW-FIELD *field*; *field-alias*}
Specifies an alias field name for field to display in the currently selected query table. Doing so does not change the field name in the database table, but it changes only the field name in the query table.

{QUERY-SORT [*key1*];[*order1*];[*key2*];[*order2*];[*key3*];[*order3*]}
Arranges data in the currently selected query table in the order you specify.

{QUERY-SORT-KEY-DEFINE *key-number*;*key-field*;*key-order*}
Defines a sort key to be used by a subsequent {QUERY-SORT} command.

{QUERY-SORT-RESET}
Clears all sort keys for the currently selected query table.

{QUERY-UPDATE}
Applies any changes you make to records in the currently selected query table to the corresponding database table.

{?}
Suspends macro execution until the user presses ENTER, letting the user type any number of keystrokes.

{QUIT}
Ends a macro immediately, returning keyboard control to the user. 1-2-3 never executes any instructions that follow a {QUIT} command.

R

{R}
Equivalent to RIGHT.

{RANGE-NAME-CREATE *range-name*;[*range-location*]}
Assigns a name to a range address.

{RANGE-NAME-DELETE *range-name*}
Deletes a range name in the current file.

{RANGE-NAME-DELETE-ALL}
Deletes all range names in the current file.

{RANGE-NAME-LABEL-CREATE [*direction*];[*label-range*]}
Assigns an existing label as the range name for a single cell immediately above, below, to the right of, or to the left of the label.

{RANGE-NAME-TABLE [*table-location*]}
Creates a two-column table with the names of all defined ranges in the current file listed alphabetically in the left column, and the corresponding range addresses listed in the right column.

{RANGE-TRANSPOSE *destination*;[*transpose*];[*origin*]}
Copies data from *origin* to *destination*, transposing the copied data and replacing any copied formulas with their current values.

{RANGE-VALUE *destination*;[*origin*]}
Copies the contents and styles from *origin* to *destination*, and replaces all copied formulas with their current values.

{READ *byte-count*;*location*}
Starts at the current byte-pointer position in the open text file, copies the number of bytes specified by *byte-count* to *location*, and advances the byte-pointer *byte-count* bytes.

{READLN *location*}
Starts at the current byte-pointer position in the open text file, copies the remainder of the current line to *location*, and advances the byte-pointer to the beginning of the next line in the file.

{RECALC *location*;[*condition*];[*iterations*]}
Recalculates the values in *location*, proceeding row by row.

{RECALCCOL *location*;[*condition*];[*iterations*]}
Recalculates the values in *location*, proceeding column by column.

{REGRESSION [*X-range*];[*Y-range*];[*output-range*];*[intercept*]}
Performs multiple linear regression analysis and also calculates the slope of the line that best illustrates the data.

{RESTART}
Clears the subroutine stack, ending the macro when the current subroutine ends.

{RETURN}

Returns macro control from a subroutine to the calling macro.

{RIGHT}
Equivalent to RIGHT.

{ROW-HEIGHT *height*;[*range*]}
Adjusts each row in *range* to a specified *height* in points.

{ROW-HEIGHT-FIT-LARGEST [*range*]}
Adjusts each row in *range* to the height of the largest font in that row.

{ROLLBACK [*driver-name*];[*database-name*]}
Cancels pending external database transactions.

S

{SCENARIO-ADD-VERSION *scenario-name*;[*scenario-creator*];*version-range*;*version-name*;[*version-creator*]}
Adds a version to a version group.

{SCENARIO-CREATE *name*;[*share*];[*comment*]}
Creates a version group.

{SCENARIO-DELETE *name*;[*creator*]}
Deletes a version group.

{SCENARIO-REMOVE-VERSION *scenario-name*;[*scenario-creator*];*version-range*;*version-name*;[*version-creator*]}
Removes a version from a scenario (now called version group.)

{SCENARIO-SHOW *name*;[*creator*]}
Displays in the sheet the selected version group.

{SCROLL-COLUMNS [*amount*]}
Scrolls horizontally by column in the current sheet.

{SCROLL-ROWS [*amount*]}
Scrolls vertically by row in the current sheet.

{SCROLL-TO-CELL *location*}
Scrolls in the current sheet so that the first cell of *location* is in the top left corner of the sheet window.

{SCROLL-TO-COLUMN *location*}
Scrolls left or right in the current sheet so that the leftmost column of *location* is the leftmost column of the sheet window.

{SCROLL-TO-OBJECT *name*; [*type*]}
Scrolls to but does not select a range, query table, chart or other drawn object in the current sheet.

{SCROLL-TO-ROW *location*}
Scrolls up or down in the current sheet so that the top row of *location* is the top row in the sheet window.

{SELECT *name*;[*part*];[*type*]}
Selects all or part of a range, chart, query table, or other drawn object, without scrolling to it. Any items in the same file that were previously selected become unselected.

{SELECT-ALL [*type*]}
Selects one of the following: the active area of the current sheet, all charts or drawn objects in the current sheet, or all sheets in the current file.

{SELECT-APPEND *name*;*part*}
Selects all or part of a range, chart, or other drawn object without deselecting those currently selected.

{SELECT-BIGLEFT}
Equivalent to SHIFT+CTRL+LEFT.

{SELECT-BIGRIGHT}
Equivalent to SHIFT+CTRL+RIGHT.

{SELECT-DOWN}
Equivalent to SHIFT+DOWN.

{SELECT-FIRSTCELL}
Equivalent to SHIFT+CTRL+HOME.

{SELECT-HOME}
Equivalent to SHIFT+HOME.

{SELECT-LASTCELL}
Equivalent to END SHIFT+CTRL+HOME.

{SELECT-LEFT}
Equivalent to SHIFT+LEFT.

{SELECT-NEXTSHEET}
Equivalent to SHIFT+CTRL+PG UP.

{SELECT-PGDN}
Equivalent to SHIFT+PG DN.

{SELECT-PGUP}
Equivalent to SHIFT+PG UP.

{SELECT-PREVSHEET}
Equivalent to SHIFT+CTRL+PG DN.

{SELECT-RANGE-RELATIVE [*column*];[*row*];[*sheet*];[*cp-col-off*];[*cp-row-off*];[*cp-sheet-off*]}
Moves the cell pointer and then selects a range whose address is represented by offsets of the current cell (the current cell is 0).

{SELECT-REMOVE *name*}
Removes a range, chart, or other drawn object from the currently selected collection.

{SELECT-REPLACE *old-range*;*new-range*}
Replaces *old-range* with *new-rang*e in a collection.

{SELECT-RIGHT}
Equivalent to SHIFT+RIGHT.

{SELECT-UP}
Equivalent to SHIFT+UP.

{SEND-MAIL [*to*];[*cc*];[*subject*];[*body*];[*clipboard*];[*file*]}
Sends a mail message, using your mail application, while you are working in 1-2-3. The mail can contain text, the contents of the clipboard, and the current file.

{SEND-RANGE *range*;*to*;[*subject*];[*body*];[*return-receipt*];[*route*];[*priority*];[*return-to-originator*];[*properties*]}
Sends a range of sheet data to other 1-2-3 users who have electronic mail. You can broadcast the range to all recipients at once, or you can route it from one recipient to the next.

{SEND-RANGE-LOGIN [*message-container-path*];[*user-name*];[*password*]}
Automatically logs in to your mail application.

{SEND-SQL *range*;*command*;[*output-range*];[*error-code-location*]}
Sends an SQL syntax command string to an external database driver, against the database that contains the specified external database table.

{SET *info-id*;*info-value*}
Sets a specified info component to a specified value.

{SETPOS *offset-number*}
Moves the byte pointer in an open text file *offset-number* bytes from the first byte in the file.

{SHEET-NAME *new-name*;[*old-name*]}
Names a 1-2-3 sheet in the current workbook.

{SHEET-NAME-DELETE [*sheet-name*]}
Deletes the name of a 1-2-3 sheet in the current workbook.

{SHOW-COLUMNS [*range*]}
Redisplays all hidden columns in *range*.

{SHOW-SHEETS [*range*]}
Redisplays all hidden worksheets in *range*.

{SMARTICONS-USE *set-name*}
Selects a set of SmartIcons to use with 1-2-3.

{SMARTSUM}
Sums values in the selected or adjacent range, if you include empty cells below or to the right of the range.

{SOLVER-ANSWER *answer*}
Displays the answer or attempt 1-2-3 finds in the sheet.

{SOLVER-DEFINE *adj-cells*;*constraint-cells*;*optimize*;*opt-cell*;*opt-type*;*answers*}
Analyzes data in a sheet and returns an answer to a problem you define.

{SOLVER-REPORT *type*}
Creates a report based on the current answer in a new sheet inserted after the solver model sheet.

{SORT [*range*];[*key1*];[*order1*];[*key2*];[*order2*];[*key3*];[*order3*]}
Arranges data in *range* in the order you specify.

{SORT-ASCENDING}
Sorts a range or database table in ascending order (A - Z and smallest to largest values), using the selected column as the key.

{SORT-DESCENDING}
Sorts a range or database table in descending order (Z - A and largest to smallest values), using the selected column as the key.

{SORT-KEY-DEFINE *key-number*;*key-range*;*key-order*}
Defines a sort key to be used by a subsequent {SORT} command.

{SORT-RESET}
Clears all sort keys for sorting range data.

{SPELLCHECK?}
Displays the Edit - Check Spelling dialog box and waits for the user to click OK.

{STYLE-ALIGN-HORIZONTAL *horizontal*;[*range*];[*over-cols*];[*wrap*]}
Changes the horizontal alignment of labels and values in *range*.

{STYLE-ALIGN-ORIENTATION *orientation*;[*angle*];[*range*]}
Changes the orientation of data in *range*.

{STYLE-ALIGN-VERTICAL *vertical*;[*range*]}
Aligns text within a cell whose height is bigger than the largest typeface.

{STYLE-BORDER *border*;*display*;[*range*];[*color*];[*style*]}
Controls borders for *range*.

{STYLE-EDGE [*color*];[*style*];[*width*];[*arrowhead*]}
Changes the color, style, and width of the edge of entire charts, chart elements (plot frames, solid data series, titles, legends, and footnotes), text blocks, enclosed drawn objects, arcs, freehand drawings, polylines, OLE objects, and pictures created in other Windows applications.

{STYLE-FONT *typeface*;[*range*];[*font-family*];[*character-set*]}
Assigns a font to *range*.

{STYLE-FONT-ALL [*typeface*];[*size*];[*bold*];[*italic*];[*underline*];[*range*];[*underline-style*];[*font-family*];[*character-set*]}
Assigns a font and adds bold, italic, and underlining to *range*.

{STYLE-FONT-ATTRIBUTES *attribute*;*on-off*;[*range*];[*underline-style*]}
Adds bold, italic, or underlining to *range*.

{STYLE-FONT-RESET [*range*]}
Restores the sheet default font, font size, attributes and color to *range.*

{STYLE-FONT-SIZE *size*;[*range*]}
Assigns a point size to the fonts in *range*.

{STYLE-FRAME *display*;[*color*];[*style*];[*range*]}
Adds or removes a frame for *range*.

{STYLE-GALLERY *template*;[*range*]}
Formats *range* with one of the style templates available in 1-2-3.

{STYLE-INTERIOR [*background-color*];[*pattern*];[*pattern-color*];[*text-color*];[*negatives*];[*range*]}
Adds colors and patterns to *range*.

{STYLE-LINE [*color*];[*style*];[*width*];[*arrowhead*];[*symbol*]}
Changes the color, style, and width of the selected line for drawn lines and chart lines including line data series, grid lines, and axes.

{STYLE-NUMBER-FORMAT [*format*];[*decimals*];[*parentheses*];[*range*];[*currency*]}
Sets the display of values in *range*.

{STYLE-NUMBER-FORMAT-RESET [*range*]}
Resets the format of range to the current default format.

{subroutine [*arg1*];[*arg2*];...;[*argn*]}
Performs a subroutine call.

T

{TAB}
Equivalent to TAB.

{TABLE}
Equivalent to F8 (TABLE).

{TOGGLE-OUTLINE}
Adds or removes a border.

{TOGGLE-SHADOW}
Draws or removes an outline around a cell or range and adds or removes a drop shadow.

U

{U}
Equivalent to UP.

{UNPROTECT [*range*]}
Turns protection off for a range.

{UP}
Equivalent to UP.

{UPDATE-OBJECT}
Updates a 1-2-3 OLE object embedded in another application file.

V

{VERSION-CREATE *version-range*;*name*;[*share*];[*retain-styles*];[*comment*]}
Creates a new version.

{VERSION-DELETE *version-range*;*name*;[*creator*]}
Deletes the specified version.

{VERSION-INDEX-MERGE *source-file*;[*date-filter*];[*user-filter*];[*table-location*]}
Copies versions and version groups from *source-file* into the current file.

{VERSION-INFO *version-range*;*name*;[*creator*];[*share*];[*retain-styles*]}
Lets you modify style retention and sharing options for a version.

{VERSION-REPORT *version-range*;[*formulas-range*];[*include-data*];[*include-audit*];[*arrange-data*];*version1*;[*version2*];...;[*version10*]}
Creates reports showing selected versions and their effect on the outcome of a formula.

{VERSION-SHOW *version-range*;*name*;[*creator*];[*goto*]}
Displays in the sheet the selected version.

{VIEW-ZOOM *how*}
Decreases or increases the display size of cells, or restores their default display size.

W

{WAIT *time-number*}
Suspends macro execution and displays WAIT as the mode indicator until the time specified by *time-number*. When the specified time arrives, 1-2-3 removes the WAIT indicator and continues the macro.

{WINDOW}
Equivalent to F6 (PANE).

{WINDOW-ACTIVATE [*window-name*];[*reserved*];[*pane*]}
Makes a window the active window.

{WINDOW-ADJUST *x;y;width;height*}
Moves the active window so that the upper left corner of the window is *x* pixels from the left and *y* pixels from the top corner of the 1-2-3 window, and sizes the active window to be *height* pixels high and *width* pixels wide.

{WINDOW-ARRANGE *how*}
Sizes open sheet windows and either places them side by side or arranges them one on top of the other.

{WINDOWSOFF}

Suppresses screen updates while a macro is running.

{WINDOWSON}
Cancels {WINDOWSOFF} and restores normal sheet display.

{WINDOW-STATE *state*}
Minimizes, maximizes, or restores the active window.

{WORKSHEET-TITLES *direction*}
Freezes (or unfreezes) columns along the top of the sheet, rows along the left edge of the sheet, or both.

{WRITE *text*}
Copies text to the open text file, starting at the current byte-pointer position.

{WRITELN *text*}
Copies text to the open text file, starting at the current byte-pointer position, and adds a carriage return and line feed.

X

Y

Z

{ZOOM}
Equivalent to ALT+F6 (ZOOM).

{CHART-ASSIGN-RANGE}

{CHART-ASSIGN-RANGE *range*;*method*} assigns all data ranges for the current chart.

Arguments

range is the name or address of a range that will be used to create all the desired data ranges.

method is text that specifies how 1-2-3 assigns the data ranges.

method	**1-2-3 does the following**
by-row	Assigns the A - W data ranges by row. If the first row of the range contains labels or dates, 1-2-3 assigns it as the X data range. If the first column of the range contains labels, 1-2-3 assigns it as the legends range.
by-column	Assigns the A - W data ranges by column. If the first column of the range contains labels or dates, 1-2-3 assigns it as the X data range. If the first row of the range contains labels, 1-2-3 assigns it as the legends range.

Examples

The following command assigns all data ranges for the current chart, by column, from the range NEW_RANGES. 1-2-3 uses the first row of data in NEW_RANGES as the x-axis labels.

{CHART-ASSIGN-RANGE NEW_RANGES;"by-column"}

F

{CHART-AXIS-INTERVALS}

{CHART-AXIS-LIMITS}

{CHART-AXIS-INTERVALS *axis*;[*major*];[*minor*];[*major-interval*];[*minor-interval*]} changes the intervals between x-axis, y-axis, or 2nd y-axis tick marks in the current chart.

{CHART-AXIS-LIMITS *axis*;[*upper*];[*lower*];[*upper-limit*];[*lower-limit*]} creates, for the current chart, a scale for the x-axis, y-axis, or 2nd y-axis that displays only the data that falls between (and includes) *upper-limit* and *lower-limit*.

Arguments

axis is text that specifies the axis you want to work with.You can use x, y, or 2y.

major is a yes/no argument that specifies whether you specify the major interval. If you choose to specify the major interval, include *major-interval*. If you choose not to specify the major interval, 1-2-3 automatically calculates it.

minor is a yes/no argument that specifies whether you specify the minor interval. If you choose to specify the minor interval, include *minor-interval*. If you choose not to specify the minor interval, 1-2-3 automatically calculates it.

major-interval is a value that specifies the major interval.

minor-interval is a value that specifies the minor interval.

upper is a yes/no argument that specifies whether you specify the upper limit. If you choose to specify the upper limit, include *upper-limit*. If you choose not to specify the upper limit, 1-2-3 automatically calculates it.

lower is a yes/no argument that specifies whether you specify the lower limit. If you choose to specify the lower limit, include *lower-limit*. If you choose not to specify the lower limit, 1-2-3 automatically calculates it.

upper-limit is a value that specifies the upper limit.

lower-limit is a value that specifies the lower limit.

Notes

If you omit an optional argument, 1-2-3 leaves that setting unchanged.

Examples

The following commands select the chart named QUARTERLY and then set the y-axis major and minor intervals to 100 and 25, respectively.

{SELECT "quarterly";;"chart"}

{CHART-AXIS-INTERVALS "y";"yes";"yes";100;25}

The following commands select the chart named QUARTERLY and then set the y-axis upper and lower limits at 250 and 0, respectively.

{SELECT "quarterly";;"chart"}

{CHART-AXIS-LIMITS "y";"yes";"yes";250;0}

{CHART-AXIS-SCALE-TYPE}

{CHART-AXIS-SCALE-TYPE *axis*;*type*} specifies the type of scale to use for an axis in the current chart.

Arguments

axis is text that specifies the axis you want to work with. You can use x, y, or 2y.

type is text that specifies the type of scale to use for *axis.*

type	**1-2-3 does the following**
standard	Increases scale numbers linearly by a fixed number of units
log	Increases scale numbers logarithmically
100%	Displays scale numbers that range from 0 through 100% and represent percentages instead of absolute values; not available for the x-axis.

Examples

The following command uses a logarithmic scale for the current chart's y-axis.

{CHART-AXIS-SCALE-TYPE "y";"log"}|

{CHART-AXIS-TICKS}

{CHART-AXIS-TICKS *axis*;[*major*];[*minor*];[*space*]} is used to specify major and minor tick marks for an axis in the specified chart.

Arguments

axis is text that specifies the axis you want to work with.You can use x, y, or 2y.

major is a yes/no argument that specifies whether 1-2-3 displays tick marks at major intervals.

minor is a yes/no argument that specifies whether 1-2-3 displays tick marks at minor intervals.

If you omit an *axis*, *major*, or *minor*, 1-2-3 leaves that setting unchanged.

space is an integer that specifies how many ticks appear between labels.

Examples

The following macro selects the chart named QUARTERLY, sets the major interval for the y-axis at 10, and displays tick marks only at major intervals.

```
{SELECT "quarterly";;"chart"}
{CHART-AXIS-INTERVALS "y";"yes";"no";10}
{CHART-AXIS-TICKS "y";"yes";"no"}
```

{CHART-AXIS-TITLE}

{CHART-AXIS-TITLE *axis*;[*title*];[*title-cell*]} changes an axis title in the current chart.

Arguments

axis is text that specifies the axis you want to work with.You can use x, y, or 2y.

title is text enclosed in " " (quotation marks) that specifies the axis title.

Note to use the contents of a cell for the axis title, use *title-cell*.

title-cell is the name or address of a cell that contains a label to use as the axis title. If you include both *title* and *title-cell*, 1-2-3 ignores *title*.

Notes

If you omit an optional argument, 1-2-3 leaves that setting unchanged.

To delete existing an axis title, specify "" for *title*.

Examples

The following command changes the x-axis title of the current chart to Months.

{CHART-AXIS-TITLE "x";"Months"}

The following commands change the x-axis and y-axis titles of Chart 1 to the contents of the cells X_TITLE and Y_TITLE, respectively.

{SELECT "Chart 1";;"chart"}

{CHART-AXIS-TITLE "x";;X_TITLE}

{CHART-AXIS-TITLE "y";;Y_TITLE}

{CHART-AXIS-UNITS}

{CHART-AXIS-UNITS *axis*;[*manual-calculate*];[*manual-title*];[*exponent*];[*title*];[*title-cell*]} changes the magnitude of the axis units and the axis-unit titles for the current chart.

Arguments

axis is text that specifies the axis you want to work with.You can use x, y, or 2y.

manual-calculate is a yes/no argument that specifies whether you want to specify an order of magnitude for the axis scale. If you choose to specify the order of magnitude, include *exponent*. If you choose not to specify the order of magnitude, 1-2-3 automatically calculates it.

manual-title is a yes/no argument that specifies whether you want to create the axis units title. If you choose to create the axis units title, include *title* or *title-cell*. If you choose not to create the axis units title 1-2-3 automatically generates it.

exponent is an integer from -95 through 95 that specifies the order of magnitude for the axis scale (the power of 10 by which the numbers along the scale must be multiplied to reflect the values you are charting).

title is text enclosed in " " (quotation marks) that specifies the units title.

Note To use the contents of a cell for the units title, use *title-cell*.

title-cell is the name or address of a cell that contains a label to use as the units title. If you include both *title* and *title-cell*, 1-2-3 ignores *title*.

Notes

If you omit an optional argument, 1-2-3 leaves that setting unchanged.

To delete existing an units title, specify "" for *title* or specify a blank cell for *title-cell*.

Examples

The following commands select the chart DRIVE, change the magnitude of the y-axis units to tens, and change the unit title to Miles-Per-Hour.

{SELECT "drive";;"chart"}

{CHART-AXIS-UNITS "y";"yes";"yes";1;"Miles-Per-Hour"}

{CHART-DATA-LABELS}

{CHART-DATA-LABELS *series*;[*label-range*];[*position*]} creates labels for data points or bars in the current chart, using data in *label-range* as the labels.

Arguments

series is text that specifies a single data series, or all data series, in the current chart.

To assign data labels for a single data series, specify a letter from A through W for *series*; to assign data labels for all data series, specify the word All for *series*.

label-range is the name or address of a range that contains the data labels. If you omit *label-range*, 1-2-3 removes the data label for *series* from the chart.

position is text that specifies location of the data labels. If you omit *position*, 1-2-3 leaves the setting unchanged.

position	**1-2-3 places the data label**
center	Centers the data labels on the data points in a line chart and area chart and above the bars in a bar chart.
right	To the right of the data points in a line chart and area chart and above the bars in a bar chart.
below	Below the data points in a line chart and area chart and below the bars in a bar chart.
left	To the left of the data points in a line chart and area chart and above the bars in a bar chart.
above	Above the data points in a line chart and area chart and above the bars in a bar chart.

Examples

The following command creates data labels for all series in the chart WEST COAST from data in the range LABELS. 1-2-3 places the data labels above the bars in the chart.

{SELECT "west coast";;"chart"}

{CHART-DATA-LABELS "all";LABELS;"above"}

{CHART-FOOTNOTE}
{CHART-TITLE}

{CHART-FOOTNOTE [*line1*];[*line2*];[*position*];[*cell1*];[*cell2*]} adds chart footnotes to the current chart.

{CHART-TITLE [*line1*];[*line2*];[*position*];[*cell1*];[*cell2*]} adds chart titles to the current chart.

Arguments

line1 is text enclosed in " " (quotation marks) that specifies the first line of the chart title or footnote.

line2 is text enclosed in " " (quotation marks) that specifies the second line of the chart title or footnote.

Note to use the contents of a cell for the first or second line of a chart title or footnote, use *cell1* or *cell2*.

position is text that specifies location of the title or footnote.

position	**1-2-3 does the following**
left	Left-aligns the title or footnote in the chart
center	Centers the title or footnote in the chart
right	Right-aligns the title or footnote in the chart

cell1 is the name or address of a range that contains a label to use as the first line of the chart title or footnote. If you include both *line1* and *cell1*, 1-2-3 ignores *line1*.

cell2 is the name or address of a range that contains a label to use as the second line of the chart title or footnote. If you include both *line2* and *cell2*, 1-2-3 ignores *line2*.

Notes

If you omit an optional argument, 1-2-3 leaves that setting unchanged.

To delete existing chart title or footnote lines, specify "" for *line1* or *line2*.

Examples

The following commands change the title of the chart PROFITS to July Profits and center the title.

{SELECT "profits";;"chart"}

{CHART-TITLE "July Profits";;"center"}

The following commands change the first line of the footnote of the chart EXPENSES to the contents of the cell NOTE, and delete the second line of the footnote.

{SELECT "expenses";;"chart"}

{CHART-FOOTNOTE ;"";;NOTE}

{CHART-GRID}

{CHART-GRID *axis*;[*major*];[*minor*]} displays or hides grid lines for an axis in the current chart.

Arguments

axis is text that specifies the axis from which the grid lines originate.

axis	**1-2-3 displays or hides**
x	Vertical grid lines that originate from the x-axis
y	Horizontal grid lines that originate from the y-axis
2y	Horizontal grid lines that originate from the 2nd y-axis

major is a yes/no argument that specifies whether to display or hide grid lines that originate from major-interval tick marks.

minor is a yes/no argument that specifies whether to display or hide grid lines that originate from minor-interval tick marks.

If you omit *major* or *minor*, 1-2-3 leaves the setting unchanged.

Notes

If the current chart is a pie chart or radar chart, 1-2-3 ignores {CHART-GRID}.

Examples

The following commands select the chart named PROFITS, and then add major-interval grid lines to the x-axis and y-axis.

{SELECT "profits";;"chart"}

{CHART-GRID "x";"yes";"no"}

{CHART-GRID "y";"yes";"no"}

{CHART-LEGEND}

{CHART-LEGEND *series*;[*legend*]; [*position*];[*legend-range*]} creates legend labels that identify the colors, symbols, or patterns of the current chart's data series.

Arguments

series is text that specifies a single data series, or all data series, in the current chart.

To assign legend labels for a single data series, specify a letter from A through W for *series*; to assign legend labels for all data series, specify the word All for *series*.

legend is text enclosed in " " (quotation marks) that specifies the legend label for *series*.

If *series* is All, omit *legend*.

Note To use the contents of a cell for the legend label, use *legend-range*.

position is text that specifies location of the legend label. If you omit *position*, 1-2-3 leaves the setting unchanged.

position	**1-2-3 places the legend label**
right	To the right of the chart
below	Below the chart
manual	Leaves the setting unchanged

legend-range is the name or address of a cell or range.

If *series* specifies a single data series, *legend-range* specifies a cell that contains a label.

If *series* specifies all data series, *legend-range* specifies a range that contains as many labels as there are data series in the current chart.

If you include both *legend* and *legend-range*, 1-2-3 ignores *legend*.

Examples

The following command creates legend labels for all series in the current chart. 1-2-3 creates the labels from the data in the range LABELS and places the legend labels below the chart.

{CHART-LEGEND "all";;"below";LABELS}

{CHART-NEW}

{CHART-NEW *location*;[*type*];[*style*];[*name*]} draws a chart at *location*, using data from the currently selected range.

Arguments

location is the name or address of a range in the current file, on which 1-2-3 draws the new chart.

Note If *location* is a single cell, 1-2-3 does not automatically place and size the chart; the chart appears only in the single cell.

type is text that specifies a chart type. You can use Line, Area, Bar, Pie, XY, HLCO, Mixed, Radar, 3D-Line, 3D-Area, 3D-Bar, or 3D-Pie.

If you omit *type*, 1-2-3 uses the default chart type.

style is an offset number that specifies a style for the *type* of chart you specified.

If you omit *style*, 1-2-3 uses the first style.

name is text that specifies a name for the chart. If you omit *name*, 1-2-3 assigns a default name, such as CHART 1.

Examples

The following commands create a stacked bar chart named JULY SALES in B:A1..B:D15. 1-2-3 creates the chart from data in the range JULY.

{SELECT JULY}

{CHART-NEW B:A1..B:D15;"bar";2;"july sales"}

{CHART-PIE-LABELS}
{CHART-PIE-SLICE-EXPLOSION}

{CHART-PIE-LABELS [*values*];[*percentage*];[*x-range*]} creates labels for the current pie chart.

{CHART-PIE-SLICE-EXPLOSION *explosion-type*;[*all-by-%*]} explodes slices in the current pie chart.

Arguments

values is a yes/no argument that specifies whether to display the values in the A data range as pie-slice labels.

percentage is a yes/no argument that specifies whether to display each value in the A data range, as a percentage of 100.

x-range is a yes/no argument that specifies whether to display the contents of the X data range.

explosion-type is text that specifies how 1-2-3 explodes slices.

explosion-type	**1-2-3 explodes**
none	No slices
all	All slices by the percent specified by *all-by-%*

all-by-% is an integer from 1 through 100 that specifies a percent by which to explode the slices if *explosion-type* is All.

Notes

If you omit an optional argument, 1-2-3 leaves that setting unchanged.

Examples

The following commands select the pie chart named MARKET SHARE and label the slices only with the contents of the X data range.

{SELECT "market share";;"chart"}

{CHART-PIE-LABELS "no";"no";"yes";"no"}

The following command explodes all slices of the current pie chart by 25%.

{CHART-PIE-SLICE-EXPLOSION "all";25}

{CHART-RANGE}
{CHART-RANGE-DELETE}

{CHART-RANGE *series*;[*series-range*];[*series-type*];[*2y-axis*]} sets the data range, series type and 2nd y-axis flag for a data series in the current chart.

{CHART-RANGE-DELETE *series*} deletes the *series* from the current chart.

Arguments

series is a letter from A through Z, excluding Y, entered as text, that specifies a data series in the current chart.

If *series* is Z, 1-2-3 uses the contents of *series-range* as the legend range.

series-range is the name or address of the data range for *series*.

series-type is text that specifies the type of series for mixed charts. You can use Area, Line, or Bar.

2y-axis is a yes/no argument that specifies whether this series should be plotted on the 2nd y-axis.

Notes

If you omit an optional argument, 1-2-3 leaves that setting unchanged.

Examples

The following command uses the values in the range NEW_C for the C data series of the current chart.

{CHART-RANGE "c";NEW_C}

The following command removes the C data series from the current chart.

{CHART-RANGE-DELETE "c"}

{CHART-RENAME}

{CHART-RENAME *old-name*;*new-name*} renames a chart.

Arguments

old-name is text that specifies the current name of the chart.

new-name is text that specifies the new name you want to give the chart.

Examples

The following command renames the chart CHART 1 as4 EXPENSES.

{CHART-RENAME "chart 1";"expenses"}

{CHART-TYPE}

{CHART-TYPE *type*;[*style*];[*orientation*];[*value-tables*];[*auto-position*]} sets the type of chart for the current chart.

Arguments

type is text that specifies a chart type. You can use Line, Area, Bar, Pie, XY, HLCO, Mixed, Radar, 3D-Line, 3D-Area, 3D-Bar, or 3D-Pie.

style is an offset number that specifies a style for the *type* of chart you specified.

If you omit *style*, 1-2-3 uses the first style.

Note 1-2-3 displays the styles in two columns and up to three rows. 1-2-3 numbers the styles from left to right and top to bottom.

orientation is text that specifies the orientation of the chart.

orientation	**1-2-3 displays**
vertical	The x-axis across the bottom of the chart, the y-axis along the left edge of the chart, and the 2nd y-axis along the right edge of the chart; default if you omit the argument
horizontal	The x-axis along the left edge of the chart, the y-axis across the top of the chart, and the 2nd y-axis along the bottom of the chart.

value-tables is a yes/no argument that specifies whether to display data values under the chart. If you omit *value-tables*, 1-2-3 does not display the values.

If *type* is Pie, HLCO, Radar, or XY, or, if *orientation* is Horizontal, 1-2-3 ignores *value-tables*.

auto-position is a yes/no argument that specifies whether 1-2-3 automatically places the plot within the chart.

Notes

If you omit an optional argument (except for orientation,) 1-2-3 leaves that setting unchanged.

Examples

The following command changes the chart named CHART 1 to a horizontal stacked bar chart.

{CHART-TYPE "bar";1;"horizontal"}

{SCENARIO-ADD-VERSION}

{SCENARIO-ADD-VERSION*scenario-name*;[*scenario-creator*];*version-range*;*version-name*;[*version-creator*]} adds a version to a scenario (now called a version group).

Arguments

scenario-name is text that specifies the name of the scenario. 1-2-3 is case-sensitive for *scenario-name*.

scenario-creator is text that specifies the name of the user who created the scenario.

If you omit *scenario-creator*, 1-2-3 uses the most recently created scenario specified by *scenario-name.*

version-range is the name of range that contains the version to add. *version-range* must be an existing named range.

version-name is text that specifies an existing version for *version-range*. 1-2-3 is case-sensitive for *version-name*.

version-creator is text that specifies the name of the user who created the version.

If you omit *version-creator*, 1-2-3 uses the most recently created version for the range *version-range* specified by *version-name*.

Examples

The following command adds the version Moderate Growth for the range SALES to the scenario Moderate Growth.

{SCENARIO-ADD-VERSION "Moderate Growth";;SALES;"Moderate Growth"}

{SCENARIO-CREATE}
{SCENARIO-DELETE}
{SCENARIO-SHOW}

{SCENARIO-CREATE *name*;[*share*];[*comment*]} creates a scenario.

{SCENARIO-DELETE *name*;[*creator*]} deletes a scenario.

{SCENARIO-SHOW *name*;[*creator*]} displays in the sheet the selected scenario (now called a version group).

Arguments

name is text that specifies the name of the scenario. If you are creating a scenario and *name* already exists, 1-2-3 creates a new scenario with the same name and a different date/time stamp. 1-2-3 is case-sensitive for *name*.

share is text that specifies the sharing option for the version.

share	**1-2-3 does the following**
unprotected	Applies no protection to the scenario; default if you omit the argument
protected	Prevents changes to the scenario
hidden	Prevents changes to and hides the scenario

comment is text that specifies a comment about the scenario. If you omit *comment*, 1-2-3 does not include a comment.

creator is text that specifies the name of the user who created the scenario. 1-2-3 uses *creator* to help determine which scenario to use or delete.

If you omit *creator*, 1-2-3 uses the most recently created scenario specified by *name*.

Examples

The following command creates a scenario named Moderate Growth, prevents changes to the scenario, and adds the comment Includes all moderate growth versions.

{SCENARIO-CREATE "Moderate Growth";"protected";"Includes all moderate growth versions"}

The following command deletes the scenario named Slow Growth that was created by Isabella Martinez.

{SCENARIO-DELETE "Slow Growth";"Isabella Martinez"}

The following command displays the scenario Moderate Growth that was created by Isabella Martinez.

{SCENARIO-SHOW "Moderate Growth";"Isabella Martinez"}

{VERSION-CREATE}
{VERSION-DELETE}
{VERSION-SHOW}

{VERSION-CREATE *version-range*;*name*;[*share*];[*retain-styles*];[*comment*]} creates a new version.

{VERSION-DELETE *version-range*;*name*;[*creator*]} deletes the specified version.

{VERSION-SHOW *version-range*;*name*;[*creator]*;[*goto*]} displays in the sheet the selected version.

Arguments

version-range is the name of the range that contains the version. *version-range* must be an existing named range.

name is text that specifies the name of the version. If you are creating a version and *name* already exists, 1-2-3 creates a new version with the same name and a different date/time stamp. 1-2-3 is case-sensitive for *name*.

share is text that specifies the sharing option for the version.

share	**1-2-3 does the following**
unprotected	Applies no protection to the version; default if you omit the argument
protected	Prevents changes to the version
hidden	Prevents changes to and hides the version

retain-styles is a yes/no argument that specifies whether to save style information with the version. If you omit *retain-styles*, 1-2-3 ignores the style information.

comment is text that specifies a comment about the version. If you omit *comment*, 1-2-3 does not include a comment.

creator is text that specifies the name of the user who created the version. 1-2-3 uses *creator* to help determine which version to use or delete.

If you omit *creator*, 1-2-3 uses the most recently created version for the range *version-range* specified by *name*.

goto is a yes/no argument that specifies whether or not to scroll to *version-range*. If you omit *goto*, 1-2-3 does not scroll to the range.

Examples

The following command creates a version named Slow Growth for the range COG, saves style information with the version, and adds a comment.

{VERSION-CREATE COG;"Slow Growth";;"yes";"Assumes COG grows 1% each month"}

The following command deletes the version Slow Growth for the range COG. The version was created by Isabella Martinez.

{VERSION-DELETE COG;"Slow Growth";"Isabella Martinez"}

The following command displays the version Moderate Growth in the range SALES.

{VERSION-SHOW SALES;"Moderate Growth"}

{VERSION-INDEX-MERGE}

{VERSION-INDEX-MERGE *source-file*;[*date-filter*];[*user-filter*];[*table-location*]} copies versions and scenarios (now called a version groups), from *source-file* into the current file.

Arguments

source-file is the name of the file that contains the versions and scenarios you want to merge. *source-file* must be in memory. If *source-file* is not in the current directory, include a path.

date-filter tells 1-2-3 to merge only versions and scenarios created or modified on or after a particular date. *date-filter* is a date number or text that specifies the date in day-month-year, day-month, or Long International Date format.

user-filter tells 1-2-3 to merge only versions and scenarios created or last modified by a particular user. *user-filter* is text that specifies the user's name.

table-location is the name or address of the range where you want 1-2-3 to create the table of merge results. Specify either the entire range or only the first cell.

Caution The table occupies one column and as many rows as there are merge results, plus one blank row. 1-2-3 writes over any existing data in *table-location*.

If there are more rows in the table than there are rows remaining in the sheet, 1-2-3 truncates the table.

If you omit *table-location*, 1-2-3 does not create a table of merge results.

Notes

1-2-3 does not merge hidden versions and scenarios.

If you do not include *date-filter* or *user-filter*, 1-2-3 copies versions from named ranges in *source-file* to ranges of the same size and with the same names in the active file. If a version or scenario in the active file has the same name, creation date, last modified date, and last user as a version or scenario in *source-file*, the version or scenario in the source file is not merged.

Examples

The following command merges all versions and scenarios from the file JULY.123.

{VERSION-INDEX-MERGE "C:\PROJECT\JULY.123"}

The following command merges versions and scenarios from the file CHICAGO.123 that were created or modified on or after April 5, 1997.

{VERSION-INDEX-MERGE "CHICAGO.123";@DATE(97;4;5)}

The following command merges versions and scenarios from the file CHICAGO.123 that were last modified by John Greene.

{VERSION-INDEX-MERGE "CHICAGO.123";;"John Greene")

{VERSION-INFO}

{VERSION-INFO *version-range*;*name*;[*creator*];[*share*];[*retain-styles*]} lets you modify style retention and sharing options for a version.

Arguments

version-range is the name of range that contains the version. *version-range* must be an existing named range.

name is text that specifies the name of the version. 1-2-3 is case-sensitive for *name*.

creator is text that specifies the name of the user who created the version. 1-2-3 uses *creator* to help determine which version to use.

If you omit *creator*, 1-2-3 uses the most recently created version for the range *version-range* specified by *name*.

share is text that specifies the sharing option for the version. If you omit *share*, the sharing option for the version remains unchanged.

share	**1-2-3 does the following**
unprotected	Applies no protection to the version
protected	Prevents changes to the version
hidden	Prevents changes to and hides the version

retain-styles is a yes/no argument that specifies whether to save style information with the version. If you omit *retain-styles*, 1-2-3 ignores the style information.

Examples

The following command prevents changes to the version Moderate Growth of the range SALES.

{VERSION-INFO SALES;"Moderate Growth";;"protected"}

{DATABASE-APPEND}

{DATABASE-DELETE}

{DATABASE-FIND}

{DATABASE-APPEND *source-range*;*database-table*} adds new records to *database-table*.

{DATABASE-DELETE *database-table*;*criteria*} deletes the records from *database-table* that meet *criteria*.

{DATABASE-FIND *database-table*;*criteria*} locates and selects records in *database-table* that meet *criteria*.

Arguments

source-range is the name or address of the range that contains the records to append to *database-table*. *source-range* can be a 1-2-3 range or an external database table.

The first row of *source-range* must contain field names that are the same as those in the table to which you are appending records.

database-table is the name or address of a database table.

criteria is text that specifies a criteria formula.

Enclose text in *criteria* in "" "" (double quotation marks). For example, to specify all customers who live in Los Angeles, use "City=""Los Angeles""".

Notes

You cannot use {DATABASE-FIND} with external database tables.

Examples

The following command adds the records from the range MARCH to the database table FIRST_QUARTER.

{DATABASE-APPEND MARCH; FIRST_QUARTER}

The following command deletes the records that were entered before January 1, 1997 from the database table RECYCLE.

{DATABASE-DELETE RECYCLE;"Date<@DATE(97;1;1)"}

The following command creates a collection of all records in the database table PERSONNEL of employees who work in the Finance department.

{DATABASE-FIND PERSONNEL;"Department=""Finance"""}

{DATABASE-CONNECT}
{DATABASE-CREATE-TABLE}
{DATABASE-DISCONNECT}
{DATABASE-SEND-COMMAND}

{DATABASE-CONNECT *driver-name*;[*driver-user-id*];[*driver-password*];[*connection-string*];*db-name*;[*db-user-id*];[*db-password*];[*owner-name*];*table-name*;[*range-name*]} establishes a connection to an external database table so you can use the table with other 1-2-3 commands.

{DATABASE-CREATE-TABLE *driver-name*;[*driver-user-id*];[*driver-password*];*db-name*;[*db-user-id*];[*db-password*];[*owner-name*];*table-name*;[*range-name*];[*creation-string*];*model-table*} sets up the structure for and connects to a new table in an external database.

{DATABASE-DISCONNECT *range-name*} disconnects an external table, ending all data exchange between 1-2-3 and the external table.

{DATABASE-SEND-COMMAND *driver-name*;[*driver-user-id*];[*driver-password*];[*connection-string*];*db-name*;[*db-user-id*];[*db-password*];*command*} sends a command to an external database.

Arguments

driver-name is text that specifies the name of the database driver associated with an external database. This external database contains the table to which you want to connect.

driver-user-id is text that specifies the driver user ID.

driver-password is text that specifies the driver password.

If you omit *driver-user-id* or *driver-password*, and a user ID or password is required, 1-2-3 displays an ID / password dialog box.

connection-string is text that specifies of additional information which may be needed to connect to a driver. You must enclose *connection-string* in " " (quotation marks).

db-name is text that specifies the name of the external database that contains the table to which you want to connect.

db-user-id is text that specifies the database user ID.

db-password is text that specifies the database password.

If you omit *db-user-id* or *db-password*, and a user ID or password is required, 1-2-3 displays an ID / password dialog box.

owner-name is text that specifies the name of the owner of the table, if one is required.

table-name is text that specifies the name of the external table you want to create or connect to.

range-name is text that specifies the range name of the table.

If you omit *range-name* in {DATABASE-CONNECT}, the range name in 1-2-3 will be the same as *table-name*.

model-table is the name or address of a 1-2-3 database table or the name of an external table that 1-2-3 models the new external table on.

creation-string is text that specifies additional information about the table. For example, the Paradox driver lets you use a table creation string to specify a sort order for the table. Not all external databases require a table creation string.

command is text that specifies the command that you want to send.

Notes

If you omit *driver-user-id*, *driver-password*, *db-user-id*, or *db-password*, and an ID or password is necessary, 1-2-3 displays a dialog box. You can enter the ID or password and click OK, or click Cancel.

If you do not enter the correct ID or password, 1-2-3 returns an error.

If you click Cancel in the dialog box, the macro ends.

After 1-2-3 executes a {DATABASE-DISCONNECT} command, you cannot refer to the range name of the specified table until it is connected again with {DATABASE-CONNECT}. Any data queries, data table commands, database @functions, or other data external commands that refer to the range name of a disconnected table may result in errors.

Examples

The following command connects 1-2-3 to the table Q_1 in the external database named SALES, located on drive D:.

The name of the driver associated with this database is dBASE IV, and you specify the full path. The optional passwords, ID's and owner name are not needed to connect to this table. The range name of the table in 1-2-3 is MYSALES.

{DATABASE-CONNECT "dbase_iv";;;"d:\regional_sales";;;;"q_1";MYSALES}

The following command creates a table named Q_2 in the external database named SALES, located on drive D:. The table uses field information in a 1-2-3 range beginning at A:A1 in the current file. dBASE IV is the required driver. The optional passwords, ID's and owner name are not needed to connect to this table.

{DATABASE-CREATE-TABLE "dbase_iv";;;;"d:regional_sales";;;;"q_2";MYSALES;;A:A1}

The following command disconnects 1-2-3 from the external table Inventory.

{DATABASE-DISCONNECT "Inventory"}

The following command encrypts TABLE1 in the external database C:\DATA. The command requires the password LosAngeles.

{DATABASE-SEND-COMMAND "paradox";;;;"c:\data";;;"encrypt=table1;LosAngeles"}

{QUERY-ADD-FIELD}
{QUERY-CHOOSE-FIELDS}
{QUERY-REMOVE-FIELD}
{QUERY-SHOW-FIELD}

{QUERY-ADD-FIELD *field*} adds a field to the currently selected query table. The field is displayed as the last field in the query table.

{QUERY-CHOOSE-FIELDS [*field1*];[*field2*];...;[*field15*]} specifies the fields that you want to appear in the currently selected query table.

{QUERY-REMOVE-FIELD *field*} removes a field from the currently selected query table.

{QUERY-SHOW-FIELD *field*; *field-alias*} specifies an alias field name for *field* to display in the currently selected query table. Doing so does not change the field name in the database table, but only changes the field name in the query table.

Arguments

field is the name of a field from the database table, enclosed in " " (quotation marks).

field1...field15 are field names of the fields to be displayed in the query table, enclosed in " " (quotation marks).

1-2-3 displays fields in the query table in the same left-to-right order as they appear in the {QUERY-CHOOSE-FIELDS} command.

{QUERY-CHOOSE-FIELDS} with no arguments chooses all fields in the source database table.

field-alias is text that specifies an alternate field name to display in the query table.

Notes

1-2-3 automatically refreshes the query table after it executes a {QUERY-ADD-FIELD}, {QUERY-CHOOSE-FIELDS}, or {QUERY-REMOVE-FIELD} command.

Examples

The following commands select the query table Employees and then add the field Salary.

{SELECT "Employees";;"query"}

{QUERY-ADD-FIELD "Salary"}

The following commands select the query table Payroll and then delete all fields except Salary and EmployeeID.

{SELECT "Payroll";;"query"}

{QUERY-CHOOSE-FIELDS "Salary";"EmployeeID"}

The following commands select the query table Payroll and then delete the field LastName.

{SELECT "Payroll";;"query"}

{QUERY-REMOVE-FIELD "LastName"}

The following commands display the field name EmployeeID as ID in the query table Payroll. 1-2-3 does not change the field name in the original database table.

{SELECT "Payroll";;"query"}

{QUERY-SHOW-FIELD "EmployeeID";"ID"}

{QUERY-AGGREGATE}

{QUERY-AGGREGATE *function*;*field-name*} performs calculations on groups of data from a query table. For example, you can calculate sales by salesperson, by month of sale, or by account.

Arguments

function is text that specifies the aggregate function.

function	**1-2-3 does the following**
sum	Adds the values
avg	Averages the values
count	Counts the values
max	Finds the largest value
min	Finds the smallest value
reset	Resets the values

field-name is text that specifies the name of a field in the selected query table.

Examples

A query table named June_Sales contains a record for each sale made by an employee during the month of June. The query table contains two fields: Employee and Sales. The following command displays the total sales per employee.

{SELECT "June_Sales";;"query"}

{QUERY-AGGREGATE "sum";"Sales"}

{QUERY-COPY-SQL}

{SEND-SQL}

{QUERY-COPY-SQL} copies to the Clipboard the SQL command equivalent to the current query.

{SEND-SQL *range*;*command*;[*output-range*];[*error-code-location*]} sends a SQL syntax command string to an external database driver, against the database that contains the specified external database table.

Arguments

range is the range name of an external database table.

command is text that specifies a SQL command.

If *command* is the name or address of a range that contains labels, 1-2-3 creates the SQL command by concatenating each label in the range. 1-2-3 concatenates the labels in the range from left to right in a row and from top to bottom.

output-range is the name or address of a destination range for any data that might be received from the SQL command.

Caution 1-2-3 writes over any existing data in *output-range*.

error-code-location is the cell in which 1-2-3 will display the return code from the SQL command.

Notes

If the external database you to which you are sending the command does not support SQL, the database returns an Invalid Command error and the macro contines with the next command.

Use {DATABASE-CONNECT} to connect to an external database before using {SEND-SQL}.

{QUERY-CRITERIA}

{QUERY-CRITERIA [*criteria*]} specifies criteria to determine which records appear in a new or currently selected query table.

Arguments

criteria is text that specifies a criteria formula. If you omit *criteria*, 1-2-3 includes all records in the query table.

Enclose text in *criteria* in "" "" (double quotation marks). For example, to specify all customers who live in Los Angeles, use "City=""Los Angeles""".

Examples

The following commands make records of employees who earn at least $35,000 per year and who were hired on or after June 1, 1987, appear in the query table named Employees.

{SELECT "Employees";;"query"}

{QUERY-CRITERIA "DOH>=@DATE(87;6;1)#AND#Salary>=35000"}

The following commands make records of employees who earn at least $35,000 per year and who work in the Finance department appear in the query table named Employees.

{SELECT "Employees";;"query"}

{QUERY-CRITERIA "Department=""Finance""#AND#Salary>=35000"}

{QUERY-DATABASE-TABLE}

{QUERY-DATABASE-TABLE *database-table*} changes the database table for the currently selected query table.

Arguments

database-table is the name or address of a database table.

Notes

If the new database table contains the same fields as the current table, 1-2-3 does not change the criteria, sort settings, aggregates, or the location of the query table.

If not all the fields in the new database table match those in the current table, the macro returns an error.

Examples

The following command uses the range ENGINEERS as the database table for the query table named Employees.

{SELECT "Employees";;"query"}

{QUERY-DATABASE-TABLE ENGINEERS}

{QUERY-JOIN}

{QUERY-JOIN [*join-criteria*]} allows you to query multiple database tables that contain a common field.

Arguments

join-criteria is text that specifies a join formula.

If you omit *join-criteria*, 1-2-3 deletes all joins, leaving you with just the original database table.

About join formulas

A join formula has the format *+table1.field1=table2.field2*.

table1 and *table2* are range names for two database tables you want to query.

field1 and *field2* are the names of fields that contain similar entries in both tables.

When you use a join formula:

- Enter field names exactly as they appear in the database tables.
- The field names do not have to match, but the two fields must contain the same type of data.
- Entries in one field must match entries in the other field, and one field should not contain duplicate entries.

For example, the join formula +SALES.Item=PRICE.Item_Name tells 1-2-3 that the fields named Item and Item_Name are located in different tables but contain similar data. Each entry in PRICE.Item_Name is listed only once but may be listed many times in SALES.Item.

Examples

You want to query two database tables named SALES and PRICE. Each database has a field that contains the names of items for sale.

The join formula SALES.ITEM=PRICE.ITEM_NAME tells 1-2-3 that the fields named Item and Item_Name in two database tables (SALES and PRICE) contain the same type of data.

{SELECT "Query 1";;"query"}

{QUERY-JOIN "SALES.ITEM=PRICE.ITEM_NAME"}

{QUERY-NAME}

{QUERY-NAME *new-name*} assigns a new name to the currently selected query table.

Arguments

new-name is text that specifies the new name of the query table.

Examples

The following command renames the query table PERSONNEL to EMPLOYEES.

```
{SELECT "Personnel";;"query"}
{QUERY-NAME EMPLOYEES}
```

{QUERY-NEW}

{QUERY-NEW *database-table*;*output-range*;[*criteria*];[*query-name*];[*record-limit*];[*field1*];[*field2*];...;[*field10*]} creates a query table that contains the records you extract from a database table.

Arguments

database-table is the name or address of a database table.

output-range is the name or address of the range where you want to create the query table.

Caution 1-2-3 writes over any existing data in the range.

Caution *output-range* cannot overlap *database-table*.

Caution If you specify the top left cell of a range, the query table will contain as many fields and records as will fit in the sheet.

Caution If you specify a range, 1-2-3 displays only the records and fields that fit in that range.

Caution For example, if you specify a range of five columns by ten rows, 1-2-3 displays the first five fields and the first ten records in the order in which they appear in the database table.

Caution If you subsequently resize the query table to be larger, 1-2-3 displays the additional fields and records.

criteria is text that specifies a criteria formula. If you omit *criteria*, 1-2-3 chooses all the records in *database-table*.

Enclose text in *criteria* in "" "" (double quotation marks). For example, to specify all customers who live in Los Angeles, use "City=""Los Angeles""".

query-name is text that specifies a name for the query table. If you omit *query-name*, 1-2-3 assigns a default name, such as Query 1.

record-limit is an integer that specifies the maximum number of records to be displayed in the query table. If you omit *record-limit*, 1-2-3 displays all records that match *criteria*.

field1...field10 are names of fields from *database-table* that you want to display in the query table. Enclose the field names in " " (quotation marks). If you omit the *field* arguments, 1-2-3 chooses all the fields in *database-table*.

Notes

1-2-3 displays fields in the query table in the same left-to-right order as they appear in the {QUERY-NEW} command.

Examples

The following command creates a new query table starting in cell B:A1 from the database table EMPLOYEES. The new query table is named Finance and contains records for all employees who work in the Finance department.

{QUERY-NEW EMPLOYEES;B:A1;"Department=""finance""";"finance"}

{QUERY-OPTIONS}

{QUERY-OPTIONS *option*;*on-off*;[*record-limit*]} specifies options for manipulating data in the currently selected query table.

Arguments

option is text that specifies an option to set.

option	1-2-3 does the following
allow-updates	Allows you to post any changes made in the query table to the database table
unique-only	Excludes duplicate records from the query table.
limit-output	Lets you specify, with *record-limit*, how many records appear in the query table.
show-samples	Lets you select from a list of unique values when specifying criteria for the query table.
auto-refresh	Changes the query table results when you change any criteria, sort settings, options, choose fields, or aggregate.

on-off is a yes/no argument that specifies whether to turn *option* on or off.

record-limit is a value from 1 through 8191 that specifies how many records appear in the query table. If you do not turn on the limit-output option, 1-2-3 ignores *record-limit*.

Notes

Do not turn on both the limit-output and allow-updates options for the same query table.

Examples

The following {QUERY-OPTIONS} command ensures that 1-2-3 refreshes the query table EMPLOYEES after the {QUERY-CRITERIA} command.

{SELECT "Employees";;"query"}

{QUERY-OPTIONS "auto-refresh";"on"}

{QUERY-CRITERIA "Department=""sales"""}

{QUERY-REFRESH}

{QUERY-UPDATE}

{QUERY-REFRESH} updates records in the currently selected query table to reflect changes made to the database table, query options, criteria, or aggregate.

{QUERY-UPDATE} applies any changes you make to records in the currently selected query table to the corresponding database table.

Notes

To ensure that you can update a database table, include the following command before the macro commands that edit data in the query table:

{QUERY-OPTIONS "allow updates";"on"}

Examples

The following commands refresh the query table Inventory.

{SELECT "Inventory";;"query"}

{QUERY-REFRESH}

The following commands update the database table that corresponds to the query table Hats.

{SELECT "Hats";;"query"}

{QUERY-UPDATE}

{QUERY-SORT}

{SORT}

{QUERY-SORT [*key1*];[*order1*];[*key2*];[*order2*];[*key3*];[*order3*]} arranges data in the currently selected query table in the order you specify.

{SORT [*range*];[*key1*];[*order1*];[*key2*];[*order2*];[*key3*];[*order3*]} arranges data in *range* in the order you specify.

Arguments

key1, *key2*, and *key3* define the first, second, and third sort keys, respectively.

order1, *order2*, and *order3* specify the sort order for *key1*, *key2*, and *key3*, respectively. You must specify a sort order for each sort key.

order	**1-2-3 sorts**
ascend	A - Z, and smallest to largest values
descend	Z - A, and largest to smallest values

range is the name or address of a range that contains the data you want to sort.

Notes

If *range* is a 3D range, 1-2-3 sorts the contents of each sheet in the range separately; it does not move the entries from one sheet to another.

Use {QUERY-SORT-KEY-DEFINE} or {SORT-KEY-DEFINE} to sort with more than three keys.

Examples

The following command sorts the data in the query table Finance by LAST_NAME and DATE_OF_HIRE, both in descending order.

{SELECT "Finance";;"query"}

{QUERY-SORT last_name;"descend";date_of_hire;"descend"}

The following command sorts the data in the range JULY by the sort key NAME, in ascending order.

{SORT JULY;NAME;"ascend"}

{QUERY-SORT-KEY-DEFINE}

{SORT-KEY-DEFINE}

{QUERY-SORT-KEY-DEFINE *key-number*;*key-field*;*key-order*} defines a sort key to be used by a subsequent {QUERY-SORT} command.

{SORT-KEY-DEFINE *key-number*;*key-range*;*key-order*} defines a sort key to be used by a subsequent {SORT} command.

Arguments

key-number is an integer from 1 through 255 that specifies a sort key.

key-field is text that specifies the field name to be sorted for this key.

key-order is text that specifies the sort order for *key-field*.

order	**1-2-3 sorts**
ascend	A - Z, and smallest to largest values
descend	Z - A, and largest to smallest values

key-range is the name or address of the range to be sorted for this key.

Examples

The following macro selects the range MAIL, defines four sort keys, and then sorts the range.

```
{SELECT MAIL}
{SORT-KEY-DEFINE 1;"Name";"descend"}
{SORT-KEY-DEFINE 2;"City";"ascend"}
{SORT-KEY-DEFINE 3;"Province";"descend"}
{SORT-KEY-DEFINE 4;"PostalCode";"ascend"}
{SORT}
```

The following macro selects the query table Mail List, defines four sort keys, and then sorts the query table.

```
{SELECT "Mail List";;"query"}
{QUERY-SORT-KEY-DEFINE 1;"Name";"descend"}
{QUERY-SORT-KEY-DEFINE 2;"City";"ascend"}
{QUERY-SORT-KEY-DEFINE 3;"Province";"descend"}
{QUERY-SORT-KEY-DEFINE 4;"PostalCode";"ascend"}
{QUERY-SORT}
```

{QUERY-SORT-RESET}

{SORT-RESET}

{QUERY-SORT-RESET} clears all sort keys for the currently selected query table.

{SORT-RESET} clears all sort keys for sorting range data.

{EDIT-OBJECT}
{INSERT-OBJECT}
{UPDATE-OBJECT}

{EDIT-OBJECT [*verb*]} executes either the primary or secondary *verb* for the currently selected OLE embedded object.

{INSERT-OBJECT *object-type*;[*location*]} creates and places an OLE embedded object in the sheet.

{UPDATE-OBJECT} updates a 1-2-3 OLE object embedded in another application file.

Arguments

verb is text that specifies the verb to be executed.

verb	The server application executes the
primary	Primary verb
secondary	Secondary verb; if the object has no secondary verb, the server application executes the primary verb.

If you omit *verb*, the server application executes the edit verb, regardless of whether it is the primary verb.

object-type is text that specifies the class name of a valid, registered OLE Server object, for example, Lotus Word Pro 97 Document.

location is the name or address of the cell where you want to put the upper-left corner of the OLE object. If you omit *location*, 1-2-3 uses the current selection.

Notes

{INSERT-OBJECT} starts the selected application, or activates it if it is already open. When you choose File Exit or File Exit & Return in the server application, the server application closes if it was not already open, and you can return to 1-2-3 by clicking the sheet.

Examples

The following command starts Lotus Word Pro 97 so you can create a memo. When you choose File Exit & Return in Word Pro, 1-2-3 places the embedded Word Pro document object in the sheet, starting at cell A:G15.

{INSERT-OBJECT "Lotus Word Pro 97 Document";A:G15}

The following macro selects the embedded Lotus Word Pro 97 document Embedded 1 and lets you edit the document in Lotus Word Pro 97.

{SELECT "Embedded 1";;"draw"}

{EDIT-OBJECT}

{DELETE-COLUMNS}

{DELETE-ROWS}

{DELETE-SHEETS}

{DELETE-COLUMNS [*range*];[*delete-selection*]} deletes all of each column that includes cells in *range*; or deletes only the part of the columns covered by *range*.

{DELETE-ROWS [*range*];[*delete-selection*]} deletes all of each row that includes cells in *range*; or deletes only the part of the rows covered by *range*.

{DELETE-SHEETS [*range*]} deletes all of each sheet that includes cells in *range*.

Arguments

range is the name or address of a range with at least one cell in each column, row, or sheet you want to delete. If you omit *range*, 1-2-3 deletes columns, rows, or sheets that have cells in the currently selected range or collection.

delete-selection is a yes/no argument that specifies whether to delete only the cells in *range* and move existing data to the left (for {DELETE-COLUMNS}) or up (for {DELETE-ROWS}). If you omit *delete-selection*, 1-2-3 deletes entire columns or rows.

Examples

The following command deletes all of columns E, F, and G on sheet A.

{DELETE-COLUMNS A:E2..A:G2}

The following command deletes only that part of the rows included in the range RATES. In the rows below, only the cells beneath the deleted range move up to take the place of what was deleted.

{DELETE-ROWS RATES;"yes"}

The following command deletes sheets A, B, and C.

{DELETE-SHEETS A:A1..C:A1}

{EDIT-COPY-FILL}

{EDIT-COPY-FILL *direction;*[*range*]} copies the contents of one row, column, or sheet in *range* to all of *range*, based on a specified *direction*.

Arguments

direction is text that specifies the direction to copy the data.

direction	**1-2-3 copies the**
down	Top row of *range* to all rows in *range*
right	Leftmost column of *range* to all columns in *range*
up	Bottom row of *range* to all rows in *range*
left	Rightmost column of *range* to all rows in *range*
back	First sheet of *range* to all sheets in *range*
forward	Last sheet of *range* to all sheets in *range*

range is the name or address of the range to fill. If you omit *range*, 1-2-3 uses the current selection.

Examples

The following command copies the formulas in the first row of the range INTEREST to all the rows in that range.

{EDIT-COPY-FILL "down";INTEREST}

{EDIT-FIND}
{EDIT-FIND?}
{EDIT-REPLACE}
{EDIT-REPLACE-ALL}

{EDIT-FIND [*search-for*];[*look-in*];[*search-through*]} finds the first instance of specified characters in labels, formulas, or both.

{EDIT-FIND?} displays the Edit Find & Replace dialog box. After the user leaves the dialog box, 1-2-3 continues the macro.

{EDIT-REPLACE [*search-for*];[*look-in*];[*replacement*];[*search-through*]} finds the first instance of specified characters in labels, formulas, or both, and replaces them.

{EDIT-REPLACE-ALL [*search-for*];[*look-in*];[*replacement*];[*search-through*]} finds all instances of specified characters in labels, formulas, or both, and replaces them.

Arguments

search-for is the text for which you want 1-2-3 to search. If you omit *search-for* 1-2-3 uses the text that you last searched for.

1-2-3 does not distinguish between uppercase and lowercase letters in *search-for*.

look-in is text that specifies in what types of cell entries 1-2-3 should search. If you omit *look-in*, 1-2-3 searches the same types of cell entries as the last time you searched for or replaced text.

look-in	**1-2-3 looks in**
formulas	Cells containing formulas
text	Cells containing labels
both	Both cells containing formulas and cells containing labels

search-through is the name or address of the range you want 1-2-3 to search. If *search-through* is a single-cell, 1-2-3 searches the entire current file. If you omit *search-through*, 1-2-3 searches the current selection, providing it is a multiple-cell range; otherwise 1-2-3 searches the entire file.

replacement is the text you want 1-2-3 to replace *search-for* with. If you omit *replacement*, 1-2-3 uses the same replacement text as the last time you replaced text.

Notes

1-2-3 displays a message box if it does not find a match for *search-for* and the macro ends.

When searching the entire file, 1-2-3 starts at cell A:A1. When searching a range, 1-2-3 starts at the top left cell in the range. Whether searching the entire file or a range, 1-2-3 searches down the leftmost column, then down the next column to the right, and so on; and front to back by sheet.

Examples

The following commands select a range and then display the Edit Find & Replace dialog box.

{SELECT A1..F20}

{EDIT-FIND?}

The following command searches both labels and formulas in the range PRINCIPAL for the first instance of the text Stock Quote.

{EDIT-FIND "Stock Quote";"both";PRINCIPAL}

The following command searches both labels and formulas in the range STOCKS, and replaces the first instance of the text Ibex with the text Willow.

{EDIT-REPLACE "Ibex";"both";"Willow";STOCKS}

The following command searches all labels in the current file and replaces all instances of the text Tax Rate with the text Losses.

{EDIT-REPLACE-ALL "Tax-Rate";"text";"Losses"}

{EDIT-PASTE-SPECIAL}

{EDIT-PASTE-SPECIAL [*destination*];[*property*]} inserts data on the Clipboard into the sheet.

Arguments

destination is the name or address of a range where you want to paste the clipboard contents. If you omit *destination*, 1-2-3 uses the current selection.

property is text that specifies what to paste.

property	**1-2-3 pastes**
cell-contents	Cell contents, but leaves the styles in *destination* intact
styles	All styles, but does not change the cell contents
both	Both cell contents and styles; default if you omit the argument
values	Both cell contents and styles, but converts all formulas to values

Examples

The following commands copy a column of @SUM formulas from the range TOTALS to the range JUNE_TOTALS, and replace the copied formulas with their current values.

{EDIT-COPY TOTALS}

{EDIT-PASTE-SPECIAL JUNE_TOTALS;"values"}

{EDIT-QUICK-COPY}

{EDIT-QUICK-MOVE}

{EDIT-QUICK-COPY *destination*;[*source*]} copies data and related styles from the *source* range to the *destination* range, without using the Clipboard.

{EDIT-QUICK-MOVE *destination*;[*source*]} moves data and related styles from the *source* range to the *destination* range, without using the Clipboard.

Arguments

destination is the name or address of the range to which you are copying.

source is the name or address of the range from which you are copying. If you omit *source*, 1-2-3 copies the current selection.

Notes

{EDIT-QUICK-COPY} and {EDIT-QUICK-MOVE} are equivalent to copying and moving data with the mouse.

1-2-3 moves but does not copy all drawn objects fastened, at all points, to the *destination* range.

Examples

The following command copies data and styles from the range RATE to the range INTEREST.

{EDIT-QUICK-COPY INTEREST;RATE}

The following command moves data and styles from the range MONTHS to the range EXPENSES.

{EDIT-QUICK-MOVE EXPENSES;MONTHS}

{FILE-UPDATE-LINKS}

{FILE-UPDATE-LINKS} recalculates formulas in the current file that contain links to other files.

{INSERT-COLUMNS}

{INSERT-ROWS}

{INSERT-SHEETS}

{INSERT-COLUMNS [*range*];[*number*];[*insert-selection*]} inserts one or more blank columns in the current file, or inserts only the part of the columns covered by *range*.

{INSERT-ROWS [*range*];[*number*];[*insert-selection*]} inserts one or more blank rows in the current file, or inserts only the part of the rows covered by *range*.

{INSERT-SHEETS [*where*];[*number*];[*range*]} inserts one or more blank sheets in the current file.

Arguments

range is a name or address of a range. 1-2-3 inserts columns immediately to the left of *range* and rows immediately above *range*. If you omit *range*, 1-2-3 uses the current selection.

number is an integer that specifies how many columns, rows, or sheets to insert. If you omit *number*, 1-2-3 inserts the same number of columns, rows, or sheets as there are in *range*.

insert-selection is a yes/no argument that specifies whether to insert only the cells in *range* and move existing data to the right (for {INSERT-COLUMNS}) or down (for {INSERT-ROWS}). If you omit *insert-selection*, 1-2-3 inserts entire columns or rows.

where specifies where to insert blank sheets.

where	**1-2-3 inserts sheets**
before	Immediately before the first sheet in *range*
after	Immediately after the first sheet in *range*; default if you omit the argument

Examples

Suppose the range A:A1..C:G25 is named OCTOBER. This range occupies part of seven columns in each of the sheets A, B, and C. The following command inserts seven entire columns immediately to the left of column A in each sheet.

{INSERT-COLUMNS OCTOBER}

The following command inserts part of four rows immediately above the range A:A5..A:D5.

{INSERT-ROWS A:A5..A:D5;4;"yes"}

The following command inserts three sheets before the current sheet.

{INSERT-SHEETS "before";3}

{FILE-CLOSE}

{FILE-CLOSE [*discard*]} closes the current file.

Arguments

discard is a yes/no argument that specifies whether to discard any unsaved changes to the current file.

If you specify "yes" for *discard* and there are unsaved changes in the current file, 1-2-3 closes the file without saving unsaved changes and without updating embedded OLE objects.

If you specify "no" for *discard* and there are unsaved changes in the current file, {FILE-CLOSE} has no effect. The file remains open; and no message is displayed.

If you specify "no" for *discard* and there are no unsaved changes in the current file, 1-2-3 closes the file.

If you omit *discard*, and there are no unsaved changes in the current file, 1-2-3 closes the file.

If you omit *discard*, and there are unsaved changes in the current file, 1-2-3 displays the Save Changes and/or Update OLE dialog box. If you click Cancel in the dialog box, the macro continues.

Examples

If there are unsaved changes in the current file, the following command displays the Save Changes dialog box.

{FILE-CLOSE}

If there are unsaved changes, the following command has no effect; the current file remains open. if there are no unsaved changes, 1-2-3 closes the current file.

{FILE-CLOSE "no"}

The following command closes the current file regardless of whether or not there are unsaved changes.

{FILE-CLOSE "yes"}

{FILE-COMBINE}

{FILE-COMBINE [*how*];*file-name*;[*password*];[*source*]} combines data and number formats from a 1-2-3 Workbook (.123, .WK*) file into the current workbook, starting in the current cell.

Arguments

how specifies how you want 1-2-3 to combine data. You can only include *how* if you are combining data from 1-2-3 files.

how	**1-2-3 combines data this way**
add	Adds numbers and the results of numeric formulas in a file on disk to numbers or blank cells in the current file
replace	Replaces data in the current file with data copied from the file on disk; default if you omit the argument
subtract	Subtracts numbers and the results of numeric formulas in a file on disk from numbers or blank cells in the current file

file-name is text that specifies the name of the file containing data which you want to combine with data in the current file.

password is text that specifies a password for accessing the file.

If you omit *password*, and a password is necessary, 1-2-3 displays a password dialog box. You can enter the password and click OK, or click Cancel.

If you do not enter the correct password, 1-2-3 returns an error.

If you click Cancel in the dialog box, the macro ends.

source is the name or address of the range in *file-name* that contains data that you want to combine with data in the current file. You must enclose *source* in " " (quotation marks). If you omit *source*, 1-2-3 combines all the data in *file-name* with data in the current file.

Notes

You can use {FILE-COMBINE} with 1-2-3 files (.123, .WK*), Symphony files (.WR*), and Graph files (.CGM and .PIC).

1-2-3 does not combine information from format files.

Examples

The following commands add the numeric data from the range ASSETS in the file SALES.123 to numeric data in the current file, starting at cell A:A20.

{SELECT A:A20}

{FILE-COMBINE "add";"sales.123";;"assets"}

{FILE-EXIT}

{FILE-EXIT [*discard*]} ends the 1-2-3 session.

Arguments

discard is a yes/no argument that specifies whether to discard any unsaved changes to any active files.

If you specify "yes" for *discard* and there are unsaved changes in active files, the 1-2-3 session ends without saving unsaved changes and without updating embedded OLE objects.

If you specify "no" for *discard* and there are unsaved changes in active files, {FILE-EXIT} has no effect. The 1-2-3 session does not end; and no message appears.

If you omit or specify "no" for *discard* and there are no unsaved changes in active files, the 1-2-3 session ends.

If you omit *discard*, and there are unsaved changes in active files, 1-2-3 displays the Save Changes and/or Update OLE dialog box. If you click Cancel in the dialog box, the macro ends.

Examples

If there are unsaved changes in any active files, the following command displays the Save Changes dialog box.

{FILE-EXIT}

If there are unsaved changes, the following command has no effect; the 1-2-3 session does not end. If there are no unsaved changes, the 1-2-3 session ends.

{FILE-EXIT "no"}

The following command ends the 1-2-3 session regardless of whether or not there are unsaved changes.

{FILE-EXIT "yes"}

The following commands save all unsaved changes in all active files and then end the 1-2-3 session.

{FILE-SAVE-ALL}

{FILE-EXIT}

{FILE-EXTRACT}
{FILE-SAVE}
{FILE-SAVE-ALL}
{FILE-SAVE-AS?}

{FILE-EXTRACT *file-name*;[*file-type*];[*password*];[*backup*];[*extract-range*];[*properties*]} saves a range to another file.

{FILE-SAVE [*file-name*];[*file-type*];[*password*];[*backup*]} saves the current file.

{FILE-SAVE-ALL} saves all active files.

{FILE-SAVE-AS?} displays the File Save As dialog box.

Arguments

file-name is text that specifies the name of the file you want to save.

If *file-name* does not specify an existing file, 1-2-3 creates a file named *file-name* and saves it.

If *file-name* specifies an existing file, and you omit *backup*, 1-2-3 displays a Backup, Replace, or Cancel dialog box.

If you omit *file-name*, 1-2-3 saves the file with its existing name, if there is one. If the file has never been saved, 1-2-3 displays the File Save As dialog box.

Note You cannot omit *file-name* from {FILE-EXTRACT}.

file-type is text that specifies the format of the saved file.

file-type	1-2-3 saves the file as
1-2-3	.123 format; default if you omit the argument
1-2-3 (wk4)	.WK4 format (1-2-3 Release 4 and 5)
1-2-3 (wk3)	.WK3 format with formatting information in .FM3 format
1-2-3 (wk1)	.WK1 format with formatting information in .FMT format
dbase (dbf)	A dBASE file
excel (xlw)	An Excel Workbook file
excel (xls)	An Excel Worksheet file
paradox (db)	A Paradox file
text (txt)	A text file (.TXT)
shared	A shared file (.NS4)

Note You cannot use "shared", "excel (xlw)", or "excel (xls)" for *file-type* with {FILE-EXTRACT}.

password is text that specifies a password with which to save the file.

If you omit *password*, and the file specified by *file-name* has a password, 1-2-3 saves the file with that password.

Note 1-2-3 does not support passwords for text files. If you specify a password for a text file, 1-2-3 ignores the password.

backup is text that specifies whether or not to create a backup file if *file-name* specifies an existing file.

backup	1-2-3 does the following
backup	Adds a .BAK extension to the name of the file on disk and saves the current file as *file-name*
replace	Replaces the existing file with the current file

If you omit *backup*, and *file-name* specifies an existing file, 1-2-3 displays a Backup, Replace, Cancel dialog box. If you click Cancel, the macro ends.

Note 1-2-3 does not create backup files for text files.

extract-range is the name or address of a range from which you want to extract data. If you omit *extract-range*, 1-2-3 uses the currently selected range.

properties is text that specifies how to save values from *extract-range*.

properties	**1-2-3 does the following when saving *extract-range***
formulas	Saves formulas without converting them to values; default if you omit the argument.
values	Converts formulas to values.

Examples

The following command saves data from the range REVENUES in the current file to a file named SALES.123. When saving formulas from REVENUES, 1-2-3 converts them to values.

{FILE-EXTRACT "sales.123";"1-2-3 (wk3)";;"backup";REVENUES;"values"}

The following lines from a macro open a file named JULY.123 with the password Zeus, edit the file, and then save it with the new name AUGUST.123, with no password.

Note that when you omit *password* from {FILE-SAVE}, the new file does not have the same password as the original file; it has no password.

{FILE-OPEN "july.123";"Zeus"}

{SELECT F10}

{CELL-ENTER "9751"}

{SELECT F11}

{CELL-ENTER "805"}

{SELECT F14}

{CELL-ENTER "276}

{FILE-SAVE "August"}

{FILE-GET-RESERVATION}

{FILE-RELEASE-RESERVATION}

{FILE-GET-RESERVATION} gets the reservation for the current file if it is available and no one saved the file since you read it into memory. When you get the reservation, you are the only person who can save changes to the file.

{FILE-RELEASE-RESERVATION} releases the reservation for the current file.

Examples

The following macro gets the network reservation setting of the current file, runs the subroutine UPDATE, saves the file, and then releases the network reservation setting.

```
{FILE-GET-RESERVATION}
{DISPATCH UPDATE}
{FILE-SAVE}
{FILE-RELEASE-RESERVATION}
```

{FILE-IMPORT}

{FILE-IMPORT [*read-text-as*];*file-name*;[*character-set*]} combines data from a text file with the current file.

Arguments

read-text-as is text that specifies how 1-2-3 should combine data from a text file.

read-text-as can be text from the table below.

read-text-as	**1-2-3 imports**
text	Text and numbers from a nondelimited text file. 1-2-3 enters each line of data as a label in a separate cell using successive cells in the same column. If a line of data is longer than 512 characters, the macro ends with an error unless you include an {ONERROR} command. If there are more than 256 columns of data, 1-2-3 truncates the extra data. If there are more than 8192 lines of data, 1-2-3 creates a new sheet for each group of 8192 lines. 1-2-3 also creates a new sheet when it encounters a form feed (0x0C) character.
numbers	Text and numbers from a delimited text file, or only numbers from a nondelimited text file.
tab	Text and numbers from a tab-delimited text file. Two consecutive tabs result in a blank cell.
comma	Text and numbers from a comma-delimited text file.
space	Text and numbers from a space-delimited text file.
semicolon	Text and numbers from a semicolon-delimited text file.
autoparse	Text and numbers based on the layout of the file. 1-2-3 automatically parses the text file by determining where the breaks are, then breaking the data into separate columns in the sheet.

For numbers, tab, comma, space, and semicolon, 1-2-3 enters each line of data in a separate successive row. Each numeric or text item in the line is entered one item per cell in successive cells in the row.

For numbers, tab, comma, space, semicolon, and autoparse, if there are more than 512 characters between delimiters, 1-2-3 truncates the data. If there are more than 256 columns of data, the macro ends with an error unless you include an {ONERROR} command.

If you omit *read-text-as* 1-2-3 uses the same separator you specified in the past. If no separator was previously specified, 1-2-3 uses "autoparse" for *read-text-as*.

file-name is text that specifies the name of the text file containing the data you want to combine with data in the current file.

character-set is text that specifies the code page you want 1-2-3 to use for interpreting the data in the text file.

character-set	**1-2-3 uses this code page**
windows	Windows ANSI; default if you omit the argument

dos	DOS or OS/2
cp850	Multilingual
cp932	Japanese
kanji	Kanji
big5	Taiwanese
ks	Korean
gb	Chinese
cp1252	US Windows
cp437	US DOS
cp860	Portuguese
cp863	French Canadian
cp865	Norwegian/Danish
cp1250	Eastern European Windows
cp852	Eastern European DOS
cp1251	Cyrillic Windows
cp866	Cyrillic DOS
cp1253	Greek Windows
cp851	Greek DOS
cp1254	Turkish Windows
cp857	Turkish DOS
cp1255	Hebrew Windows
cp1256	Arabic Windows

Notes

Make sure that numbers in a text file do not contain commas, since these are delimiters. For example, 1-2-3 interprets 12,345 as two values, 12 and 345.

Examples

The following command copies the data from D:\FILES\EXPENSES.TXT, a nondelimited text file, to the current file, starting at the current cell. 1-2-3 enters each line of data as a long label in successive cells in the same column.

{FILE-IMPORT "text";"d:\files\expenses.txt"}

{FILE-NEW}

{FILE-NEW [*file-name*];[*where*];[*smartmaster*]} creates a new file, places the new file in a window, and makes the window current.

Arguments

file-name is text that specifies the name of the file that you want to create. If you omit *file-name*, 1-2-3 supplies a default file name for the current path. The first default file name is FILE0001.123, the next default file name is FILE0002.123, and so on.

where is text that specifies the order of the new file in memory. In a macro, the order of files in memory applies only to moving from file to file with macro commands such as {NEXTSHEET} and {PREVSHEET}.

where	**1-2-3 opens the new file**
before	Immediately before the current file in memory; default if you omit the argument
after	Immediately after the current file in memory

smartmaster is text that specifies the name of the SmartMaster (WT4) file you want to use to create the new file. You do not have to include the path or WT4 extension.

If you omit *smartmaster,* 1-2-3 creates a new blank file, and displays a sheet with the cell pointer in cell A1

Examples

The following command creates a new file named DEBITS.123 immediately before the current file in memory. A:A1 in DEBITS.123 becomes the current cell.

{FILE-NEW "debits.123"}

The following command creates a new file named DEBITS.123 immediately after the current file in memory, using the Fast Financials SmartMaster (FINANCE.WT4).

{FILE-NEW "debits.123";"after";"finance"}

{FILE-OPEN}

{FILE-OPEN?}

{FILE-RETRIEVE}

{FILE-OPEN *file-name*;[*password*];[*read-only*];[*where*];[*read-text-as*];[*character-set*]} reads a file into memory, makes it the current file, and moves the cell pointer to the cell it was in when you last saved the file.

{FILE-OPEN?} displays the File Open dialog box.

{FILE-RETRIEVE *file-name*;[*password*];[*read-only*];[*read-text-as*]} replaces the current file in memory with a file from disk, and moves the cell pointer to the cell it was in when you last saved the file.

Caution When you replace the current file with a file retrieved with {FILE-RETRIEVE}, 1-2-3 removes the current file from memory without saving it and without prompting the user.

Arguments

file-name is text that specifies the name of the file you want to open. If *file-name* specifies a file that is already open, or if no file of that name exists, 1-2-3 returns an error.

password is text that specifies a password for opening the file.

If you omit *password*, and a password is necessary, 1-2-3 displays a password dialog box. You can enter the password and click OK, or click Cancel.

If you do not enter the correct password, 1-2-3 returns an error.

If you click Cancel in the dialog box, the macro ends.

read-only is a yes/no argument that specifies whether 1-2-3 should open the file as read only, if another user or another application has the network reservation for the file, or not open the file.

If you specify "yes" for *read-only* and the file is not reserved, 1-2-3 opens the file, and you get the network reservation for the file.

If you specify "no" for *read-only* and the file is reserved, 1-2-3 does not open the file.

If you omit read-only, and the file is reserved, 1-2-3 displays a dialog box saying that the file is currently in use and asking whether to open it for viewing only or not to open it.

where is text that specifies the order of the new file in memory. In a macro, the order of files in memory applies only to moving from file to file with macro commands such as {NEXTSHEET} and {PREVSHEET}.

where	**1-2-3 opens the new file**
before	Immediately before the current file in memory
after	Immediately after the current file in memory; default if you omit the argument

read-text-as specifies how 1-2-3 opens a text file.

read-text-as can be text from the table below.

read-text-as	**1-2-3 imports**
text	Text and numbers from a nondelimited text file. 1-2-3 enters each line of data as a label in a separate cell using successive cells in the same column. If a line of data is longer than 512 characters, the macro ends with an error unless you include an {ONERROR} command. If there are more than 256 columns of data, 1-2-3 truncates the extra data. If there are more than 8192 lines of data, 1-2-3 creates a new sheet for each group of 8192 lines. 1-2-3 also creates a new sheet when it encounters a form

	feed (0x0C) character.
numbers	Text and numbers from a delimited text file, or only numbers from a nondelimited text file.
tab	Text and numbers from a tab-delimited text file. Two consecutive tabs result in a blank cell.
comma	Text and numbers from a comma-delimited text file.
space	Text and numbers from a space-delimited text file.
semicolon	Text and numbers from a semicolon-delimited text file.
autoparse	Text and numbers based on the layout of the file. 1-2-3 automatically parses the text file by determining where the breaks are, then breaking the data into separate columns in the sheet.

For numbers, tab, comma, space, and semicolon, 1-2-3 enters each line of data in a separate successive row. Each numeric or text item in the line is entered one item per cell in successive cells in the row.

For numbers, tab, comma, space, semicolon, and autoparse, if there are more than 512 characters between delimiters, 1-2-3 truncates the data. If there are more than 256 columns of data, the macro ends with an error unless you include an {ONERROR} command.

If you omit *read-text-as* 1-2-3 uses the same separator you specified the last time you used File Open Text Options, {FILE-IMPORT}, or {FILE-OPEN}. If no separator was previously specified, 1-2-3 uses "autoparse" for *read-text-as*.

character-set is text that specifies the code page you want 1-2-3 to use for interpreting the data in the text file.

Generally, you use the Windows ANSI or DOS code pages.

character-set	**1-2-3 uses this code page**
windows	Windows ANSI; default if you omit the argument
dos	DOS or OS/2
cp850	Multilingual
cp932	Japanese
kanji	Kanji
big5	Taiwanese
ks	Korean
gb	Chinese
cp1252	US Windows
cp437	US DOS
cp860	Portuguese
cp863	French Canadian
cp865	Norwegian/Danish
cp1250	Eastern European Windows
cp852	Eastern European DOS
cp1251	Cyrillic Windows
cp866	Cyrillic DOS
cp1253	Greek Windows
cp851	Greek DOS
cp1254	Turkish Windows

cp857	Turkish DOS
cp1255	Hebrew Windows
cp1256	Arabic Windows

Notes

1-2-3 cannot open certain types of files, including .ALL, .FM?, .WMF, .BMP,.CGM and .PIC files, with {FILE-OPEN}, {FILE-OPEN?}, or {FILE-RETRIEVE}. If you try to open these types of files with these commands,1-2-3 returns an error.

Use {FILE-COMBINE} to open .CGM and .PIC files.

Examples

The following command opens the file EXPENSES.123. If the file is reserved, 1-2-3 will open it for viewing only.

{FILE-OPEN "expenses.123";;;"yes"}

The following command replaces the current file with the file FINANCES.123.

{FILE-RETRIEVE "finances.123"}

{FILE-SEAL}

{FILE-UNSEAL}

{FILE-SEAL [*password*]} controls the reservation for the current file and seals the file.

{FILE-UNSEAL [*password*]} unseals the current file and releases its network reservation setting.

Arguments

password is text that specifies a password for sealing or unsealing the current file.

If you omit *password* for {FILE-SEAL}, 1-2-3 displays a dialog box for entering a password to seal the file. If you click Cancel in the dialog box, the macro ends.

If you omit *password* for {FILE-UNSEAL}, 1-2-3 displays a password dialog box. You can enter the password and click OK, or click Cancel.

If you do not enter the correct password, 1-2-3 returns an error.

If you click Cancel in the dialog box, 1-2-3 does not unseal the file, but continues to the macro command in the next cell.

Examples

The following command seals the current file and prevents changes to its reservation status. 1-2-3 displays a password dialog box for sealing, and later unsealing the file.

{FILE-SEAL}

The following macro runs the subroutine UPDATE, saves the file, and then unseals the network reservation setting. 1-2-3 displays a password dialog box for sealing, and later unsealing the file.

{DISPATCH UPDATE}

{FILE-SAVE}

{FILE-UNSEAL}

{CELL-ENTER}

{CELL-ENTER *data*;[*target-location*]} enters *data* in *target-location*.

Arguments

data is the text, number, or formula you want to enter in the sheet, enclosed in " " (quotation marks).

target-location is the name or address of the cell where you want to enter *data*. If you specify a range, 1-2-3 enters *data* in the first cell in the range. If you omit *target-location*, 1-2-3 enters *data* in the current cell.

Notes

{CELL-ENTER} is equivalent to entering or editing data in a sheet.

1-2-3 determines whether *data* is text, a formula, or a number, just as it would if you were typing it at the keyboard. This means, for example, that if *data* is a formula, 1-2-3 enters the formula in *target-location* and displays the result of the formula in the sheet.

The same messages can occur when you use {CELL-ENTER} as when you enter data by typing; for example, "Out of memory." Also, if 1-2-3 determines that *data* is an invalid formula, it displays the message "Invalid Expression" and does not enter *data* in *target-location*.

Examples

The following command enters the company name Absolute Enterprises, Inc., in the current cell.

{CELL-ENTER "Absolute Enterprises; Inc."}

The following commands enter a series of values in cells C5, C6, and C7 of the current sheet.

{EDIT-GOTO C5}

{CELL-ENTER "221"}

{DOWN}

{CELL-ENTER "217"}

{DOWN}

{CELL-ENTER "212"}

The following command enters a formula in the first cell of the range ACTION; 1-2-3 displays the result of the formula in the sheet.

{CELL-ENTER "+A1=1#AND#A2=2";action}

{EDIT-GOTO}

{SELECT}

{EDIT-GOTO *name*;[*part*];[*type*]} selects all or part of a range, query table, chart, or other drawn object, and then scrolls to it. Any items in the same file that were previously selected become unselected.

{SELECT *name*;[*part*];[*type*]} selects all or part of a range, chart, query table, or other drawn object, without scrolling to it. Any items in the same file that were previously selected become unselected.

Arguments

name is the name of the item you want to select. The item can be in the current file or in another open file.

For a range, *name* is a range name or address.

For a query table, chart, or other drawn object, name is the name of the item, enclosed in " " (quotation marks).

Note 1-2-3 creates drawn-object names, which you cannot edit. The name of a drawn object is displayed in the selection indicator when the drawn object is selected.

part specifies a part that may be included in the item specified by *name*. For example, you can select a cell in a range or the title in a chart. If you omit *part*, 1-2-3 selects the entire item specified by *name.*

If *name* specifies a range *part* must be the name or address of a single cell.

If *name* specifies a chart, *part* must be the name of a chart element, enclosed in " " (quotation marks).

If *name* specifies a query table, *part* must be a field name, enclosed in " " (quotation marks).

type is text that specifies what type of item *name* refers to. *type* can be chart, draw, query, or range. If you omit *type*, 1-2-3 uses range.

Notes

If *name* specifies a named chart created in Release 2 or Release 3, 1-2-3 adds the chart to the center of the sheet area displayed on screen.

Examples

The following command selects and displays a range named EXPENSES in the current file.

{EDIT-GOTO EXPENSES}

The following command selects the range A:C1..A:C5 and makes A:C5 the current cell.

{SELECT A:C1..A:C5;A:C5}

The following command selects and displays the chart Costs.

{EDIT-GOTO "Costs";;"chart"}

The following command selects the title of the chart Costs.

{SELECT "Costs";"title box";"chart"}

The following command selects the query table Employees.

{SELECT "Employees";;"query"}

The following command selects and displays the field Salary in the query table Employees.

{EDIT-GOTO "Employees";"Salary";"query"}

{SCROLL-COLUMNS}
{SCROLL-ROWS}

{SCROLL-COLUMNS [*amount*]} scrolls horizontally by column in the current sheet.

{SCROLL-ROWS [*amount*]} scrolls vertically by row in the current sheet.

Arguments

amount is an integer that specifies how many columns or rows to scroll.

If *amount* is positive, 1-2-3 scrolls right by column or down by row.

If *amount* is negative, 1-2-3 scrolls left by column or up by row.

If *amount* is 0, 1-2-3 does not scroll.

If you omit *amount*, 1-2-3 uses 1.

Notes

These commands do not change the current cell. For example, if cell A:A1 is current, it is still the current cell after scrolling.

If you display more than one sheet, 1-2-3 scrolls in the pane that contains the cell pointer.

If the absolute (positive) value of *amount* is greater than the number of remaining columns or rows in the sheet, 1-2-3 scrolls as far as possible.

Examples

The following macro scrolls ten columns left and ten rows down. The current cell does not change.

{SCROLL-COLUMNS -10}

{SCROLL-ROWS 10}

{SCROLL-TO-CELL}
{SCROLL-TO-COLUMN}
{SCROLL-TO-ROW}

{SCROLL-TO-CELL *location*} scrolls in the current sheet so that the first cell of *location* is in the top left corner of the sheet window.

{SCROLL-TO-COLUMN *location*} scrolls left or right in the current sheet so that the leftmost column of *location* is the leftmost column of the sheet window.

{SCROLL-TO-ROW *location*} scrolls up or down in the current sheet so that the top row of *location* is the top row in the sheet window.

Arguments

location is the name or address of the range to which you want to scroll.

Notes

{SCROLL-TO-COLUMN} is equivalent to moving the scroll box in the horizontal scroll bar. {SCROLL-TO-ROW} is equivalent to moving the scroll box in the vertical scroll bar.

If you display more than one sheet, 1-2-3 scrolls in the pane that contains the cell pointer.

These commands do not change the current cell. For example, if cell A:A1 is current, it is still the current cell after scrolling.

{SCROLL-TO-CELL} returns an error if *location* is not in the sheet that contains the current cell. {SCROLL-TO-COLUMN} and {SCROLL-TO-ROW} ignore sheet letters in *location*.

Examples

The following command scrolls the current sheet so cell X32 is the top left cell.

{SCROLL-TO-CELL X32}

The following command scrolls the current sheet horizontally so that column M is the leftmost column.

{SCROLL-TO-COLUMN M1..P25}

The range A:B60..A:F70 is named EXPENSES. The following command scrolls the current sheet vertically so that row 60 is the top row.

{SCROLL-TO-ROW EXPENSES}

{SCROLL-TO-OBJECT}

{SCROLL-TO-OBJECT *name;* [*type*]} scrolls to but does not select a range, query table, chart or other drawn object in the current sheet.

Arguments

name is the name of the item you want to scroll to.

For a range, *name* is a range name or address.

For a query table, chart, or other drawn object, name is the name of the item, enclosed in " " (quotation marks).

Note 1-2-3 creates drawn-object names, which you cannot edit. The name of a drawn object is displayed in the selection indicator when the object is selected.

type is text that specifies what type of item *name* refers to. *type* can be chart, draw, query, or range. If you omit *type*, 1-2-3 uses range.

Notes

{SCROLL-TO-OBJECT} does not change the current cell. For example, if cell A:A1 is current, it is still the current cell after scrolling.

You cannot scroll to a part of another item. For example, you can scroll to a chart, but not to the title of a chart.

{SCROLL-TO-OBJECT} returns an error if the item is not on the sheet that contains the current cell.

Examples

The following command scrolls to a chart named Chart 1 in the current sheet.

{SCROLL-TO-OBJECT "Chart 1";"chart"}

{SELECT-ALL}

{SELECT-ALL [*type*]} selects one of the following:

The active area of the current sheet

All charts or drawn objects in the current sheet

All sheets in the current file

Arguments

type is text that specifies what type of item to select.

type	1-2-3 selects
cells	The active area of the current sheet; default if you omit the argument
charts	All charts in the current sheet
drawn-objects	All drawn objects in the current sheet
sheets	All sheets in the current file

Notes

You cannot select parts of items. For example, you can select all charts, but not the titles of all charts.

Examples

The following macro selects the active area of the current sheet and then formats all the values as comma with no decimal places.

{SELECT-ALL "cells"}

{STYLE-NUMBER-FORMAT "comma";0}

Suppose the current sheet contains several text blocks. The following macro selects all the text blocks and then changes their font to Arial 10 point.

{SELECT-ALL "drawn-objects"}

{STYLE-FONT "Arial"}

{STYLE-FONT-SIZE 10}

{SELECT-APPEND}

{SELECT-REMOVE}

{SELECT-APPEND *name*;*part*} selects all or part of a range, chart, or other drawn object without deselecting those currently selected.

{SELECT-REMOVE *name*} removes a range, chart, or other drawn object from the currently selected collection.

Arguments

name is the name of the item to add to or remove from the currently selected collection or group of items. If *name* is not an existing name for the type of item currently selected, {SELECT-APPEND} and {SELECT-REMOVE} return an error.

If ranges are currently selected, *name* can be the name or address of any range in the current file.

If charts or drawn objects are currently selected, *name* must be the name of a chart or drawn object in the current sheet, enclosed in " " (quotation marks).

Note 1-2-3 creates drawn-object names, which you cannot edit. The name of a drawn object is displayed in the selection indicator when the object is selected.

part specifies a part that may be included in the item specified by *name*. For example, you can select a cell in a range or the title in a chart. If you omit *part*, 1-2-3 selects the entire item specified by *name.*

If *name* specifies a range, *part* must be the name or address of a single cell.

If *name* specifies a chart, *part* must be the name of a chart element, enclosed in " " (quotation marks).

Examples

The following macro selects cells in columns C, E, and G and then sets the widths of the columns to 12.

{SELECT A:C1}

{SELECT-APPEND A:E1}

{SELECT-APPEND A:G1}

{COLUMN-WIDTH 12}

The following command removes the range TOTALS from the currently selected collection.

{SELECT-REMOVE TOTALS}

{SELECT-RANGE-RELATIVE}

{SELECT-RANGE-RELATIVE [*column*];[*row*];[*sheet*];[*cp-col-off*];[*cp-row-off*];[*cp-sheet-off*]} moves the cell pointer and then selects a range whose address is represented by offsets of the current cell (the current cell is 0).

Any items in the same file that were previously selected become unselected.

Arguments

column, *row*, and *sheet* extend the selection from the current cell by the specified number of columns, rows, or sheets.

cp-col-off, *cp-row-off*, and *cp-sheet-off* move the current cell a specified number of columns, rows, or sheets before selecting the range.

column and *cp-col-off* are offset numbers from -255 through 255.

row and *cp-row-off* are offset numbers from -8191 through 8191.

sheet and *cp-sheet-off* are offset numbers from -255 through 255.

Positive numbers extend the selection or move the current cell as follows:

By column	Right (toward column IV)
By row	Down (toward row 8192)
By sheet	Forward (away from A:)

Negative numbers extend the selection or move the current cell as follows:

By column	Left (toward column A)
By row	Up (toward row 1)
By sheet	Back (toward A:)

If you omit any argument, 1-2-3 uses 0.

Notes

1-2-3 moves the cell pointer first and then selects the range.

{SELECT-RANGE-RELATIVE} does not return an error if the absolute value of any argument is larger than the number columns, rows, or sheets remaining in the file.

If the absolute value of *column*, *row*, or *sheet* is larger than the number of remaining columns, rows, or sheets, the selection extends to the first or last column, row, or sheet.

For example, suppose there are three sheets in the current file, and the current cell is cell B:C5. If *column* is -10, *row* is -10, and *sheet* is 10, 1-2-3 extends the selection to cell C:C5.

If the absolute value of *cp-col-off, cp-row-off*, or *cp-sheet-off* is larger than the number of columns, rows, or sheets remaining in the file, 1-2-3 moves the cell pointer to the first or last column, row, or sheet.

For example, suppose there are three sheets in the current file, and the current cell is cell B:C5. If *cp-col-off* is -10, *cp-row-off* is -10, and *cp-sheet-off* is 10, 1-2-3 moves the cell pointer to cell C:A1.

Examples

Suppose that the current cell is cell A:C10. The following command selects the range A:C10..B:E25. Relative to the current cell, this range extends 2 columns right, 15 rows down, and 1 sheet forward.

{SELECT-RANGE-RELATIVE 2;15;1}

Suppose you want to style every other column of your spreadsheet using the same named style. The following macro selects a single-column range of 13 cells and applies the named style called tpc to that range. It then moves the cell pointer to the right two columns, selects another range of 13 cells, and applies the same named style.

{SELECT-RANGE-RELATIVE 0,12,0}

{NAMED-STYLE-USE "tpc"}

{SELECT-RANGE-RELATIVE 0,12,0,2,0,0}

{NAMED-STYLE-USE "tpc"}

{SELECT-REPLACE}

{SELECT-REPLACE *old-range*;*new-range*} replaces *old-range* with *new-range* in a collection.

Arguments

old-range is the name or address of a currently selected range you want to replace with *new-range*.

new-range is the name or address of the range to replace *old-range*.

Both old-range and new-range must be in the current file.

Examples

The following command replaces the range Q_1 with the range Q_2 in the currently selected collection.

{SELECT-REPLACE Q_1;Q_2}

Chart Elements

Chart elements let you select parts of a chart with {EDIT-GOTO}, {SELECT}, and {SELECT-APPEND}.

? range (? is a letter from A through W)

? range data labels (? is a letter from A through W)

A range, slice ? (? is an integer from 0 through the last slice number)

Plot left wall

Plot back wall

Plot floor

X axis

Y axis

2Y axis

X axis major tick marks

Y axis major tick marks

2Y axis major tick marks

X axis minor tick marks

Y axis minor tick marks

2Y axis minor tick marks

X axis major grids

Y axis major grids

2Y axis major grids

X axis minor grids

Y axis minor grids

2Y axis minor grids

X axis zero line

Y axis zero line

2Y axis zero line

X axis 3D zero line

Y axis 3D zero line

2Y axis 3D zero line

X axis labels

Y axis labels

2Y axis labels

X axis title

Y axis title

2Y axis title

X axis units title

Y axis units title

2Y axis units title

Title line 1

Title line 2

Note line 1

Note line 2

Legend labels

Title box

Note box

Legend box

{PRINT}

{PRINT?}

{PRINT [*what*];[*from*];[*to*];[*start*];[*copies*]} prints the current file according to the current page settings.

{PRINT?} displays the File Print dialog box.

Arguments

what is text that specifies what to print. If you omit *what*, 1-2-3 prints the range specified by the Print-Range Info component.

what	**1-2-3 prints**
all	The current file
current	The current sheet
selection	The current selection

from is a value that specifies the page number of the first page to print.

to is a value that specifies the page number of the last page to print.

start is a value that specifies the page number at which to start numbering pages.

copies is a value that specifies the number of copies to print.

Examples

In the following macro, the {PRINT} command prints the current file, using the current print settings.

{PRINT "all"}

The following commands select and print a collection.

{SELECT A:A1..D25}

{SELECT-APPEND A:F1..A:I25}

{SELECT-APPEND B:B1..B:B25}

{PRINT "selection"}

{PRINT-NAME-ADD}

{PRINT-NAME-USE}

{PRINT-NAME-ADD *page-setting-name*} saves the current page settings as a named print style.

{PRINT-NAME-USE *page-setting-name*} makes a named print style current.

Arguments

page-setting-name is text that specifies the name of the print style to save the settings to, or specifies the name of the print style to make current.

Examples

The following command saves the current page settings as the named print style LETTERS.

{PRINT-NAME-ADD "LETTERS"}

The following commands print the current file, using either the named print style LETTERS.

{PRINT-NAME-USE "LETTERS"}

{PRINT}

{PRINT-RESET}

{PRINT-RESET} replaces the currently selected Margins, Print titles, Header, Footer, Options, Compression, and Orientation settings with the default page layout for the current file.

Examples

The following commands print the current file using the print style LETTERS, and then restore the default page layout.

{PRINT-NAME-USE "LETTERS"}

{PRINT}

{PRINT-RESET}

{DATA-TABLE-1}

{DATA-TABLE-2}

{DATA-TABLE-3}

{DATA-TABLE-RESET}

{DATA-TABLE-1 [*output-range*];[*input-cell-1*]} substitutes values for one variable in one or more formulas and enters the results in *output-range*.

{DATA-TABLE-2 [*output-range*];[*input-cell-1*];[*input-cell-2*]} substitutes values for two variables in one formula and enters the results in *output-range*.

{DATA-TABLE-3 [*output-range*];[*input-cell-1*];[*input-cell-2*];[*input-cell-3*];[*formula*]} substitutes values for three variables in one formula and enters the results in *output-range*.

{DATA-TABLE-RESET} clears the ranges and input-cell settings for all what-if tables in the current file.

Arguments

output-range is the name or address of a range that contains the formula, a list of input values that the formula uses in place of the variable, and blank cells where 1-2-3 places the results.

input-cell-1, *input-cell-2*, and *input-cell-3* are the names or addresses of the first, second and third cells in which 1-2-3 temporarily enters values while performing the calculations required to create the table. These cells must be unprotected, and they should be blank or contain unimportant data.

formula is the name or address of a cell containing the formula that has the three variables you want to change.

input cell-1, *input-cell-2*, *input-cell-3*, and *formula* must be outside of *output-range*.

Notes

If you omit *output-range*, *input-cell-1*, *input-cell-2*, *input-cell-3*, or *formula*, 1-2-3 uses the same range as the last time you used a {DATA-TABLE} macro command during the current 1-2-3 session.

Examples

The following command puts a table of results in the range PAYMENTS and uses B1 as the input cell.

{DATA-TABLE-1 PAYMENTS;B1}

The following command puts the table of results in the range PROJECT, which spans four sheets. A:B4, A:B5, and A:B6 are the input cells, and A:A1 is the formula cell.

{DATA-TABLE-3 PROJECT; A:B4; A:B5;A:B6;A:A1}

{DISTRIBUTION}

{DISTRIBUTION [*values-range*];[*bin-range*]} creates a frequency distribution that counts how many values in *values-range* fall within each numeric interval specified by *bin-range*.

Arguments

values-range is the address or name of a range containing the values you want 1-2-3 to analyze. 1-2-3 ignores blank cells and cells that contain labels in *values-range*.

bin-range is the address or name of a single-column range that contains values. These values are the limits of numeric intervals that define the bins of the frequency distribution.

Each cell in *bin-range* should contain a unique value, and in ascending order (lowest to highest, reading down the column). 1-2-3 assigns the value 0 to all labels in *bin-range* and includes them in calculations. 1-2-3 enters the frequency distribution in the adjacent column to the right of *bin-range*.

Notes

If you omit *values-range* or *bin-range*, 1-2-3 uses the same range as the last time you used {DISTRIBUTION} during the current 1-2-3 session.

Examples

{DISTRIBUTION}

Example: {DISTRIBUTION}
The following command determines how many of the values in the range MARCH are less than or equal to 3000; greater than 3000 and less than or equal to 5000; greater than 5000 and less than or equal to 7000; and greater than 7000.

The values range MARCH (A2..B10), the bin range LIMITS (D2..D4) and the resulting frequency distribution (E2..E5) are shown below.

{DISTRIBUTION MARCH;LIMITS}

	A	B	C	D	E
1	MARCH		LIMITS		
2	$2,500	$7,000		3000	7
3	3,520	2,500		5000	5
4	4,230	2,325		7000	5
5	300	2,860			1
6	5,025	5,005			
7	1,069	4,950			
8	3,555	6,780			
9	7,020	6,505			
10	3,030	2,435			

{FILL}

{FILL [*range*];[*start*];[*step*];[*stop*];[*units*]} enters a sequence of values in a specified range.

Arguments

range is the name or address of the range you want to fill. 1-2-3 writes over any existing data in *range*.

If you omit *range*, 1-2-3 uses the currently selected range if it is a multi-cell range.

If you omit *range* and the current selection is a single cell, 1-2-3 uses the same range as the last time you used Range Fill or {FILL}.

start specifies the first value 1-2-3 enters in *range*.

step specifies the increment between each of the values in the range.

stop specifies the limit of the sequence. If you specify a negative *step* value, you must specify a *stop* value that is less than the *start* value.

units is text that indicates that the *step* increment is either a number or a unit of time.

units	**1-2-3 defines a *step* value of 1 as one**
numeric	Integer; default if you omit the argument
day	Day
week	Week (7 days)
month	Month (30 or 31 days)
quarter	Quarter (90 days)
year	Year (365 or 366 days)
hour	Hour
minute	Minute
second	Second

Notes

If you omit *start*, *step*, or *stop*, 1-2-3 uses the same values as the last time you used {FILL} during the current 1-2-3 session.

Examples

The following lines from a macro fill the range TERM with dates starting at the current date and ending as near as it can get to the current date plus 100. The step increment is one month. The {STYLE-NUMBER-FORMAT} command formats TERM as 31-Dec-97.

```
{SELECT TERM}
{FILL ;@NOW;1;@NOW+100;"month"}
{STYLE-NUMBER-FORMAT "dd-mmm-yy"}
```

{FILL-BY-EXAMPLE}

{FILL-BY-EXAMPLE [*range*]} fills *range* with a sequence of data. 1-2-3 creates a pattern for the sequence, based on data you include in the *range*.

Arguments

range is the name or address of the range you want to fill.

If you omit *range*, 1-2-3 uses the currently selected range or collection.

Examples

The first cell in the twelve-cell range YEAR contains the label January. The following macro command fills the rest of the range with the labels February, March, April, and so on, through December.

{FILL-BY-EXAMPLE YEAR}

{MATRIX-INVERT}

{MATRIX-MULTIPLY}

{MATRIX-INVERT [*matrix-to-invert*];[*output-range*]} inverts a square matrix.

{MATRIX-MULTIPLY [*matrix1*];[*matrix2*];[*output-range*]} multiplies the matrix in *matrix1* by the matrix in *matrix2* to create a matrix in *output-range* that contains the results.

Arguments

matrix-to-invert is the name or address of a range containing the matrix that you want to invert.

output-range is the name or address of a range where you want 1-2-3 to put the results of the matrix inversion or multiplication.

matrix1 is the name or address of a range containing the first matrix that you want to multiply.

matrix2 is the name or address of a range containing the second matrix that you want to multiply.

Caution 1-2-3 writes over any data in *output-range*.

Notes

If you omit *matrix-to-invert*, *matrix1*, *matrix2*, or *output-range*, 1-2-3 uses the same range as the last time you used {MATRIX-INVERT} or {MATRIX-MULTIPLY} during the current 1-2-3 session.

Not every matrix can be inverted. If 1-2-3 cannot create an inverse of the matrix in *matrix-to-invert*, the macro ends with an error.

Examples

The following command inverts a square matrix in a range named SALES and puts the results in a range named INVERT.

{MATRIX-INVERT SALES;INVERT}

The following command multiplies a matrix in a range named EXPENSES by a matrix in a range named BANK, and puts the results in a range named NOW.

{MATRIX-MULTIPLY EXPENSES;BANK;NOW}

{PARSE}

{PARSE [*parse-range*];[*output-range*];[*format-line*]} Converts long labels from an imported text file into separate columns of data of one or more types (values, dates, times, and labels).

Arguments

parse-range is the name or address of a single-column range that contains the labels that you want to parse.

output-range is the name or address of a range where you want 1-2-3 to put the parsed data. Specify either the entire range or only the first cell.

Caution 1-2-3 writes over any existing data in *output-range*.

format-line is text that tells 1-2-3 how to parse, or separate, data and enter it in a sheet.

If you omit *format-line*, the first cell in *parse-range* must be a valid format line.

Notes

If you omit *parse-range* or *output-range*, 1-2-3 uses the same range as the last time you used {PARSE} during the current 1-2-3 session.

Examples

The following command parses the data in range A10..A60 and puts the parsed data in an output range beginning at B50.

{PARSE A10..A60;B50}

{RANGE-NAME-CREATE}
{RANGE-NAME-DELETE}
{RANGE-NAME-DELETE-ALL}

{RANGE-NAME-CREATE *range-name*;[*range-location*]} assigns a name to a range address.

{RANGE-NAME-DELETE *range-name*} deletes a range name in the current file.

{RANGE-NAME-DELETE-ALL} deletes all range names in the current file.

Arguments

range-name is text that specifies the name you want to assign to a range.

range-location is the address of a range that you want to name. If you omit *range-location*, 1-2-3 names the currently selected range.

Examples

The following command assigns the name DATES to the range A:A8..A:F10.

{RANGE-NAME-CREATE "dates"; A:A8..A:F10}

The following command deletes the range name DATES and any associated notes.

{RANGE-NAME-DELETE "dates"}

{RANGE-NAME-LABEL-CREATE}

{RANGE-NAME-LABEL-CREATE [*direction*];[*label-range*]} assigns an existing label as the range name for a single cell immediately above, below, to the right of, or to the left of the label.

Arguments

direction is text that specifies the position of the single-cell range(s) relative to *text-range*.

direction	**1-2-3 names cells**
right	To the right of the labels (for example, labels in column A become names for adjacent cells in column B); default if you omit the argument
left	To the left of the labels (for example, labels in column B become names for adjacent cells in column A)
up	Above the labels (for example, labels in row 2 become names for cells in row 1)
down	Below the labels (for example, labels in row 1 become names for cells in row 2)

label-range is the name or address of a range that contains the text you want to assign as a range name(s) to an adjacent cell(s). If you omit *label-range*, 1-2-3 uses the currently selected range.

Examples

The following command assigns the label in each cell of the range HATS as the range name of its right-adjacent cell.

{RANGE-NAME-LABEL-CREATE "right";HATS}

{RANGE-NAME-TABLE}

{RANGE-NAME-TABLE [*table-location*]} creates a two-column table with the names of all defined ranges in the current file listed alphabetically in the left column, and the corresponding range addresses listed in the right column.

Arguments

table-location is the name or address of the range where you want 1-2-3 to create the table of range names and addresses. Specify either the entire range or only the first cell.

If you omit *table-location*, 1-2-3 creates the table starting at the top left cell of the currently selected range.

Caution The table occupies two columns and as many rows as there are range names, plus one blank row. 1-2-3 writes over any existing data in *table-location*.

Examples

The following command creates a range name table starting at the top left cell of the range NAMES.

{RANGE-NAME-TABLE "names"}

{RANGE-TRANSPOSE}

{RANGE-TRANSPOSE *destination*;[*transpose*];[*origin*]} copies data from *origin* to *destination*, transposing the copied data and replacing any copied formulas with their current values.

Arguments

destination is the name or address of the range to which you are copying. Specify either the entire range or only the first cell.

Caution 1-2-3 writes over any existing data in *destination*.

transpose is text that specifies how to transpose the data.

transpose	**1-2-3 does the following**
rows-to-columns	Transposes rows of data in *origin* to columns of data in *destination*; default if you omit the argument.
columns-to-sheets	Copies the first column in every sheet of *origin* to the first sheet in *destination*; the second column in every sheet of *origin* to the second sheet in *destination*; and so on. This argument works only for multi-sheet ranges.
sheets-to-rows	Copies the first row in every sheet of *origin* to the first sheet in *destination*; the second row in every sheet of *origin* to the second sheet in *destination*; and so on. This argument works only for 3D ranges.

origin is the name or address of the range that contains data you want to copy and transpose.

If you omit *origin*, 1-2-3 uses the currently selected range.

Examples

The following {RANGE-TRANSPOSE} command copies the contents and styles of B3..F7 to B9..G20, transposes the rows of data in B3..F7 to columns of data in B9..G20, and replaces any copied formulas with their current values.

{RANGE-TRANSPOSE B9..G20;"rows-to-columns";B3..F7}

{RANGE-VALUE}

{RANGE-VALUE *destination*;[*origin*]} copies the contents and styles from *origin* to *destination*, and replaces all copied formulas with their current values.

Arguments

destination is the name or address of the range to which you are copying. Specify either the entire range or only the first cell.

origin is the name or address of the range that contains data you want to copy.

If you omit *origin*, 1-2-3 uses the currently selected range.

Examples

The following command copies a column of @SUM formulas from the range TOTALS to the range JUNE_TOTALS, and replaces the copied formulas with their current values.

{RANGE-VALUE TOTALS;JUNE_TOTALS}

{REGRESSION}

{REGRESSION [*X-range*];[*Y-range*];[*output-range*];[*intercept*]} performs multiple linear regression analysis and also calculates the slope of the line that best illustrates the data.

Arguments

X-range contains the independent variables. *X-range* is the name or address of a range that can contain up to 75 columns and 8,192 rows.

Y-range contains the set of values for the dependent variable. *Y-range* is the name or address of a single-column range with the same number of rows as X-*range*.

output-range is the name or address of a range for the results of the regression analysis. Specify either the entire range or only the first cell.

Caution 1-2-3 writes over any existing data in *output-range*.

intercept is text that specifies whether 1-2-3 calculates the y-axis intercept or uses 0 as the y-axis intercept.

intercept	**1-2-3 does the following**
compute	Calculates the y-axis intercept
zero	Uses 0 as the y-axis intercept

Notes

If you omit X-*range*, *Y-range*, *intercept,* or *output-range*, 1-2-3 uses the same range as the last time you used {REGRESSION} during the current 1-2-3 session.

If you specify a single-cell range for *output-range*, 1-2-3 enters the regression results in a rectangular area nine rows deep and a minimum of four columns wide, with an additional column for each x variable after the second x variable.

If you specify a multiple-cell range for *output-range*, and it is too small to contain the regression results, the macro ends with an error.

Examples

{REGRESSION}

Example: {REGRESSION}

You run an ice cream stand at a tourist location, and you want to predict roughly how many quarts of ice cream you'll sell in the next day.

You think your sales depend on three key factors: the number of hours of sunshine, the midday temperature, and the number of buses in a nearby parking lot.You want to determine the correlation between these factors (*X-range*, B2..D7) and your sales (*Y-range*, A2..A7).

A	----- A	-- B	--- C	----D---
1	Sales	Sun	Temp	Buses
2	250	3	84	10
3	545	5	91	7
4	550	5	89	8
5	450	6	85	10
6	605	6	90	11
7	615	7	88	9

The following command enters the results of the regression in the sheet, starting at A11.

{REGRESSION B2..D7;A2..A7;A11}

1-2-3 enters these regression results in the sheet:

	Regression Output		
Constant	-2327.90951		
Std Err of Y Est	32.67147906		
R Squared	0.977225218		
No. of Observations	6		
Degrees of Freedom	2		
X Coefficient(s)	61.17698	28.44788087	0.595647194
Std Err of Coef.	12.18849	6.79391567	11.89658121

{SHEET-NAME}

{SHEET-NAME-DELETE}

{SHEET-NAME *new-name*;[*old-name*]} names a 1-2-3 sheet in the current file.

{SHEET-NAME-DELETE [*sheet-name*]} deletes the name of a 1-2-3 sheet in the current file.

Arguments

new-name is text that specifies a new name for the sheet.

old-name is text that specifies the current name or letter of the sheet.

If you omit *old-name*, 1-2-3 names the current sheet.

sheet-name is text that specifies the sheet name to delete. After you delete *sheet-name*, the name reverts to the sheet letter.

If you omit sheet-*name*, 1-2-3 deletes the name of the current sheet, if it is named.

Examples

The following command assigns the name August to sheet H.

{SHEET-NAME "August";"H"}

The following command deletes the sheet name July.

{SHEET-NAME-DELETE "July"}

Macros Help for 1-2-3 97

Finding individual macros

After you copy the macros help files to your lotus/123 directory, the macros Help Contents and Index entries are integrated into 1-2-3 Help.

Macros A-Z

Use Macros Commands A-Z to scroll the list of macros alphabetically.

Macros by category

To get help on macros arranged by category, choose Help - Help Topics, click the Contents tab, and choose the Macros by Category book.

Searching for an individual macro by name

To search for help on an individual macro, choose Help - Help Topics, click the Index tab, and type the macro name. For example, to search for Help on {SEND-MAIL}, type **send-mail** in the index box.

{?}

{?} suspends macro execution until the user presses ENTER, letting the user type any number of keystrokes.

When the user presses ENTER, 1-2-3 ends the {?} command and continues the macro; it does not enter data or complete a menu command unless the next character in the macro is a ~ (tilde) or a cursor-movement-key name (for example, {DOWN}).

If the user clicks OK to enter data, the {?} command remains in effect, allowing further entry before proceeding with the macro.

Examples

The following example moves the cell pointer to the cell named ERR_MSG, which contains an error message, and pauses to let the user read the message. When the user presses ENTER, the macro continues.

{EDIT-GOTO ERR_MSG}

{?}

{*subroutine*}

{*subroutine* [*arg1*];[*arg2*];...;[*argn*]} performs a subroutine call.

Arguments

subroutine is the range name of the subroutine that you want the macro to call. The range name can refer to the first cell of the subroutine or to the entire subroutine. If you specify a range for *subroutine*, 1-2-3 begins executing in the top left corner of the range.

Although you can use a range address for *subroutine*, Lotus recommends that you use a range name. If you move a *subroutine* (for example, if you insert some rows above the range), a {subroutine} command that refers to *subroutine* by name will continue to work correctly, but one that refers to *subroutine* by address will no longer work correctly.

arg1,arg2,...,argn are optional arguments. You can include up to 31 optional arguments. Arguments can be values or text, including formulas and the names or addresses of cells. {subroutine} passes the arguments to the subroutine, which must begin with a {DEFINE} command if arguments are specified. {DEFINE} evaluates and stores the optional arguments in sheet cells.

Notes

Use subroutines to divide long macros into smaller, more specific tasks. If these tasks are shared by several macros, using a subroutine means you have to write the shared task only once. You can call it from all macros that use it. 1-2-3 can transfer macro execution from one subroutine to another to perform many different tasks during a macro.

To call a subroutine, use a {subroutine} command in the calling macro where you want 1-2-3 to begin executing the subroutine. Specify the name or address of the subroutine as {subroutine}. 1-2-3 temporarily passes control from the calling macro to the subroutine when it encounters a {subroutine} command. A subroutine ends when 1-2-3 executes a {RETURN} command or encounters a blank cell. A {QUIT} command in the subroutine ends the macro.

One subroutine can call another subroutine. This is known as nesting. Using nested subroutines lets you create large macro applications that are clearly structured, accessible, and easy to revise. The number of subroutines you can nest is limited only by the amount of available memory.

When 1-2-3 encounters a {subroutine} command in a subroutine, it immediately starts executing the new subroutine. When the second subroutine ends, 1-2-3 returns to the subroutine that called it and finishes executing that subroutine, and then returns control to the original calling macro. If there is more than one nested subroutine, 1-2-3 keeps returning to the previous subroutine until it finally returns to the original calling macro.

If you don't want 1-2-3 to return from a particular subroutine, use {RESTART} in that subroutine. {RESTART} cancels the return sequence that 1-2-3 tracks as it executes nested subroutines. When 1-2-3 finishes executing the subroutine that contains {RESTART}, macro execution ends.

Examples

The FORMAT1 macro calls the subroutine CURRSUB four times. Each time, it formats a range (Q_1, Q_2, Q_3, or Q_4) that it selects with {EDIT-GOTO}. After each subroutine call, 1-2-3 returns to the next {EDIT-GOTO} command in FORMAT1.

```
FORMAT1     {EDIT-GOTO Q_1}
            {CURRSUB}
            {EDIT-GOTO Q_2}
            {CURRSUB}
            {EDIT-GOTO Q_3}
            {CURRSUB}
            {EDIT-GOTO Q_4}
            {CURRSUB}
CURRSUB     {STYLE-NUMBER-FORMAT
            "currency";2}
            {RETURN}
```

The {*subroutine*} command in macro \B passes three arguments to SUBR1. The {DEFINE} command at the beginning of SUBR1 evaluates the arguments before storing them. Thus, it stores the value of the first argument, today's date, as a number in cell ONE; the second argument, the text Closing Price:, as a label in cell TWO; and the value of the third argument, the contents of the cell named CLOSE, as a number in cell THREE.

The macro then formats the current cell as day-month and enters the number stored in cell ONE; moves right one cell

and enters the label stored in cell TWO; and moves right one cell again, formats the cell as Currency with two decimal places, and enters the number stored in cell THREE.

```
\B          {SUBR1 @TODAY;"Closing
            Price:";CLOSE}
            ...
SUBR1       {DEFINE ONE:V;TWO;THREE:V}
            {STYLE-NUMBER-FORMAT "dd-mmm"}
            {LET @CELLPOINTER("coord");ONE}
            {R}
            {LET @CELLPOINTER("coord");TWO}
            {R}
            {STYLE-NUMBER-FORMAT
            "currency";2}{LET
            @CELLPOINTER("coord");THREE}
```

The result is a row that reads (depending on the date and closing price):

17-Dec Closing Price $9.32.

{APP-ADJUST}

{WINDOW-ADJUST}

{APP-ADJUST *x;y;width;height*} moves the 1-2-3 window so that the top left corner of the window is *x* pixels from the left and *y* pixels from the top corner of the screen, and sizes the 1-2-3 window to be *height* pixels high and *width* pixels wide.

{WINDOW-ADJUST *x;y;width;height*} moves the active window so that the top left corner of the window is *x* pixels from the left and *y* pixels from the top corner of the 1-2-3 window, and sizes the active window to be *height* pixels high and *width* pixels wide.

Arguments

x is a value that specifies the horizontal position, in pixels, measured from the left side of the screen to the left side of the 1-2-3 window (for {APP-ADJUST}) or from the left side of the 1-2-3 window to the left side of the window being moved (for {WINDOW-ADJUST}).

y is a value that specifies the vertical position, in pixels, measured from the top of the screen to the top of the 1-2-3 window (for {APP-ADJUST}) or from the top of the 1-2-3 window to the top of the window being moved (for {WINDOW-ADJUST}).

width is a value that specifies the window width, in pixels, from the left border to the right border.

height is a value that specifies the window height, in pixels, from the top border to the bottom border.

Notes

If you specify too large a value for *x* or *y*, the window moves partially or completely out of view. Use the operating system's Window - Restore command to bring the window back into view.

Examples

The following macro places the 1-2-3 window 50 pixels from the left and 30 pixels from the top of the screen, and makes the window 215 by 215 pixels in size:

{APP-ADJUST 50;30;215;215}

The following macro makes the sheet window SALES.123 active, places it 50 pixels from the left and 30 pixels from the top of the 1-2-3 window, and makes it 215 by 215 pixels in size.

{WINDOW-SELECT "SALES.123"}

{WINDOW-ADJUST 50;30;215;215}

{APP-STATE}
{WINDOW-STATE}

{APP-STATE *state*} minimizes, maximizes, or restores the 1-2-3 window.

{WINDOW-STATE *state*} minimizes, maximizes, or restores the active window.

Arguments

state is one of the words from the table below, entered as text.

state	**1-2-3 does the following**
maximize	Maximizes the window
minimize	Minimizes the window
restore	Restores a maximized window to its previous state

Examples

The following command minimizes the 1-2-3 window.

{APP-STATE "minimize"}

The following command expands the sheet window to full-screen size.

{WINDOW-STATE "maximize"}

{APPENDBELOW}

{APPENDRIGHT}

{APPENDBELOW *target-location;source-location*} copies the contents of *source-location* to the rows immediately below *target-location*.

{APPENDRIGHT *target-location;source-location*} copies the contents of *source-location* to the columns immediately to the right of *target-location*.

Arguments

target-location and *source-location* are ranges of any size. If you use named ranges, the range name definition of *target-location* expands to include the rows or columns that contain the appended data.

Notes

In the following situations, {APPENDBELOW} and {APPENDRIGHT} fail and the macro stops due to an error:

- When the number of rows or columns in *source-location* exceeds the number of rows below or columns to the right of *target-location*.
- When appending *source-location* to *target-location* would write over data.
- When rows below or columns to the right of *target-location* are protected.
- When *source-location* contains formulas, {APPENDBELOW} and {APPENDRIGHT} copy the current values of the formulas to *target-location*, not the formulas themselves.

Examples

The following macro lets you append the information in NEWCUST to the customer database table named CUSTDB and expands CUSTDB to include the new record.

{APPENDBELOW CUSTDB;NEWCUST}

{BEEP}

{BEEP} sounds the Windows beep.

Notes

{BEEP} does not produce a tone when "Beep on error" is not selected in File - User Setup - 1-2-3 Preferences (General tab) or if sound is turned off using the operating system.

{BLANK}

{BLANK *location*} erases the contents of *location*. {BLANK} does not change the formatting of the cells in *location* and does not force recalculation.

Arguments

location is the name or address of a cell or range.

Examples

The following macro erases the contents of the range named DATARANGE.

{BLANK DATARANGE}

The following macro erases the entry in the current cell and then resets the number format to the sheet default.

{BLANK @CELLPOINTER("coord")}

{STYLE-NUMBER-FORMAT-RESET}

{BRANCH}

{BRANCH *location*} transfers macro control from the current macro instruction to *location* and does not return to the calling macro.

Arguments

location is the name or address of a cell or range that contains macro instructions. It is often the name of another macro or subroutine. If you specify a range, 1-2-3 branches to the first cell in the range.

Notes

Use {BRANCH} with {IF} to implement if-then-else processing or to transfer control to another macro.

Use {BRANCH} to create a loop by branching to a cell above the {BRANCH} command in the same macro. This structure is useful for repetitive data entry tasks.

{BRANCH} is not the same as {EDIT-GOTO}. {EDIT-GOTO} moves the cell pointer to another cell. {BRANCH} transfers macro execution to the commands that begin in *location*.

Examples

The following macro transfers control to either the macro named BIG or the macro named SMALL, depending on the value in the cell named SIZE.

```
{IF SIZE>100}{BRANCH BIG}
{BRANCH SMALL}
```

The following macro creates a loop for data entry by entering the data you supply during the {?} command in subsequent cells down a column until you press CTRL+BREAK to end the macro.

```
\A      {?}{DOWN}
        {BRANCH \A}
```

{BREAK}

{BREAK} clears the edit line when data is being entered or edited, or leaves the current dialog box during selection of a 1-2-3 command, and returns 1-2-3 to Ready mode. In any other situation, {BREAK} has no effect.

Examples

The following macro leaves the current dialog box (if any) and displays a range named HELP_SCREEN.

{BREAK}{EDIT-GOTO HELP_SCREEN}

{BREAKOFF}

{BREAKON}

{BREAKOFF} disables CTRL+BREAK while a macro is running.

{BREAKON} restores the use of CTRL+BREAK, undoing a {BREAKOFF} command.

Notes

{BREAKOFF} stays in effect until 1-2-3 executes a {BREAKON} command or until the macro ends.

Caution Add {BREAKOFF} to a macro only after you have thoroughly tested the macro. If {BREAKOFF} is in effect and the macro goes into an infinite loop, the only way to stop the macro is to turn off and restart the computer. You loose all data entered or changed since the last time the file was saved.

Examples

The following macro disables CTRL+BREAK before starting the PAYROLL subroutine, preventing the user from gaining access to proprietary information by stopping the macro when the payroll file is open. When the PAYROLL subroutine ends, {BREAKON} restores CTRL+BREAK for the rest of the macro.

{BREAKOFF}

{PAYROLL}

{BREAKON}

{CLOSE}

{CLOSE} closes the text file opened with an {OPEN} command and saves any changes made to the file.

Examples

The following macro opens a text file named STOCKS with append access, adds a line to the file to report the day's volume for a stock, and closes the file before ending the macro. Without the {CLOSE} command, STOCKS would remain open at the end of the macro, and you could continue processing STOCKS in a subsequent macro without using an {OPEN} command.

```
{OPEN STOCKS;A}
{WRITELN VOLUME}
{CLOSE}
{QUIT}
```

{COMMIT}
{ROLLBACK}

{COMMIT [*driver-name*];[*database-name*]} commits (finalizes) pending external database transactions.

{ROLLBACK [*driver-name*];[*database-name*]} cancels pending external database transactions.

Arguments

driver-name is text that specifies the name of the driver.

database-name is text that specifies the name of the external database.

You must use both arguments or no arguments. {COMMIT} or {ROLLBACK} with arguments commits or cancels only the transaction pending for the driver and database you specify. {COMMIT} or {ROLLBACK} with no arguments commits or cancels all pending transactions.

Notes

{COMMIT} and {ROLLBACK} work with the SQL Server driver only.

Examples

The following command commits the transaction pending for the driver SQL_SERVER and the database named PAYROLL.

```
{COMMIT "SQL_SERVER";"PAYROLL"}
```

The following command cancels the transaction pending for the driver SQL_SERVER and the database named PAYROLL.

```
{ROLLBACK "SQL_SERVER";"PAYROLL"}
```

{CONTENTS}

{CONTENTS *target-location;source-location;*[*width*];[*format*]} copies the contents of *source-location* to *target-location* as a label.

Arguments

target-location and *source-location* are the addresses or names of cells or ranges. If you specify ranges, 1-2-3 uses the first cells of the ranges.

width is an integer from 1 through 240 that specifies the width of the label 1-2-3 creates.

format is an integer that specifies the format of the label 1-2-3 creates.

format	**1-2-3 formats the label as**
0 to 15	Fixed, 0 to 15 decimal places
16 to 31	Scientific, 0 to 15 decimal places
32 to 47	Sheet's default Currency format, 0 to 15 decimal places
48 to 63	Percent, 0 to 15 decimal places
64 to 79	Comma, 0 to 15 decimal places
112	+/-
113	General
114	31-Dec-97
115	31-Dec
116	Dec-97
117	Text
118	Hidden
119	11:59:59 AM
120	11:59 AM
121	12/31/97
122	12/31
123	23:59:59
124	59:59
127	Sheet's default number format

Notes

If you do not include *width* and *format*, the label 1-2-3 creates in *target-location* has the same width and format as *source-location*.

Although {CONTENTS} changes the contents of cells, 1-2-3 does not automatically recalculate formulas after executing a {CONTENTS} command when sheet recalculation is set to Automatic. To force recalculation after a {CONTENTS} command, follow the command with {CALC}.

Examples

In the examples below, the cell named INCOME contains the formula +GROSSEXP, which results in $167.24. INCOME is formatted as Currency with two decimal places, and its column width is 9.

{CONTENTS REPORT;INCOME}

+"Today we earned"&REPORT~

Enters the label $167.24 (with a leading and trailing space) in cell REPORT, and then creates the sentence, "Today we earned $167.24" and enters it in the current cell.

{CONTENTS REPORT;INCOME;11;117}

+"The formula we use to calculate earnings is: "&REPORT&"~"

Enters the label +GROSSEXP (with a trailing space) in REPORT (Code 117 is Text format), and then creates the sentence, "The formula we use to calculate earnings is: +GROSSEXP " and enters it in the current cell.

{CONTENTS REPORT;INCOME;3;}

Places the three-character label *** in REPORT, because the specified width is not wide enough to display $167.24.

{CONTENTS REPORT;INCOME;;113}

Places the 167.24 (with two leading spaces and one trailing space) in REPORT. Code 113 formats $167.24 in General format.

{DEFINE}

{DEFINE *location1;location2;...;locationn*} specifies where to store arguments passed to a subroutine in a {*subroutine*} command. You must include a {DEFINE} command in any subroutine to which you pass arguments, and the {DEFINE} command must come before the point in the subroutine where the arguments are used.

Arguments

location is the name or address of a cell or range. If *location* is a range, 1-2-3 uses the first cell of the range as the storage location.

Specify a *location* argument for each argument in the {*subroutine*} command. If you do not, the macro terminates with an error when 1-2-3 reaches the {DEFINE} command.

Notes

You can add one of two suffixes to each *location* argument in a {DEFINE} command.

Although {DEFINE} changes the contents of cells, 1-2-3 does not automatically recalculate formulas after executing a {DEFINE} command when sheet recalculation is set to Automatic. To force recalculation after a {DEFINE} command, follow the command with {CALC}.

When you use {DEFINE}, it should be the first command in the subroutine.

Examples

The {*subroutine*} command in macro \A passes three arguments to SUBR1. The {DEFINE} command at the beginning of SUBR1 stores the label @TODAY in cell ONE, the label "Closing Price:" in cell TWO, and the label CLOSE in cell THREE. The {LET} command then enters the labels in three consecutive cells in a row.

```
\A          {SUBR1 @TODAY;"Closing
            Price:";CLOSE}

            ...

SUBR1       {DEFINE ONE;TWO;THREE}

            {LET @CELLPOINTER("coord");ONE}
            {R}

            {LET @CELLPOINTER("coord");TWO}
            {R}

            {LET
            @CELLPOINTER("coord");THREE}
```

The result is a row that reads:

@TODAY Closing Price: CLOSE

The {*subroutine*} command in macro \B passes three arguments to SUBR1. The {DEFINE} command at the beginning of SUBR1 evaluates the arguments before storing them. Thus, it stores the value of the first argument, today's date, as a number in cell ONE; the second argument, the text Closing Price:, as a label in cell TWO; and the value of the third argument, the contents of the cell named CLOSE, as a number in cell THREE.

The macro then formats the current cell as day-month and enters the number stored in cell ONE; moves right one cell and enters the label stored in cell TWO; moves right one cell again, formats the cell as Currency with two decimal places, and enters the number stored in cell THREE.

```
\B          {SUBR1 @TODAY;"Closing
            Price:";CLOSE}

            ...

SUBR1       {DEFINE ONE:V;TWO;THREE:V}

            {STYLE-NUMBER-FORMAT "dd-mmm"}
            {LET @CELLPOINTER("coord");ONE}
            {R}

            {LET @CELLPOINTER("coord");TWO}
            {R}

            {STYLE-NUMBER-FORMAT
            "currency";2}{LET
```

@CELLPOINTER("coord");THREE}

The result is a row that reads (depending on the date and closing price):
17-Dec Closing Price $9.32.

{DISPATCH}

{DISPATCH *location*} performs an indirect branch by transferring macro control to the cell whose name or address is entered in *location*.

Arguments

location is a single cell containing the name or address of the cell to which macro control is transferred. If *location* is a multiple-cell range, 1-2-3 branches to *location* instead of to the cell whose name or address is entered in the first cell of *location*.

Notes

Use {DISPATCH} to have 1-2-3 branch to one of several possible macros, depending on the contents of *location*. {DISPATCH} is particularly useful in macros that change depending on conditions in the sheet.

{DISPATCH} does not return control to the calling macro. If you want to return control to the calling macro, use {BRANCH} or another {DISPATCH} in the called macro.

Examples

The following excerpt from a macro sets the label in the cell named SWITCH and then transfers macro control to the macro whose name is in SWITCH.

{IF BALANCE<0}{LET SWITCH;NEGATIVE:s}

{IF BALANCE=0}{LET SWITCH;ZERO:s}

{IF BALANCE>0}{LET SWITCH;POSITIVE:s}

{DISPATCH SWITCH}

{EDIT-CLEAR}

{EDIT-CLEAR [*selection*];[*property*]} deletes data and related styles from the sheet without moving it to the Clipboard.

Arguments

selection is the name or address of the range whose contents you want to delete.

If you omit *selection*, 1-2-3 deletes the contents of the current selection.

property is text that specifies whether to delete cell contents, styles, or both.

property	**1-2-3 deletes**
contents	The contents of all cells in the selected range but leaves styles intact; this is the default setting if you omit the argument.
styles	All styles for the selected range; returns the font settings to the default font set for the sheet file; returns the number format settings to the default set for the sheet;and returns the color settings to the defaults set for the sheet window.
both	Both cell contents and styles.

Notes

{EDIT-CLEAR} does not clear protected cells or change their format.

Examples

The following {EDIT-CLEAR} command removes the contents of the range LOCAL and returns all styles to the default.

{EDIT-CLEAR LOCAL;"both"}

{EDIT-COPY}

{EDIT-CUT}

{EDIT-PASTE}

{EDIT-COPY [*selection*];[*format*]} copies data and related styles from the sheet to the Clipboard.

{EDIT-CUT [*selection*];[*format*]} cuts data and related styles from the sheet to the Clipboard.

{EDIT-PASTE [*selection*];[*format*]} copies data and related styles from the Clipboard into the current sheet file.

Arguments

For {EDIT-COPY} or {EDIT-CUT}, *selection* is the name or address of the range whose contents you want to copy to the Clipboard.

For {EDIT-PASTE}, *selection* is the name or address of the range where you want to paste the contents of the Clipboard.

If you omit *selection*, 1-2-3 uses the current selection.

format is text that specifies one of the Clipboard formats.

If you omit *format*, 1-2-3 uses all appropriate formats.

Examples

The following command copies the contents of the range SALES to the Clipboard:

{EDIT-COPY SALES}

The following commands cut the contents of the range TAXES to the Clipboard and then paste them in the range starting at cell D5.

{EDIT-CUT TAXES}

{EDIT-PASTE D5}

{EDIT-PASTE-LINK}

{EDIT-PASTE-LINK [*destination*];[*format*];[*reference*]} creates a link between a 1-2-3 97 sheet file and the file referenced on the Clipboard.

Arguments

destination is the name or address of the range to which you want the server application to send the data whenever it is updated.

format is text that specifies one of the Clipboard formats.

If you are creating a link with 1-2-3 cell data, 1-2-3 ignores *format*.

If you omit *format*, 1-2-3 uses the Text Clipboard format.

reference is text that specifies whether 1-2-3 creates absolute or relative cell references when linking to 1-2-3 cell data. If you are creating a link with data from another application, 1-2-3 ignores *reference*.

reference	**1-2-3 creates**
absolute	Absolute references
relative	Relative references; default if you omit the argument

Notes

You can use {EDIT-PASTE-LINK} only when the Clipboard contains data copied from a valid source file -- that is, from another sheet file or from a file created with another Windows application that supports OLE.

When you copy data from a valid source file to the Clipboard, 1-2-3 also stores the link reference (for example, a range address) on the Clipboard. {EDIT-PASTE-LINK} links the current sheet file to the source file from which you copied the data. Initially, 1-2-3 creates this new link with the update mode set to Automatic (updates the link automatically whenever the source file changes).

{FILESIZE}

{FILESIZE *location*} counts the number of bytes in an open text file and enters the number in *location*.

Arguments

location is the name or address of a cell or a range. If you specify a range, 1-2-3 enters the number in the first cell of the range.

Examples

The following macro enters in cell BYTES the number of bytes in the open text file. The {READ} command then copies the contents of the text file into cell FILECONTENTS. If no text file is open, 1-2-3 branches to cell NO_OPEN_FILE for further instructions.

```
{FILESIZE BYTES}{BRANCH NO_OPEN_FILE}
{READ BYTES;FILECONTENTS}
```

{FOR}
{FORBREAK}

{FOR *counter;start;stop;step;subroutine*} creates a for loop; it repeatedly performs a subroutine call to *subroutine*.

{FORBREAK} cancels a for loop created by a {FOR} command.

Arguments

counter is the name or address of a cell that keeps track of *subroutine* execution during the for loop. *counter* should be a blank cell, since anything in *counter* is replaced.

start is the initial value for *counter*.

stop is the value that tells 1-2-3 when to terminate the for loop.

step is the value added to *counter* each time 1-2-3 executes the subroutine.

subroutine is the range name or address of the subroutine that 1-2-3 executes in the for loop.

Notes about {FOR}

When 1-2-3 encounters a {FOR} command, it does the following:

1. Enters *start* in *counter*.
2. Compares the number in *counter* with *stop*. If the number in *counter* is less than or equal to *stop*, 1-2-3 performs a subroutine call to *subroutine* and goes to step 3.

   If the number in *counter* is greater than *stop*, 1-2-3 does not perform a subroutine call to *subroutine*. Instead, 1-2-3 returns to the location of the {FOR} command and continues the macro at the instruction following {FOR}.
3. Increases the number in *counter* by *step* and returns to step 2.

If *step* is 0, the number in *counter* can never exceed *stop*, and the for loop becomes an infinite loop. Press CTRL+BREAK to stop an infinite for loop.

1-2-3 stores *start*, *stop*, and *step* internally. You cannot have *subroutine* modify these values once it starts.

Although {FOR} changes the contents of cells, 1-2-3 does not automatically recalculate formulas after executing a {FOR} command when sheet recalculation is set to Automatic. To force recalculation after a {FOR} command, follow the command with {CALC}.

Notes about {FORBREAK}

After executing a {FORBREAK} command, 1-2-3 returns to the calling macro and executes the instruction immediately following the {FOR} command.

Use {FORBREAK} only within a for loop. Using {FORBREAK} anywhere else causes the macro to terminate with an error.

Examples

In macro \A below, 1-2-3 repeats subroutine ENTRY up to 10 times, to let you enter names in a roster. If you press ENTER at the {GET-LABEL} command instead of typing a name, the {FORBREAK} command terminates the for loop and 1-2-3 continues immediately to the instructions following the {FOR} command.

```
\A          {BLANK ROSTER}
            {EDIT-GOTO ROSTER}
            {FOR J10;1;10;1;ENTRY}
            ...
ENTRY       {GET-LABEL "Enter
            name:";@CELLPOINTER("coord")}
            {IF @CELLPOINTER("contents")=""}
            {FORBREAK}
            {DOWN}
```

{FRAMEOFF}

{FRAMEON}

{FRAMEOFF} and {FRAMEON} have no effect in 1-2-3 Release 4 or later.

Notes

To hide the sheet frame, use the command {SET "window-display-frame";"no"}.

{GET}

{GET *location*} suspends macro execution until you press a key, and then records the keystroke as a left-aligned label in *location*.

Arguments

location is the name or address of a cell or range. If you specify a range, 1-2-3 records the keystroke in the first cell of the range.

Notes

After executing a {GET} command, 1-2-3 continues to the cell immediately below the {GET} command, ignoring any instructions in the same cell as the {GET} command.

There is no time limit on a {GET} command; the macro waits indefinitely for a keystroke.

You must use two {GET} commands to record any of the following keystrokes: CTRL+END HOME, END CTRL+HOME, CTRL+END END, CTRL+END CTRL+PG UP, and CTRL+END CTRL+PG DN.

Although {GET} changes the contents of cells, 1-2-3 does not automatically recalculate formulas after executing a {GET} command when sheet recalculation is set to Automatic. To force recalculation after a {GET} command, follow the command with {CALC}.

Examples

The following macro prompts you to choose Daily or Monthly (by typing D or M) and stores the keystroke in the cell named CHOICE. If the keystroke in CHOICE is D, 1-2-3 branches to DAY; if it is M, 1-2-3 branches to MONTH. If the keystroke is anything else, 1-2-3 beeps and starts the macro again.

```
\A          {EDIT-GOTO EXPENSES}
            {INDICATE "Choose (D)aily or
            (M)onthly"}
            {GET CHOICE}
            {IF CHOICE="d"}{BRANCH DAYS}
            {IF CHOICE="m"}{BRANCH MONTHS}
            {BEEP}{BRANCH \A}
```

{GETPOS}

{GETPOS *location*} enters a number in *location*. This number reports the current byte-pointer position in the open text file.

Arguments

location is the name or address of a cell or a range. If you specify a range, 1-2-3 enters the number in the first cell of the range.

Examples

The following line from a macro records the current position of the byte pointer in cell POINTER. If the {GETPOS} command succeeds, the macro continues in the next cell. If a text file is not open, the macro branches to FAIL, which contains further instructions.

{GETPOS POINTER}{BRANCH FAIL}

{IF}

{IF *condition*} evaluates *condition* as true or false. If *condition* is true, 1-2-3 continues with the next instruction immediately following the {IF} command in the same cell. If *condition* is false, 1-2-3 goes immediately to the next cell in the column, skipping any further instructions in the same cell as the {IF} command.

Arguments

condition is usually a logical formula or the name or address of a cell that contains a logical formula. However, you can use any formula, number, text, or cell name or address as *condition*. 1-2-3 evaluates any *condition* that does not equal 0 as false. Blank cells, text, and ERR and NA values all equal 0 when used as *condition*.

Notes

If you use {IF} to implement if-then-else processing in a macro, be sure to include a {BRANCH} or {RETURN} command at the end of the "then" instructions (the instructions that follow the {IF} command in the same cell). This keeps 1-2-3 from continuing to the "else" instructions (the instructions that start in the cell below the {IF} command).

Examples

In the following macro, if the entry in the cell named DATE is between 21002 and 31959 (the date numbers for July 1, 1957, and July 1, 1987, respectively), the macro copies the contents of DATE to the current cell and ends. If not, the macro continues to the {BRANCH} command in the cell below.

{IF DATE>21002}{IF DATE<31959}{EDIT-QUICK-COPY DATE}{QUIT}

{BRANCH INVALID_DATE}

The following macro creates mailing labels from the records in a database table. First, the macro checks to see whether the current cell is blank. (A blank cell indicates the end of the database table.) If so, the macro branches to the subroutine PRINT, which contains the macro instructions for printing the mailing labels. If not, it calls subroutine MAKE_A_LABEL, which contains the macro instructions for creating a mailing label, then moves the cell pointer down one cell and repeats macro \A from the beginning.

\A	{IF @CELLPOINTER("type")="b"} {BRANCH PRINT}
	{MAKE_A_LABEL}
	{DOWN}{BRANCH \A}

{INDICATE}

{INDICATE [*text*]} displays *text* in the title bar until 1-2-3 reaches another {INDICATE} command or until you end the 1-2-3 session.

Arguments

text is any text that fits in the title bar.

Notes

Using an empty string as *text* — {INDICATE ""} — displays a blank title bar.

{INDICATE} with no argument restores standard operation of the title bar.

Examples

The following command displays Database Maintenance Macro in the title bar.

{INDICATE "Database Maintenance Macro"}

The following command displays the contents of a cell named MSG in the title bar.

{INDICATE MSG}

{LAUNCH}

{LAUNCH *command*;[*window*];[*switch-to*]} starts and optionally switches to a Windows application.

Arguments

command is text that specifies the command string that starts the Windows application, including the path and any command-line arguments.

window is an integer from 0 through 9 that controls the initial state of the application.

The following table shows the possible values of *window* and their effects on the application you want to start.

Note Not all values for *window* are supported by all Windows applications.

window	**1-2-3 does the following**
0	Hides the application window and activates another window.
1	Activates and displays the application window. If the window is minimized or maximized, restores it to its original size and position.
2	Activates and minimizes the application window.
3	Activates and maximizes the application window.
4	Displays the application window in its most recent size and position. 1-2-3 remains the active application.
5	Activates the application window and displays it in its current size and position.
6	Minimizes the application window and activates the top-level window in the window-manager's list.
7	Minimizes the application window. 1-2-3 remains the active application. This is the value 1-2-3 uses if you do not include a *window* argument.
8	Displays the application window in its current state. 1-2-3 remains the active application.
9	Activates and displays the application window. If the window is minimized or maximized, restores it to its original size and position.

Note *switch-to* lets you switch to the application specified in *command* or to any currently running Windows application.

switch-to is the text that appears in the title bar of an application. *switch-to* can match the entire title, or just the beginning of it. For example, to switch to Ami Pro, you can specify just "ami" for *switch-to*.

If you omit *switch-to* or if you specify text that does not match the title bar of a running application, 1-2-3 launches the application specified in *command*.

If you specify a different application for *switch-to* than you specify for *command*, 1-2-3 switches to the application specified for *switch-to*, but does not launch the application specified for *command*.

Examples

The following command switches to the Windows Notepad utility if it is already open, and opens the file LIST.TXT. The command starts Notepad if it is not already open.

{LAUNCH "C:\WIN95\NOTEPAD C:\WINDOWS\LIST.TXT";;"Notepad"}

{LET}

{LET *location;entry*} enters a number or left-aligned label in *location*.

Arguments

location is the name or address of a cell or range. If you specify a range, 1-2-3 enters the number or label in the first cell of the range.

entry is a number, text, formula, or name or address of a cell that contains a number, label, or formula.

Notes

If you use a formula for *entry*, 1-2-3 evaluates the formula and enters the result in *location*. {LET} does not enter formulas.

You can add one of two suffixes to *entry.*

Although {LET} changes the contents of cells, 1-2-3 does not automatically recalculate formulas after executing a {LET} command when sheet recalculation is set to Automatic. To force recalculation after a {LET} command, follow the command with {CALC}.

Examples

In the following macro, the {LET} command enters the result of 1.5 times the value in QTR_1 in the cell named QTR_2 if QTR_1 is a defined range name. If it is not, the {LET} command enters ERR in the cell named QTR_2.

{LET QTR_2;1.5*QTR_1:v}

The following macro enters 1.5*QTR_1 as a label in the cell named QTR_2:

{LET QTR_2;"1.5*QTR_1"}

The following macro enters the result of the text formula +"Ms." &NAME in the cell named CUSTOMER. If NAME is not a defined range name, the macro enters ERR in the cell named CUSTOMER.

{LET CUSTOMER;+"Ms. "&NAME:v}

{LINK-ASSIGN}

{LINK-ASSIGN *link-name;range;*[*clear-styles*]} specifies a range to make an OLE link to (a destination range).

Arguments

link-name is text that specifies the name for the link specified in {LINK-CREATE}.

If *link-name* does not refer to an existing link, {LINK-ASSIGN} returns an error.

range is the name or address of the destination range.

Caution When the destination range is not big enough to hold the incoming data, 1-2-3 clips the incoming data that does not fit into the destination range.

clear-styles is a yes/no argument that specifies whether to delete styles in *range* whenever the client data is updated. If you omit *clear-styles*, 1-2-3 does not delete styles. If the link is not for range data, 1-2-3 ignores *clear-styles*.

Notes

If *link-name* refers to an active link, 1-2-3 updates data from the server application when it reaches a {LINK-ASSIGN} command, even if the link-update mode is manual.

You cannot assign more than one destination range to any one link.

1-2-3 no longer supports *property* arguments for {LINK-ASSIGN}. If your macros currently contain {LINK-ASSIGN} commands that include *property* arguments, remove the arguments before you run the macros.

{LINK-CREATE}

{LINK-CREATE *link-name;app-name;topic-name;item-name*;[*format*];[*mode*];[*branch-location*]}, without using the Clipboard, creates a link between the current workbook file and another application that supports OLE as a server.

Arguments

link-name is text that specifies a link name. If the *link-name* you specify is already in use, {LINK-CREATE} returns an error.

app-name is text that specifies the name of an open Windows application that supports DDE or OLE as a server. Do not include a path and extension in *app-name*. Doing so may result in an inactive link.

topic-name is text that specifies the name of the application file to link to. Use "system" to link to the system topic.

item-name is text that specifies the name of the item to link to.

format is text that specifies one of the Clipboard formats.

If you omit *format*, 1-2-3 uses the Text Clipboard format.

mode is text that specifies when data is updated.

mode	**1-2-3 updates data in the destination range**
automatic	Each time the source item is updated; default if you omit the argument
manual	Only when you use {LINK-UPDATE}.

If the server application does not support the requested mode, data is updated in the mode supported by the server.

branch-location is the name or address of the cell where macro execution will start when the data from the link is updated. If you specify a range, 1-2-3 branches to the first cell in the range.

1-2-3 ignores *branch-location* for OLE links.

Notes

After it successfully executes a {LINK-CREATE} command, 1-2-3 goes directly to the next cell in the macro, ignoring any macro instructions after {LINK-CREATE} in the same cell. If {LINK-CREATE} cannot establish a conversation, the macro continues in the same cell as {LINK-CREATE}.

{LINK-DEACTIVATE}

{LINK-DEACTIVATE [*link-name*]} deactivates an OLE link in the current sheet, but leaves the link intact. When a link is inactive, 1-2-3 does not update values in the destination range.

Arguments

link-name is text that specifies the name for the link specified in {LINK-CREATE}.

If *link-name* does not refer to an existing link, {LINK-DEACTIVATE} returns an error.

If you omit *link-name*, 1-2-3 deactivates all existing links.

Notes

Use {LINK-UPDATE} to reactivate a link.

Use {LINK-DELETE} to permanently delete a link.

{LINK-DELETE}

{LINK-DELETE *link-name*} deletes an OLE link in the current sheet, but leaves the values obtained through the link in the sheet.

Arguments

link-name is text that specifies the name for the link specified in {LINK-CREATE}.

If *link-name* does not refer to an existing link, {LINK-DELETE} returns an error.

Notes

If a destination range was specified for the link you want to delete, 1-2-3 automatically disassociates the destination range from the link, but does not delete the data in the destination range.

When the last link on a conversation is deleted, the conversation is closed.

Examples

The following macro deletes a link between 1-2-3 and Ami Pro named AMILINK2.

{LINK-DELETE "AMILINK2"}

{LINK-REMOVE}

{LINK-REMOVE *link-name*} removes the currently used destination range for an OLE link but does not delete the data in the range.

Arguments

link-name is text that specifies the name for the link specified in {LINK-CREATE}.

If *link-name* does not refer to an existing link, {LINK-REMOVE} returns an error.

Notes

For OLE links, 1-2-3 leaves in the sheet a copy of the embedded object (metafile or bitmap) which is no longer linked to the server.

{LINK-REMOVE} does not delete links. Use {LINK-DELETE} to delete links.

If no destination range has been assigned to the link with a {LINK-ASSIGN} command, {LINK-REMOVE} returns an error.

Examples

The following macro changes the current destination range for the link AMILINK2 to MAY_PAYMENT.

```
{LINK-REMOVE "AMILINK2"}
{LINK-ASSIGN "AMILINK2";"MAY_PAYMENT"}
```

{LINK-UPDATE}

{LINK-UPDATE [*link-name*]} updates OLE links, or activates and updates links deactivated with {LINK-DEACTIVATE}.

Arguments

link-name is text that specifies the name for a link specified in {LINK-CREATE}.

If *link-name* does not refer to an existing link, {LINK-UPDATE} returns an error.

If you omit *link-name*, 1-2-3 updates all existing links for that file.

Notes

If you assigned a destination range to the link with {LINK-ASSIGN}, 1-2-3 updates the destination range with current information from the source file.

{LOOK}

{LOOK *location*} checks the typeahead buffer for keystrokes and records the first keystroke (if any) as a left-aligned label in *location*. If the buffer is empty, 1-2-3 enters ' (apostrophe label-prefix character) in *location*.

Arguments

location is the name or address of a cell or range. If you specify a range, 1-2-3 records the keystroke in the first cell in the range.

Notes

The typeahead buffer is the buffer in which 1-2-3 stores keystokes you make during noninteractive parts of a macro.

Use {LOOK} to stop a long macro, break out of an infinite loop, or tell a macro to branch elsewhere. The macro keeps running unless the {LOOK} command records a character that tells the macro to do something else.

1-2-3 does not remove a keystroke it records with {LOOK} from the typeahead buffer, so a subsequent {LOOK} command will record the same keystroke. To remove the first keystroke from the buffer, follow the {LOOK} command with a {GET} command. For example, the sequence {LOOK LOC1}{GET LOC2}{LOOK LOC2} records the first keystroke in the buffer in cell LOC1, removes that keystroke from the buffer, and records the next keystroke in the buffer in cell LOC2.

Although {LOOK} changes the contents of cells, 1-2-3 does not automatically recalculate formulas after executing a {LOOK} command when sheet recalculation is set to Automatic. To force recalculation after a {LOOK} command, follow the command with {CALC}.

Examples

The TASK macro below is part of a longer macro that requires a user to perform specific tasks. The macro begins by erasing the contents of the cell named KEYCELL. Later, the macro beeps twice and checks whether the user has typed a character. If the typeahead buffer is empty, the macro loops back to the beginning of TASK. If the buffer contains a character, the macro branches to the subroutine NEWTASK.

```
TASK        {BLANK KEYCELL}
            ...
            {BEEP 4}{BEEP 2}
            {LOOK KEYCELL}
            {IF KEYCELL=""}{BRANCH TASK}
            {BRANCH NEWTASK}
```

{MENUBRANCH}

{MENUCALL}

{MENUBRANCH *location*;[*x*];[*y*]} displays a dialog box that contains a list of menu commands, waits for you to select one and then click OK or Cancel, and then branches to the macro instructions associated with the command you select.

{MENUCALL *location*;[*x*];[*y*]} displays a dialog box that contains a list of menu commands, waits for you to select one and then click OK or Cancel, and then performs a subroutine call to the macro instructions associated with the command you select.

Arguments

location is the name or address of the first cell of a row that contains the dialog box items (branch or subroutine names).

x is a value that specifies the horizontal position, in pixels, measured from the left side of the screen to the left side of the dialog box.

y is a value that specifies the vertical position, in pixels, measured from the top of the screen to the top of the dialog box.

If you omit *x* and *y*, the dialog box appears in the center of the screen.

Notes

{MENUBRANCH} and {MENUCALL} are included to ensure that macros written with releases of 1-2-3 prior to Release 4 continue to work.

When you highlight an item in the list box, 1-2-3 displays its menu-item description above the list box.

Clicking Cancel or pressing ESC cancels the {MENUBRANCH} or {MENUCALL} command that displayed the dialog box. Macro control returns to the location from which the {MENUBRANCH} or {MENUCALL} command was issued, and the macro continues at the instruction that follows the {MENUBRANCH} or {MENUCALL} command.

{ONERROR}

{ONERROR *branch-location*;[*message-location*]} traps and handles errors that occur while a macro is running.

Normally, when an error occurs while a macro is running, 1-2-3 displays an error message and, except for background errors, changes the mode indicator to ERROR and ends the macro. However, if an {ONERROR} command is in effect when the error occurs, 1-2-3 returns to READY mode and branches to *branch-location* for further macro instructions. If the {ONERROR} command includes the optional *message-location* argument, 1-2-3 records the error message in *message-location*.

Arguments

branch-location is the name or address of the cell or range that contains the macro instructions to which 1-2-3 branches after an error occurs. If you specify a range, 1-2-3 branches to the first cell in the range.

message-location is the name or address of a cell or range you specify to store the error message. If you specify a range, 1-2-3 uses the first cell in the range.

Notes

Each {ONERROR} command can handle only one error. An {ONERROR} command remains in effect until an error occurs, until 1-2-3 executes another {ONERROR} command, or until the macro ends.

{ONERROR} traps all types of errors except macro syntax errors (typing errors in macro instructions that prevent 1-2-3 from interpreting the instructions). When 1-2-3 encounters a macro syntax error, it ends the macro and displays an error message that describes the error.

{ONERROR} clears the subroutine stack. This means that if the error occurs in a subroutine, 1-2-3 does not return to the location from which the subroutine call was issued after completing the instructions in *branch-location*.

When you are using {ONERROR} to trap an error other than the one that results from pressing CTRL+BREAK, you may want to precede the {ONERROR} command with {BREAKOFF}.

Although {ONERROR} changes the contents of cells, 1-2-3 does not automatically recalculate formulas after executing a {ONERROR} command when sheet recalculation is set to Automatic. To force recalculation after a {ONERROR} command, follow the command with {CALC}.

Examples

The following excerpt from a macro branches to a subroutine named CHOICE2 if an error occurs and stores the error message in a cell named ERR_MSG.

```
{ONERROR CHOICE2;ERR_MSG}
```

{OPEN}

{OPEN *file-name;access-type*} opens a text file for read-only processing or for read-and-write processing, depending on the type of access you specify.

Arguments

file-name is the full name of a text file, including the extension, or the name or address of a cell that contains a text file name. Unless the text file is in the current directory, you must specify the path as part of *file-name* and enclose the argument in " (quotation marks), for example, "C:\PERSONAL\JOBMEMO.PRN".

access-type is one of the four characters r, w, m, or a (in uppercase or lowercase), or the name or address of a cell that contains one of those characters. The character specifies the type of access you have to the file once it is open:

r — Read access opens an existing file for reading only, placing the byte pointer at the beginning of the file. You can use {READ} and {READLN} but not {WRITE} and {WRITELN} with a file opened with read access.

w — Write access opens a new file for reading and writing. You can use {READ}, {READLN}, {WRITE}, and {WRITELN} with a file opened with write access. **Caution** If you open an existing file with write access, 1-2-3 erases the current contents of the file when it opens the file. To open an existing file for writing and retain the existing file contents, use modify or append access.

m — Modify access opens an existing file for reading and writing, placing the byte pointer at the beginning of the file. You can use {READ}, {READLN}, {WRITE}, and {WRITELN} with a file opened with modify access.

a — Append access opens an existing file for reading and writing, placing the byte pointer at the end of the file. You can use {READ}, {READLN}, {WRITE}, and {WRITELN} with a file opened with append access.

Notes

An open text file does not appear on screen. It is open only in the sense that 1-2-3 can use it.

When opening a new file (a file that does not yet exist in the specified directory), you can use write access only. If you try to open a new file with read, modify, or append access, the {OPEN} command will fail.

Examples

The following macro opens a new text file named PASTDUE.PRN in the root directory on drive C, enters the contents of the cell named OVERDUE as the first line of the file, and closes the file; then the macro ends. If unable to open PASTDUE.PRN on drive C, 1-2-3 branches to CONTINUE for further instructions.

```
{OPEN "C:\PASTDUE.PRN";w}{BRANCH CONTINUE}
{WRITELN OVERDUE}
{CLOSE}
```

In the following macro, if the working directory contains a file named PASTDUE.PRN, 1-2-3 opens the file with read access, enters the first line of the file in the cell named OVERDUE, closes the file, and ends the macro. If the working directory does not contain a file named PASTDUE.PRN, 1-2-3 branches to CONTINUE.

```
{OPEN PASTDUE.PRN;r}{BRANCH CONTINUE}
{READLN OVERDUE}
{CLOSE}
```

{PANELOFF}

{PANELON}

{PANELOFF} freezes the menu bar, title bar, and edit line until 1-2-3 encounters a {PANELON} command or the macro ends.

{PANELON} unfreezes the the menu bar, title bar, edit line, and status line.

Notes

{INDICATE} unfreezes the mode indicator after a {PANELOFF} command.

Examples

The following macro freezes the control panel, status line, and sheet area so that you don't see the series of prompts and dialog boxes that normally appear during F5 (GOTO) commands.

```
{PANELOFF}
{EDIT-GOTO DATA_1}
{STYLE-NUMBER-FORMAT "currency";2}
{EDIT-GOTO DATA_2}
{STYLE-NUMBER-FORMAT "currency";2}
{PANELON}
```

{PUT}

{PUT *location*;*column-offset*;*row-offset*;*entry*} enters a number or left-aligned label in a cell within *location*.

Arguments

location is the name or address of a range of any size that contains the cell where you want to enter data.

column-offset and *row-offset* are offset numbers that identify the column and row position of a cell within *location*.

entry is a number, text, formula, or name or address of a cell that contains a number, label, or formula. If *entry* is a text formula, precede it with a + (plus sign).

Notes

If you use a formula for *entry*, 1-2-3 evaluates the formula and enters the result in *location*.

You can add one of two suffixes to *entry*.

Although {PUT} changes the contents of cells, 1-2-3 does not automatically recalculate formulas after executing a {PUT} command when sheet recalculation is set to Automatic. To force recalculation after a {PUT} command, follow the command with {CALC}.

Examples

The following examples refer to a range named COSTS (A1..D5) in the current sheet.

{PUT COSTS;3;2;45}

places the number 45 in cell D3.

{PUT COSTS;2;0;MONTH}

copies the contents of the cell named MONTH to cell C1. If MONTH contains a formula, the macro copies the current value of the formula to cell C1.

{PUT COSTS;0;8;500}

results in an error. Range COSTS has only five rows, so a *row-offset* of 8 is invalid.

{QUIT}

{QUIT} ends a macro immediately, returning keyboard control to the user. 1-2-3 never executes any instructions that follow a {QUIT} command.

Notes

If you use {QUIT} in a subroutine, the command ends the entire macro, not just the subroutine.

Examples

In the following line from a macro, if the cell named YEAR contains the value 1997, the macro ends; otherwise, 1-2-3 continues to the next cell for further macro instructions.

{IF YEAR=1997}{QUIT}

In the following macro, if the value in the cell named YEAR is less than 1997, 1-2-3 branches to OLD; otherwise, the macro ends.

{IF YEAR<1997}{BRANCH OLD}

{QUIT}

{READ}

{READLN}

{READ *byte-count*;*location*} starts at the current byte-pointer position in the open text file, copies the number of bytes specified by *byte-count* to *location*, and advances the byte-pointer *byte-count* bytes.

{READLN *location* } starts at the current byte-pointer position in the open text file, copies the remainder of the current line to *location*, and advances the byte-pointer to the beginning of the next line in the file.

Arguments

byte-count is a value or the name or address of a cell that contains a value from 0 through 511. If the value of *byte-count* is greater than the number of bytes remaining in the file, 1-2-3 copies all of the remaining bytes to *location*. Using a negative number or a number greater than 511 as *byte-count* is equivalent to using 511.

location is the name or address of a cell or range. If you specify a range, 1-2-3 enters the data in the first cell of the range.

Notes

{READ} copies the carriage-return and line-feed characters at the end of text lines.

{READLN} does not copy the carriage-return and line-feed characters at the end of text lines.

Examples

In an open text file, the byte pointer is at the first byte (position 0) of the text:

Total Sales for the Year Ending 1997

The following {READ} command copies the word Total and the space that follows it to the cell named CHARS, and moves the byte pointer forward to the S in Sales.

{READ 6;CHARS}

In an open text file, the byte pointer is at the beginning of the line that contains the word January. Each line ends with a carriage-return.

January

February

The first {READLN} command copies the word January to cell MONTH1. The next {READLN} command copies the word February to the cell MONTH2.

{READLN MONTH1}

{READLN MONTH2}

{RECALC}
{RECALCCOL}

{RECALC *location*;[*condition*];[*iterations*]} recalculates the values in *location*, proceeding row by row.

{RECALCCOL *location*;[*condition*];[*iterations*]} recalculates the values in *location*, proceeding column by column.

Arguments

location is the name or address of the cell or range you want to recalculate.

condition tells 1-2-3 to repeat the recalculation until *condition* is true.

condition is usually a logical formula or the name or address of a cell that contains a logical formula, but it can also be a numeric formula or text formula, a number, or the name or address of a cell.

1-2-3 evaluates any *condition* that does not equal 0 as true and any condition that does equal 0 as false. A numeric formula or number is considered a true *condition* unless its value is 0; a text formula is always a true *condition*; and a reference to a cell that contains the value ERR or NA, a text formula, or a label is always a true *condition*. A reference to a blank cell is always a false *condition*.

If *condition* is the name or address of a cell that contains a formula, and the formula needs to be recalculated for the {RECALC} or {RECALCCOL} command to work correctly, be sure the cell is inside *location*.

iterations is a value that specifies the number of recalculation passes to perform. This argument overrides the default setting for recalculation. If *iterations* is 0, 1-2-3 performs the recalculation once.

If you include both *condition* and *iterations*, 1-2-3 repeats the recalculation until *condition* is true or until it has performed the specified number of *iterations*, whichever happens first.

Notes

Use {RECALC} or {RECALCCOL} only if recalculation is set to Manual.

When 1-2-3 recalculates with {RECALC} or {RECALCCOL}, it does not update formulas outside the range. To ensure that all your formulas are up to date at the end of a macro that uses {RECALC} or {RECALCCOL}, include a {CALC} instruction in the macro, change sheet recalculation to Automatic, or press F9 (CALC) when the macro ends.

Examples

The following command uses *iterations* without *condition* to perform exactly 100 recalculation passes row by row on the range TAXES.

{RECALC TAXES;;100}

The following command recalculates the range named PAYMENT, column by column, until the value in the cell named VAL falls below 100 or the number of recalculations equals 50.

{RECALCCOL PAYMENT;VAL<100;50}

{RESTART}

{RESTART} clears the subroutine stack, ending the macro when the current subroutine ends.

Notes

When 1-2-3 encounters a {RESTART} command, it executes the remaining instructions in the current subroutine, but instead of returning control to the original macro location after it completes the current subroutine, the macro ends. If the instructions that follow {RESTART} in the subroutine transfer macro control elsewhere, however, the macro does not end.

Examples

The following excerpt from a subroutine combines {RESTART} with {IF} to clear the subroutine stack and branch to NEXTPLAN if the cell named STATUS contains the label Not OK. If STATUS contains anything else or is blank, macro control returns to the original macro location after 1-2-3 completes the remainder of the subroutine.

```
{IF STATUS="Not OK"}{RESTART}{BRANCH NEXTPLAN}
```

In the following example, the {FOR} command calls the subroutine BALANCE. The subroutine stores the number entered in cell PURCHASE and enters the new balance in cell BAL. If the new balance is 0 or less, {RESTART} branches to BROKE; otherwise, 1-2-3 repeats the subroutine BALANCE ten times, as specified in the {FOR} command. When the for loop is complete, 1-2-3 returns to the instruction that follows the {FOR} command in the original macro.

```
                {FOR COUNT;1;10;1;BALANCE}
BALANCE         {GETNUMBER "Cost of
                purchase?";PURCHASE}
                {LET BAL;BAL-PURCHASE}
                {IF BAL<=0}{RESTART}{BRANCH
                BROKE}
```

{RETURN}

{RETURN} returns macro control from a subroutine to the calling macro.

Notes

In a subroutine called by {*subroutine*} or {MENUCALL}, {RETURN} immediately returns macro control from the subroutine to the location in the calling macro from which {*subroutine*} or {MENUCALL} was issued. In a subroutine called by a {FOR} command, {RETURN} ends the current iteration of the subroutine and immediately starts the next iteration.

If the subroutine ends with a blank cell, {RETURN} is unnecessary; macro control automatically returns to the calling macro.

When used in the main body of macro instructions rather than in a subroutine, {RETURN} is equivalent to {QUIT}: it ends the macro immediately.

Examples

In the SAVE subroutine below, {GET-LABEL} prompts you to type a response. If you type N or n, 1-2-3 returns immediately to the location from which the subroutine call {SAVE} was issued. If you type Y or y, 1-2-3 saves the current version of the file and then returns to the location from which the subroutine call {SAVE} was issued. If you type any other character, 1-2-3 repeats subroutine SAVE from the beginning.

```
SAVE        {GET-LABEL "Save file? (Y/N)";INPUT}
            {IF INPUT="N"}{RETURN}
            {IF INPUT="Y"}{FILE-SAVE}{RETURN}
            {BRANCH SAVE}
```

{SETPOS}

{SETPOS *offset-number*} moves the byte pointer in an open text file *offset-number* bytes from the first byte in the file.

Arguments

offset-number is an offset number that specifies the position in the file to which you want to move the byte pointer, relative to the first byte in the file.

Caution 1-2-3 does not prevent you from placing the byte pointer past the end of a file. If necessary, use {FILESIZE} to determine the size of a file before using {SETPOS}.

Examples

If the byte pointer is at the beginning of a text file that consists of 250 bytes and begins with the text

```
This report contains information based on last year's performance
```

the command

{SETPOS 10}

moves the byte pointer to the letter t at the end of the word report.

The following command, acting on the same text file, enters the value 250 in the cell named BYTES and then moves the byte pointer to the position after the last character in the file. If no text file is open, the macro branches to NEXT.

{FILESIZE BYTES}{BRANCH NEXT}

{SETPOS BYTES}

{WAIT}

{WAIT *time-number*} suspends macro execution and displays WAIT as the mode indicator until the time specified by *time-number*. When the specified time arrives, 1-2-3 removes the WAIT indicator and continues the macro.

Arguments

time-number is a time number. If *time-number* represents a nonexistent time or a time that has already passed, 1-2-3 ignores the {WAIT} command and continues to the next macro instruction in the same cell.

Notes

1-2-3 uses your computer's date and time settings to keep track of time. Be sure these settings are correct before you use {WAIT}.

During a {WAIT} command, the only keystroke 1-2-3 responds to is CTRL+BREAK. If you press CTRL+BREAK during a {WAIT} command, 1-2-3 ends the macro immediately, unless you used {BREAKOFF} earlier in the macro.

Examples

The macro READCOL displays the message "Press CTRL+BREAK to stop" as the mode indicator, moves the cell pointer down one row, pauses 5 seconds, and beeps. It repeats this process until you press CTRL+BREAK. This macro is useful to examine a long column of entries or to scroll through a long document while you are reading it.

READCOL	{INDICATE "Press CTRL+BREAK to stop"}
PAUSE	{DOWN}
	{WAIT @NOW+@TIME(0;0;5)}
	{BEEP}{BRANCH PAUSE}

The following macro suspends macro execution for the amount of time specified by @TIMEVALUE(00:17:18), about 17.3 minutes:

{WAIT @TIMEVALUE(00:17:18)}

{WINDOWSOFF}
{WINDOWSON}

{WINDOWSOFF} suppresses screen updates while a macro is running.

{WINDOWSON} cancels {WINDOWSOFF} and restores normal sheet display.

Notes

{WINDOWSOFF} remains in effect until 1-2-3 executes a {WINDOWSON} command or the macro ends.

Examples

The following macro uses {WINDOWSOFF} before recalculating all the active sheet files and then uses {WINDOWSON} when recalculation is complete. The macro continues, resuming screen updating.

{WINDOWSOFF}

{CALC}

{WINDOWSON}

{WRITE}
{WRITELN}

{WRITE *text*} copies *text* to the open text file, starting at the current byte-pointer position.

{WRITELN *text*} copies *text* to the open text file, starting at the current byte-pointer position, and adds a carriage return and line feed.

Arguments

text is the text you want to copy. If *text* is a text formula, 1-2-3 evaluates the formula and writes the resulting text in the file. If *text* is a value, the macro terminates with an error.

Notes

1-2-3 evaluates *text* and converts the result from LMBCS codes to ASCII codes. It then copies the converted result to the file, starting at the current position of the byte pointer, and advances the byte pointer to the position just beyond the last character written. If necessary, 1-2-3 extends the length of the file to accommodate the incoming *text*.

1-2-3 maps LMBCS characters to Windows ANSI characters (using the closest match available), because Windows can only display and print ANSI characters. 1-2-3 accepts all LMBCS characters, but the actual character displayed or printed is limited by the Windows ANSI character set.

A subsequent {WRITE} or {WRITELN} command begins writing where this command stopped, unless you change the position of the byte pointer with a {SETPOS} command. If the byte pointer is in the middle of the file, the incoming *text* writes over existing data.

Examples

The following line from a macro copies the text

McGuill's Dairy

to the open text file. If no text file is open, or if the file was opened with read-only access, the macro branches to FAIL.

```
{WRITE "McGuill's Dairy"}{BRANCH FAIL}
```

The following macro writes a line to the open text file, adds a carriage return and line feed to start a new line, and writes four more lines that each end with a carriage return and line feed. If no text file is open, or if the text file was opened with read-only access, the macro branches to FAIL.

```
{WRITE "Musical Instruments in My Band"}{BRANCH FAIL}
{WRITELN " "}
{WRITELN "Keyboard"}
{WRITELN "Saxophone"}
{WRITELN "Drums"}
{WRITELN "Guitar"}
```

suffixes

You can add one of two suffixes — :string or :value (or an abbreviation of string or value, as long as the first letter is s or v, respectively) — to *entry*. The suffix tells 1-2-3 explicitly whether to treat the argument as a literal string (enter the argument verbatim) or to evaluate the argument before entering it.

The :string suffix tells 1-2-3 to store the argument as a left-aligned label, even if the argument looks like a number, formula, or cell or range address.

The :value suffix tells 1-2-3 to evaluate the argument before storing it. If the argument is a number, 1-2-3 stores it as a number. If the argument is a formula, 1-2-3 evaluates the formula, and stores the result either as a left-aligned label (for a text formula) or a number (for a numeric formula). If the argument is a cell address or range name, 1-2-3 evaluates the contents of the referenced cell and stores the result as a label or number.

{BACKSOLVE}

{BACKSOLVE *formula-cell*;*target-value*;*adjustable-range*} finds values for one or more cells that make the result of a formula equal to a value you specify.

Arguments

formula-cell is the name or address of a cell that contains the formula for which you want to get a specific result. If you specify a multi-cell range for *formula-cell*, 1-2-3 uses the first cell in the range.

target-value is the specific value you want the formula in *formula-cell* to result in.

adjustable-range is the name or address of a range that contains values that 1-2-3 can change.

The formula in *formula-cell* must depend directly or indirectly on the cells in *adjustable-range*.

Examples

The following command sets the result of the formula in B2 to $1,200 and solves for the principal amount in B1.

{SOLVER-ANSWER}

{SOLVER-ANSWER *answer*} Solves the problem using the current parameters and displays the answer or attempt that 1-2-3 finds in the sheet.

Note Solver is only available as an add-in for 1-2-3 97. You can install a trial version of Solver from \EXTRA\123\ SOLVER on the 1-2-3 97 CD. For more information about Solver, see Compatibility.

Arguments

answer is text that specifies which answer or attempt to display.

answer	**1-2-3 does the following**
first	Displays the optimal answer, the best answer found, or the first answer or attempt
next	Obsolete: For compatibility reasons this value displays the optimal answer, or best answer found, or the first answer or attempt
solve	Obsolete: For compatibility reasons this value displays the optimal answer, or best answer found, or the first answer or attempt
original	Displays the values that were in the sheet before you ran Solver

Notes

After executing a {SOLVER-ANSWER} command, 1-2-3 returns to Ready mode.

Examples

The following command tells 1-2-3 to solve the problem using the current parameters, and display the answer or attempt.

{SOLVER-ANSWER "first"}

See {SOLVER-DEFINE} for more information.

{SOLVER-DEFINE}

{SOLVER-DEFINE *adj-cells*;*constraint-cells*;*optimize*;*opt-cell*;*opt-type*;*answers*} analyzes data in a sheet and returns an answer to a problem you define.

Note Solver is only available as an add-in for 1-2-3 97. You can install a trial version of Solver from \EXTRA\123\SOLVER on the 1-2-3 97 CD. For more information about Solver, see Compatibility.

Arguments

adj-cells is the range name or address of the adjustable cell(s), enclosed in " " (quotation marks).

constraint-cells is the range name or address of the constraint cell(s), enclosed in " " (quotation marks).

For example, the following command uses three adjustable ranges (TV, RADIO, and PRINT).

{SOLVER-DEFINE "TV;Radio;Print";"Cons-Adv";"On";Adv_Profit;Max;1}

optimize is always enabled in 1-2-3 97. 1-2-3 ignores the *optimize* argument.

opt-cell is the name or address for which you want Solver to find the highest or lowest value.

opt-cell must depend directly or indirectly on the value of one or more cells in *adj-cells*.

opt-type is text that specifies whether you want Solver to find the highest or lowest value for *opt-cell.*

opt-type	**1-2-3 finds**
max	The highest value for *opt-cell*
min	The lowest value for *opt-cell*

answers 1-2-3 97 now ignores the *answers* argument since it always attempts to find one answer.

Notes

After executing a {SOLVER-DEFINE} command, 1-2-3 returns to Ready mode and puts your answer in the sheet. See {SOLVER-ANSWER} for more information.

{SOLVER-REPORT}

{SOLVER-REPORT *type*} Creates a report based on the current answer in a new sheet inserted after the solver model sheet.

Note Solver is only available as an add-in for 1-2-3 97. You can install a trial version of Solver from \EXTRA\123\ SOLVER on the 1-2-3 97 CD. For more information about Solver, see Compatibility.

Arguments

type is text that specifies the type of report to create.

type	**1-2-3 creates a report that**
answer	The Answer Report provides information about the decision variables and constraints, with their original and final values. The Answer Report also provides a quick way to determine which constraints are binding, (satisfied with equality at the solution), and which constraints have slack.
cells	Obsolete: For macro compatibility, this argument now generates an answer report which contains similar information.
how	Obsolete: For macro compatibility, this argument now generates an answer report which contains similar information.
limits	The Limits Report provides a different kind of "sensitivity analysis" information. It is created by re-running the optimization model with each decision variable (or changing cell) in turn while the objective (both maximizing and minimizing), and all other variables are held fixed.
nonbinding	Obsolete: For macro compatibility, this argument now generates an answer report which contains similar information.
sensitivity	The Sensitivity Report provides classical sensitivity analysis information for both linear and non-linear programming problems, including dual values (in both cases) and range information (for linear problems only).
what-if	Obsolete: For macro compatibility, this argument now generates a Limits Report which contains similar information.

Examples

The following command creates a sheet named Answer 1 that provides information about the answer 1-2-3 found for the current problem.

{SOLVER-REPORT "answer"}

{COLUMN-WIDTH}

{COLUMN-WIDTH-FIT-WIDEST}

{COLUMN-WIDTH-RESET}

{COLUMN-WIDTH *width*;[*range*]} adjusts each column in *range* to a specified *width* in the default font and size.

{COLUMN-WIDTH-FIT-WIDEST [*range*]} adjusts columns to the width of the widest entries included in *range*.

{COLUMN-WIDTH-RESET [*range*]} returns each column in *range* to the default width.

Arguments

width is an integer that specifies the number of digits to which you want to set the columns.

range is the name or address of the range of columns whose width you want to adjust. If you omit *range*, 1-2-3 uses the currently selected range, collection, or query table.

Examples

The following command sets the column width to 25 for all columns in the range CITIES.

{COLUMN-WIDTH 25;CITIES}

The following commands formats MONTHS, a range of date numbers, in day-month-year format and adjusts each column in the range to the width of the widest entry.

{SELECT MONTHS}

{STYLE-NUMBER-FORMAT "dd-mmm-yy"}

{COLUMN-WIDTH-FIT-WIDEST}

{HIDE-COLUMNS}
{HIDE-SHEETS}

{HIDE-COLUMNS [*range*]} hides all columns in *range*.

{HIDE-SHEETS [*range*]} hides all sheets in *range*.

Arguments

range is the name or address of a range with at least one cell in each column or sheet you want to hide.

If you omit *range*, 1-2-3 hides any column or sheet that has cells in the currently selected range.

Examples

The following command hides columns D, E, and F in the current file.

{HIDE-COLUMNS D4..F17}

The following command hides sheets A, B, and C in the current file.

{HIDE-SHEETS A:A1..C:A1}

{NAMED-STYLE-USE}

{NAMED-STYLE-USE *style-name*;[*range*]} applies a named style to a range or query table.

Arguments

style-name is text that specifies the name of the style to apply.

range is the name or address of the range to which you want to apply a named style.

If you omit *range*, 1-2-3 uses the current selection.

Examples

The following commands apply the style named TITLES to a collection.

{SELECT HEADING_1}

{SELECT-APPEND HEADING_2}

{SELECT-APPEND HEADING_3}

{NAMED-STYLE-USE TITLES}

{PAGE-BREAK-COLUMN}

{PAGE-BREAK-ROW}

{PAGE-BREAK-COLUMN *on-off*} inserts or deletes a vertical page break to the left of the column containing the current cell.

{PAGE-BREAK-ROW *on-off*} inserts or deletes a horizontal page break above the row containing the current cell.

Arguments

on-off is text that specifies whether to insert or delete a page break.

on-off	**1-2-3 does the following**
on	Inserts a page break
off	Deletes a page break

Examples

The following commands make cell H40 the current cell and then insert a vertical page break.

{SELECT H40}

{PAGE-BREAK-COLUMN "on"}

The following commands make cell H30 the current cell and then delete the horizontal page break above that cell.

{SELECT H30}

{PAGE-BREAK-ROW "off"}

{PROTECT}
{UNPROTECT}

{PROTECT [*range*]} turns protection back on for a range that has been unprotected.

{UNPROTECT [*range*]} turns protection off for a range.

Arguments

range is the name or address of the range you want to protect or unprotect.

If you omit *range*, 1-2-3 uses the currently selected range or collection.

Examples

The following data-entry macro removes protection from the range PRICES before sealing the file. When the user finished entering data in PRICES, the macro turns protection for the range back on. The user must provide the password to seal and unseal the file.

{UNPROTECT PRICES}

{FILE-SEAL}

{FORM PRICES;SIGKEYS;;BADKEYS}

{FILE-UNSEAL}

{PROTECT PRICES}

{ROW-HEIGHT}
{ROW-HEIGHT-FIT-LARGEST}

{ROW-HEIGHT *height*;[*range*]} adjusts each row in *range* to a specified *height* in points.

{ROW-HEIGHT-FIT-LARGEST [*range*]} adjusts each row in *range* to the height of the largest font in that row.

Arguments

height is an integer from 1 through 255 that specifies the row height, in points.

range is the name or address of the range whose row height you want to adjust.

If you omit *range*, 1-2-3 uses the currently selected range or query table.

Examples

The following command sets the row height to 24 points for all rows in the range GROSS.

{ROW-HEIGHT 24;GROSS}

The following command adjusts each row in the range MONTHS to the height of the largest font in that row.

{ROW-HEIGHT-FIT-LARGEST MONTHS}

{SHOW-COLUMNS}
{SHOW-SHEETS}

{SHOW-COLUMNS [*range*]} redisplays all hidden columns in *range*.

{SHOW-SHEETS [*range*]} redisplays all hidden sheets in *range*.

Arguments

range is the name or address of a range with at least one cell in each column or sheet you want to redisplay.

If you omit *range*, 1-2-3 uses the currently selected range.

Examples

Columns D, E, and F of the current sheet are hidden. The following command redisplays them.

{SHOW-COLUMNS D4..F17}

Sheets A, B, and C of the current file are hidden. The following command redisplays them.

{SHOW-SHEETS A:A1..C:A1}

{STYLE-ALIGN-HORIZONTAL}

{STYLE-ALIGN-HORIZONTAL *horizontal*;[*range*];[*over-cols*];[*wrap*]} changes the horizontal alignment of labels and values in *range*.

Arguments

horizontal is text that specifies how to align data in *range*.

horizontal	**1-2-3 aligns data**
general	Labels to the left and values to the right
left	To the left
center	In the center
right	To the right
evenly	Stretches text within the cell by expanding the space between words and between the letters in words. Evenly has no effect on labels that end with a . (period), ! (exclamation point), ? (question mark), or : (colon).

over-cols is a yes/no argument that specifies whether align the text in the leftmost cell over the columns in *range*, according to your *horizontal* selection.

If you omit *over-cols*, 1-2-3 does not change this setting.

wrap is a yes/no argument that specifies whether labels should wrap to fit inside a single cell.

If you omit *wrap*, 1-2-3 leaves the setting unchanged.

Examples

The following command left-aligns data in the range DEBITS.

{STYLE-ALIGN-HORIZONTAL "left";DEBITS}

{STYLE-ALIGN-VERTICAL}

{STYLE-ALIGN-VERTICAL *vertical*;[*range*]} aligns text within a cell whose height is bigger than the largest typeface.

Arguments

vertical is text that specifies how to align data in *range*.

vertical	**1-2-3 aligns data**
top	With the top of the cell
center	In the center of the cell
bottom	With the bottom of the cell

range is the name or address of the range or query table where you want to align data.

If you omit *range*, 1-2-3 aligns data in the currently selected range, collection, or query table.

Examples

The following command top-aligns data in the range DEBITS.

{STYLE-ALIGN-VERTICAL "top";DEBITS}

{STYLE-ALIGN-ORIENTATION}

{STYLE-ALIGN-ORIENTATION *orientation*;[*angle*];[*range*]} changes the orientation of data in *range*.

Arguments

orientation is an offset number from 0 through 4 that specifies an orientation.

angle is an integer from 1 through 90 that specifies the rotation angle if *orientation* is 4.

If you omit *angle*, 1-2-3 uses 45.

range is the name or address of the range or query table where you want to change the orientation of data.

If you omit *range*, 1-2-3 changes the orientation of data in the currently selected range, collection, or query table.

Examples

The following command rotates data in the range TOP_ROW to a 45-degree angle.

{STYLE-ALIGN-ORIENTATION 4;45;TOP_ROW}

{STYLE-BORDER}

{STYLE-BORDER *border*;*display*;[*range*];[*color*];[*style*]} controls borders for *range*.

Arguments

border is text that specifies the border you want to work with.

border	**1-2-3 manipulates the**
outline	Border around the entire range
all	Border around each cell in the range
left	Left border of each cell
right	Right border of each cell
top	Top border of each cell
bottom	Bottom border of each cell

display is a yes/no argument that specifies whether to turn the display of *border* on or off. If you turn display of *border* off, 1-2-3 ignores *color* and *style*.

range is the name or address of the range where you want to work with borders.

If you omit *range*, 1-2-3 uses the current selection.

color is an offset number from 0 through 15 that specifies a line color.

style is an offset number from 0 through 7 that specifies a line style.

If you omit *color* or *style*, 1-2-3 uses the default settings.

Examples

The first three commands in the following example select a collection. The {STYLE-BORDER} command draws a bold, red line around the outside edge of each range in the collection.

```
{SELECT A2..B8}
{SELECT-APPEND D3..E27}
{SELECT-APPEND D32..F35}
{STYLE-BORDER "outside";"on";;2;3}
```

{STYLE-EDGE}

{STYLE-LINE}

{STYLE-EDGE [*color*];[*style*];[*width*];[*arrowhead*]} changes the color, style, and width of the edge of entire charts, chart elements (plot frames, solid data series, titles, legends, and footnotes), text blocks, enclosed drawn objects, arcs, freehand drawings, polylines, OLE objects, and pictures created in other Windows applications.

{STYLE-LINE [*color*];[*style*];[*width*];[*arrowhead*];[*symbol*]} changes the color, style, and width of the selected line for drawn lines and chart lines including line data series, grid lines, and axes.

Arguments

color is an integer from 0 through 255 that specifies a color in the color palette.

style is an offset number from 0 through 7 that specifies a line style.

width is an offset number from 0 through 7 that specifies a line width.

arrowhead is an offset number from 0 through 3 that specifies an arrowhead type.

symbol is an offset number from 0 through 23 that specifies a data-point symbol. If the current selection is not a line data series, 1-2-3 ignores *symbol*.

If you omit *color*, *style*, *width*, *arrowhead*, or *symbol*, the setting remains unchanged.

Examples

The first three commands in the following macro select three drawn objects. Then the {STYLE-EDGE} command makes all the rectangle edges bold and red.

```
{SELECT "Rectangle 1";;"draw"}
{SELECT-APPEND "Rectangle 2"}
{SELECT-APPEND "Rectangle 3"}
{STYLE-EDGE 129;1;3}
```

The first command in the following macro selects the B line data series in the chart COSTS. Then the {STYLE-LINE} command displays the data points as yellow, solid triangles.

```
{SELECT "COSTS";"B Range";"chart"}
{STYLE-LINE 34;1;3;;3}
```

{STYLE-FONT}

{STYLE-FONT-ALL}

{STYLE-FONT *typeface*;[*range*]} assigns a font to *range*.

{STYLE-FONT-ALL [*typeface*];[*size*];[*bold*];[*italic*];[*underline*];[*range*];[*underline-style*]]} assigns a font and adds bold, italic, and underlining to *range*.

Arguments

typeface is text that specifies the name of the font that you want to assign.

range is the name or address of the range where you want to work with fonts.

If you omit *range*, 1-2-3 uses the current selection.

size is a value that specifies the point size that you want to assign.

bold, *italic*, and *underline* are yes/no arguments that add or remove boldface, italics, and underlining.

If you omit *size*, *bold*, *italic*, or *underline*, the setting remains unchanged.

underline-style is an offset number from 0 through 2 that specifies an underline style.

If you omit *underline-style*, 1-2-3 uses 0. If you specify "off" for *underline,* 1-2-3 ignores *underline-style*.

Examples

The following command assigns the Helvetica font to the range HEADLINE.

{STYLE-FONT "Helvetica";HEADLINE}

The following command applies the font Times New Roman, in 24 point size, to the range HEADLINE and then adds bold and wide underlining.

{STYLE-FONT-ALL "Times New Roman";24;"on";"off";"on";HEADLINE;2}

{STYLE-FONT-ATTRIBUTES}
{STYLE-FONT-RESET}
{STYLE-FONT-SIZE}

{STYLE-FONT-ATTRIBUTES *attribute*;*on-off*;[*range*];[*underline-style*]} adds bold, italic, or underlining to *range*.
{STYLE-FONT-RESET [*range*]} restores the sheet default font, font size, attributes and color to *range*.
{STYLE-FONT-SIZE *size*;[*range*]} assigns a point size to the fonts in *range*.

Arguments

attribute is text that specifies the attribute that you want to add or remove.

attribute	**1-2-3 adds or removes**
bold	Boldface
italic	Italics
underline	Underlining

on-off is a yes/no argument that specifies whether to add or remove *attribute*.
range is the name or address of the range where you want to work with fonts.
If you omit *range*, 1-2-3 uses the current selection.
underline-style is an offset number from 0 through 2 that specifies an underline style.
If you omit *underline-style*, 1-2-3 uses 0. If you turn off underlining, 1-2-3 ignores *underline-style*.
size is a value that specifies the point size that you want to assign.

Examples

The following command adds bold to data in the range HATS.
{STYLE-FONT-ATTRIBUTES "bold";"on";HATS}
The following macro selects the range HEADLINE, and assigns the font Helvetica, in 24 point size, to the range.
{SELECT HEADLINE}
{STYLE-FONT "Helvetica"}
{STYLE-FONT-SIZE 24}

{STYLE-FRAME}

{STYLE-FRAME *display*;[*color*];[*style*];[*range*]} adds or removes a frame for *range*.

Arguments

display is a yes/no argument that specifies whether to turn the display of the frame on or off. If you turn display of the frame off, 1-2-3 ignores *color* and *style*.

color is an integer from 0 through 255 that specifies a color in the color palette.

style is an offset number from 0 through 15 that specifies a frame style.

If you omit *color* or *style*, the setting remains unchanged.

range is the name or address of the range where you want to work with a frame.

If you omit *range*, 1-2-3 uses the current selection.

Examples

The first three commands in the following example select a collection. Then the {STYLE-FRAME} command adds a red, photo-corner frame around each range in the collection.

{SELECT A2..B8}

{SELECT-APPEND D3..E27}

{SELECT-APPEND D32..F35}

{STYLE-FRAME "on";3;129}

{STYLE-GALLERY}

{STYLE-GALLERY *template*; [*range*]} formats *range* with one of fourteen style templates available in 1-2-3.

Arguments

template is an offset number from 0 through 13 that specifies a template.

range is the name or address of the range you want to format.

If you omit *range*, 1-2-3 uses the current selection.

Examples

The following command formats the range EXPENSES with the Chisel2 template.

{STYLE-GALLERY 1;EXPENSES}

{STYLE-INTERIOR}

{STYLE-INTERIOR [*background-color*];[*pattern*];[*pattern-color*];[*text-color*];[*negatives*];[*range*]} adds colors and patterns to *range*.

Arguments

background-color, *pattern-color*, and *text-color* are integers from 0 through 255 that specify colors in the color palette.

pattern is an offset number from 0 through 63 that specifies a pattern.

If you omit *background-color*, *pattern*, *pattern-color*, or *text-color*, 1-2-3 uses 0.

negatives is a yes/no argument that specifies whether to display negative values in a range or query table in red.

If the current selection is not a range or query table, 1-2-3 ignores *negatives.* If you omit *negatives*, 1-2-3 does not change the setting.

range is the name or address of the range you want to format.

If you omit *range*, 1-2-3 uses the current selection.

Examples

The following commands selects an ellipse and changes the interior color to light gray.

{SELECT ELLIPSE 1;;"draw"}

{STYLE-INTERIOR 95}

The following commands select the query table EMPLOYEES and then changes the background color to light gray and the text color to dark blue.

{SELECT EMPLOYEES;;"query"}

{STYLE-INTERIOR 95;;;186}

The following command displays negative values in the range MARCH in red.

{STYLE-INTERIOR ;;;;"yes";MARCH}

{STYLE-NUMBER-FORMAT}
{STYLE-NUMBER-FORMAT-RESET}

{STYLE-NUMBER-FORMAT [*format*];[*decimals*];[*parentheses*];[*range*];[*currency*]} sets the display of values in *range*.

{STYLE-NUMBER-FORMAT-RESET [*range*]} resets the format of *range* to the current default format.

Arguments

format is text that specifies the format that you want to assign to the values in *range*. If you omit *format*, the current format of *range* remains unchanged.

format	**1-2-3 displays values in this format**
automatic	Automatic
comma	Comma
currency	Currency
fixed	Fixed
general	General
hidden	Hidden
label	Label
percent	Percent
scientific	Scientific
text	Text
+/-	+/- (plus or minus)
dd-mmm	31-Dec
dd-mmm-yy	31-Dec-97
mmm-yy	Dec-97
date-long-international	12/31/97
date-short-international	12/31
hh:mm am/pm	11:59:PM
hh:mm:ss am/pm	11:59:59 PM
time-long-international	23:59:59
time-short-international	59:59

decimals is an integer from 0 through 15 that specifies the number of decimal places.

If you omit *decimals*, 1-2-3 uses 2.

parentheses is a yes/no argument that specifies whether or not to enclose values in parentheses.

If you omit *parentheses*, the current Parentheses setting of *range* remains unchanged.

range is the name or address of the range to format.

If you omit *range*, 1-2-3 uses the current selection.

currency is text that specifies the currency symbol to use if *format* is "currency." *currency* is the name of a currency symbol.

Examples

The following commands format the range EUROPE in the 23:59:59 time format.

{SELECT europe}

{STYLE-NUMBER-FORMAT "time-long-international"}

The following commands format the y-axis for the chart COG as currency:

{SELECT "COG";"Y axis labels";"CHART"}

{STYLE-NUMBER-FORMAT "currency";2}

The following commands format the range APRIL as currency using the Japanese yen currency symbol.

{SELECT april}
{STYLE-NUMBER-FORMAT "currency";2;;;"japanese yen"}

{ -- *comment*}

{-- *comment*} puts a comment into a macro. This macro keyword is two - (hyphens) with no spaces between them.

Arguments

comment is the text of the comment that you want to add. *comment* can contain any characters except } (close brace). You do not have to enclose *comment* in " " (quotation marks).

Notes

When 1-2-3 encounters a {-- *comment*}, it ignores this command and proceeds to the next macro command.

Use comment commands to document your macros. Frequent comment commands with long comments, however, slow macro performance. It is best to enter any extended comments as labels in the adjacent column to the right of the commands in the sheet.

Examples

You might put the following command at the beginning of a subroutine that enters a formatted company name.

{-- Enters the company name in Helvetica bold 24 point}

{ADDIN-LOAD}
{ADDIN-REMOVE}
{ADDIN-REMOVE-ALL}

{ADDIN-LOAD *add-in*} reads an add-in into memory.

{ADDIN-REMOVE *add-in*} removes an add-in from memory.

{ADDIN-REMOVE-ALL} removes all add-ins from memory.

Arguments

add-in is text that specifies the name of the add-in you want to work with. For {ADDIN-LOAD}, include the path.

Examples

The following command loads an add-in named Finance into memory.

{ADDIN-LOAD "c:lotus\123\addins\finance.12A"}

The following command removes an add-in named Finance from memory.

{ADDIN-REMOVE "finance.12A"}

{PLAY}

{PLAY *filename*} plays a .WAV file.

Arguments

filename is text that specifies the name of the .WAV file to play, including the path.

Notes

See your Windows 95 documentation for information about sound files.

Examples

The following command plays Happy Birthday, which is stored in the file BIRTHDAY.WAV in the directory D:\WINDOWS\SOUNDS.

```
{PLAY "d:\windows\sounds\birthday.wav"}
```

{SEND-MAIL}

{SEND-MAIL [*to*];[*cc*];[*subject*];[*body*];[*clipboard*];[*file*]} sends a mail message, using your mail application, while you are working in 1-2-3. The mail can contain text, the contents of the clipboard, and the current file.

Arguments

to and *cc* specify whom to send the mail to and whom to copy.

If *to* or *cc* is text enclosed in " " (quotation marks), you can enter only a single name, for example, "Christine Smith" or "Sales Team."

If *to* or *cc* is the name or address of a range that contains labels, you must enter the labels in a single row or column. 1-2-3 ignores cells that do not contain labels or text formulas. The range you specify can contain up to 100 cells.

If you omit *to*, 1-2-3 displays a dialog box from your mail application.

subject is text that specifies the subject of the mail message, for example "Information About the Monthly Sales Meeting."

body specifies the body of the message.

If *body* is the name or address of a range that contains labels, you must enter the labels in a single row or column. 1-2-3 ignores cells that do not contain labels or text formulas.

If *body* is a multiple-cell range, each label is followed by a line feed and carriage return in the body of the mail message. 1-2-3 ignores cells that do not contain labels or text formulas. The range you specify can contain up to 100 cells.

clipboard is a yes/no argument that specifies whether to attach the contents of the Clipboard to the mail message.

If you omit *clipboard*, 1-2-3 does not attach the contents of the Clipboard.

Note Only Lotus Notes users can attach the contents of the Clipboard to the mail message.

file is a yes/no argument that specifies whether to attach the current file to the mail message.

If you omit *file*, 1-2-3 does not attach the current file.

Examples

The following command sends the current file to the group East Coast Reps under the subject heading Fourth Quarter Sales Plan. The message contains no text.

{SEND-MAIL "East Coast Reps";;"Fourth Quarter Sales Plan";;"no";"yes"}

{SET}

{SET *info-id*;*info-value*} sets a specified Info component to a specified value.

Arguments

info-id is text that specifies the name of the Info component whose value you want to set.

info-value specifies the value to which you want to set the Info component. *info-value* can be a value, text, or a location, depending on the component that you are setting.

Examples

The following commands set the default number format to Currency with no decimal places.

{SET "worksheet-format";"currency"}

{SET "worksheet-format-decimals";0}

{SMARTICONS-USE}

{SMARTICONS-USE *set-name*} selects a set of SmartIcons to use with 1-2-3.

Arguments

set-name is text that specifies the name of the set of SmartIcons to make current.

Examples

The following command selects the set of SmartIcons named Draw.

{SMARTICONS-USE "Draw"}

{SPELLCHECK?}

{SPELLCHECK?} displays the Edit - Check Spelling dialog box and waits for you to click OK.

Notes

When spell checking is complete, 1-2-3 continues to the macro command in the cell below {SPELLCHECK?}.

If you did not install the Spell Checker, {SPELLCHECK?} returns an error.

Keystroke equivalents

The table below lists the macro key names that correspond to the 1-2-3 function keys, pointer-movement keys, and a few keyboard keys. For explanations of what the 1-2-3 keys do, see Special Keys.

1-2-3 key	Macro instruction
~ (tilde)	{~}
{ (open brace)	{{}
} (close brace)	{}}
/ (slash) or < (less than)	/, <, or {MENU}
ALT+F6 (ZOOM)	{ZOOM}
BACKSPACE	{BACKSPACE} or {BS}
CTRL+END	{FILE}
CTRL+END CTRL+PG DN	{PREVFILE}, {PF}, or {FILE}{PS}
CTRL+END CTRL+PG UP	{NEXTFILE}, {NF}, or {FILE}{NS}
CTRL+END END	{LASTFILE}, or {FILE}{END}
CTRL+END HOME	{FIRSTFILE},{FF}, or {FILE}{HOME}
CTRL+HOME	{FIRSTCELL} or {FC}
CTRL+LEFT	{BACKTAB} or {BIGLEFT}
CTRL+PG UP	{NEXTSHEET} or {NS}
CTRL+PG DN	{PREVSHEET} or {PS}
CTRL+RIGHT	{BIGRIGHT}
DEL	{DELETE} or {DEL}
DOWN	{DOWN} or {D}
END	{END}
END CTRL+HOME	{LASTCELL} or {LC}
ESC	{ESCAPE} or {ESC}
ESC in 1-2-3 Classic edit line	{CLEARENTRY} or {CE}
F1 (HELP)	{HELP}
F2 (EDIT)	{EDIT}
F3 (NAME)	{NAME}
F4 in Ready mode	{ANCHOR}
F4 (ABS)	{ABS}
F5 (GOTO)	{GOTO}
F6 (PANE)	{WINDOW}
F7 (QUERY)	{QUERY}
F8 (TABLE)	{TABLE}
F9 (CALC)	{CALC}
HOME	{HOME}
INS	{INSERT} or {INS}
LEFT	{LEFT} or {L}
PG DN	{PGDN}
PG UP	{PGUP}
RIGHT	{RIGHT} or {R}
SHIFT+CTRL+LEFT	{SELECT-BIGLEFT}

SHIFT+CTRL+RIGHT	{SELECT-BIGRIGHT}
SHIFT+DOWN	{SELECT-DOWN}
SHIFT+CTRL+HOME	{SELECT-FIRSTCELL}
SHIFT+HOME	{SELECT-HOME}
END SHIFT+CTRL+HOME	{SELECT-LASTCELL}
SHIFT+LEFT	{SELECT-LEFT}
SHIFT+CTRL+PG UP	{SELECT-NEXTSHEET}
SHIFT+PG DN	{SELECT-PGDN}
SHIFT+PG UP	{SELECT-PGUP}
SHIFT+CTRL+PG DN	{SELECT-PREVSHEET}
SHIFT+RIGHT	{SELECT-RIGHT}
SHIFT+UP	{SELECT-UP}
TAB	{TAB}
UP	{UP} or {U}

Note 1-2-3 does not have macro key names for the following keys: ALT+BACKSPACE (UNDO), ALT+F1 (COMPOSE), ALT+F2 (STEP), ALT+F3 (RUN), CAPS LOCK, NUM LOCK, PRINT SCREEN, SCROLL LOCK, and SHIFT. Therefore, you cannot use these keystrokes in a macro.

Macro commands for SmartIcons

Macro commands for SmartIcons correspond to the functions of commonly used SmartIcons.

Icon	Corresponding macro command
	{SMARTSUM} sums values in the selected or adjacent range, if you include empty cells below or to the right of the range.
	{SORT-ASCENDING} sorts a range or database table in ascending order (A - Z and smallest to largest values), using the selected column as the key.
	{SORT-DESCENDING} sorts a range or database table in descending order (Z - A and largest to smallest values), using the selected column as the key.
	{TOGGLE-OUTLINE} adds or removes a border.
	{TOGGLE-SHADOW} draws or removes an outline around a cell or range and adds or removes a drop shadow.

{ALERT}

{ALERT *message*;[*buttons*];[*icon-type*];[*results-range*];[*x*];[*y*]} displays a message box and waits for the user to click OK or Cancel.

Arguments

message is the text of the message to appear in the box.

buttons is one of the following numbers.

buttons	**Message box displays**
1	Only the OK button; default if you omit the argument
2	Both the OK and Cancel buttons

icon-type is text that specifies the type of icon to display in the message box.

icon-type	**Message box displays**
note	Note icon; default if you omit the argument
caution	Caution icon
stop	Stop icon

results-range is the name or address of a cell where 1-2-3 stores the number of the button the user selected (1 for OK, 0 for Cancel).

The number in the results range before 1-2-3 runs an {ALERT} command determines which button is the default button in the message box. If the results range contains 0, Cancel is the default button; otherwise, OK is the default setting.

If you omit *results-range*, 1-2-3 does not enter a result in the sheet.

x is a value that specifies the horizontal position, in pixels, measured from the left side of the screen to the left side of the dialog box.

y is a value that specifies the vertical position, in pixels, measured from the top of the screen to the top of the dialog box.

If you omit *x* and *y*, the dialog box appears in the center of the screen.

Examples

The following macro displays a dialog box in the center of the screen with the text "Your message here", both the OK and Cancel buttons, and the caution symbol.

{ALERT "Your message here.";2;caution;;;}

{CHOOSE-FILE}

{CHOOSE-FILE [*file-type*];*results-range*;[*title*]} displays a Windows common dialog box that contains a list of files and waits for the user to select one.

Arguments

file-type is text that specifies the type of files displayed in the dialog box. 1-2-3 displays the names of files in the current directory, though the user can change the path.

file-type	**1-2-3 lists**
worksheet	Only 1-2-3 workbooks; default if you omit the argument
all	All the files in the directory
text	Only text files with .TXT and .PRN extensions

You can also use the wildcard characters * (asterisk) and ? (question mark) in *file-type* to display a list of files with similar names or extensions.

The * wildcard character represents any number of consecutive characters in a file name or extension. For example, to have {CHOOSE-FILE} list all files with the extension .123, make *file-type* "***.123**".

The ? wildcard character represents any single character in a file name or extension. For example, to have {CHOOSE-FILE} list all files with a three-character extension that begins with .W, make file-type "*.w??".

results-range is the name or address of a cell where, if the user clicks OK, 1-2-3 stores the name of the file that the user selected. If the user clicks Cancel in the dialog box, *results-range* is blank.

title is text that appears in the title bar of the dialog box.

Notes

If your macros currently contain the SmartPak command {CHOOSEFILE}, this command will continue to work correctly.

File names appear in a list box.

The macro commands that follow {CHOOSE-FILE} can perform an action based on the selected file.

{CHOOSE-ITEM}

{CHOOSE-ITEM *list-range*;*results-range*;[*prompt*];[*title*]} displays a dialog box that contains a list of data items, waits for the user to select one and then click OK or Cancel, and enters the index number for the user's choice in the sheet.

Arguments

list-range is the name or address of a single-column range that contains the items displayed in the dialog box. The items must appear one per cell in the same order that you want them to appear in the list. End the list of items in *list-range* with a blank cell or a cell that contains the value ERR or NA.

results-range is the name or address of a cell where 1-2-3 stores the index number of the item the user selected. The first item in the list is numbered 0, the second item is numbered 1, and so on. If the user clicks Cancel in the dialog box, 1-2-3 leaves *results-range* blank.

prompt is text that appears at the top of the dialog box. Use this prompt to tell users what happens when they select an item.

title is text that appears in the title bar of the dialog box.

Notes

If your macros currently contain the SmartPak command {CHOOSEITEM}, this command will continue to work correctly.

Items appear in a list box, and the first item in the list box is highlighted.

Use {CHOOSE-ITEM} to let the user select an item other than a file. The macro commands that follow {CHOOSE-ITEM} can perform an action based on the selected item.

{CHOOSE-MANY}

{CHOOSE-MANY *choices-range;results-range*;[*prompt*];[*title*]} displays a dialog box and waits for the user to select one or more check boxes and then click OK or Cancel.

Arguments

choices-range is the name or address of a range that contains descriptions of the check boxes. This range requires three rows and a column for each check box. You can create up to eight check boxes.

Row 1: Enter the label that you want 1-2-3 to display to the right of the corresponding check box in the dialog box.

Row 2: Specify the initial state that you want for the corresponding check box when 1-2-3 displays the dialog box. A value of 0 means off; a value of 1 means on; a value of NA means dimmed.

Row 3: 1-2-3 will enter the state of a check box after the user clicks OK. A value of 0 means off; a value of 1 means on.

results-range is the name or address of a cell where 1-2-3 stores a 0 if the user clicks Cancel in the dialog box or 1 if the user clicks OK.

prompt is text that appears at the top of the dialog box. Use this prompt to tell users what happens when they select the check boxes.

title is text that appears in the title bar of the dialog box.

Notes

If your macros currently contain the SmartPak command {CHOOSEMANY}, this command will continue to work correctly.

{CHOOSE-MANY} stores the user's choices in the third row of *choices-range.* Unlike {CHOOSE-ONE}, however, {CHOOSE-MANY} doesn't perform any action based on what the user chose. Use {CHOOSE-MANY} with subsequent macro commands that test the contents of *results-range* and the third row of *choices-range*, and then perform actions based on what the user chooses.

If the user clicks	1-2-3 stores
OK	1 in *results-range* and 0 or 1 in each cell in the third row in *choices-range*
Cancel	0 in *results-range* and doesn't change the third row in *choices-range*; clicking Cancel removes the {CHOOSE-MANY} dialog box but doesn't stop the macro.

{CHOOSE-ONE}

{CHOOSE-ONE *choices-range; results-range*; [*prompt*];[*title*]} displays a dialog box and waits for the user to select an option and then click OK or Cancel; then runs the macro associated with the option.

Arguments

choices-range is the name or address of a range that contains descriptions of the option buttons. This range requires at least three rows and a column for each button. You can create up to eight buttons.

Row 1: Enter the label that you want 1-2-3 to display to the right of the corresponding button in the dialog box.

Row 2: Specify the initial state that you want for the corresponding button when 1-2-3 displays the dialog box. A value of 0 means off; a value of 1 means on; a value of NA means dimmed.

Only one button can be selected when 1-2-3 displays the dialog box, so only one cell in the second row can contain a 1. If no cell contains 1, the first button will be selected. If more than one cell contains 1, only the button corresponding to the first cell that contains 1 will be selected. This row doesn't change after 1-2-3 performs {CHOOSE-ONE}.

Row 3: Enter macro commands (up to 511 characters per cell) or the name of the subroutine that you want 1-2-3 to perform when the corresponding button in the dialog box is selected and the user clicks OK. Starting at the third row, you can use as many subsequent rows as you need for macro commands.

results-range is the address or range name of a cell where 1-2-3 enters a 0 if the user clicks Cancel or 1 if the user clicks OK.

prompt is text that appears at the top of the dialog box. Use this prompt to tell users what happens when they select a button.

title is text that appears in the title bar of the dialog box.

Notes

If your macros currently contain the SmartPak command {CHOOSEONE}, this command will continue to work correctly.

Use the {CHOOSE-ONE} command to prompt the user to select a radio button so that 1-2-3 will perform the macro commands associated with the button. Unlike the {CHOOSE-MANY} command, {CHOOSE-ONE} doesn't enter the user's choice in the sheet, but instead performs an action based on the user's choice.

If the user clicks	1-2-3 stores
OK	1 in *results-range* and performs the macro commands associated with the selected button.
Cancel	0 in *results-range* and doesn't perform the macro commands associated with the selected button; clicking Cancel removes the {CHOOSE-ONE} dialog box but doesn't stop the macro.

{DIALOG}

{DIALOG *range*} displays a custom dialog box created with the Lotus Dialog Editor.

After you create a dialog box in the Dialog Editor and copy it to the Clipboard, you paste it in a worksheet file so that you can use it in a macro.

Arguments

range is the name or address of the first cell in the dialog-description table.

Notes

Although {DIALOG} changes the contents of cells, 1-2-3 does not automatically recalculate formulas after executing a {DIALOG} command when worksheet recalculation is set to Automatic. To force recalculation after a {DIALOG} command, follow the command with {CALC}.

The following information is from 1-2-3 Release 5 Help and shows how to use parameters of the Lotus Dialog Editor, which is not supplied with 1-2-3 97. This section is included only for compatibility wih earlier versions of 1-2-3.

Using a Dialog Box Created with the Lotus Dialog Editor

After you create a dialog box in the Dialog Editor and copy it to the Clipboard, you paste it in a worksheet file so that you can use it in a macro.

To see a sample dialog-description table, find the file UIMACROS.WK4 (that shipped with 1-2-3 Release 5) and click the worksheet tab {Dialog}, or press CTRL+PG UP five times to go to worksheet F.

In the file, the dialog box takes the form of a dialog-description table. This table contains 11 columns and as many rows as there are dialog-box controls, plus two rows. The two rows contain labels that mark the beginning and end of the table.

Columns of the dialog-description table

1-2-3 uses the first nine columns of the table to store information about the contents and layout of the dialog-box. The table requires two more columns:

Input column: The tenth column of the table. You enter information about the initial state of a control in the corresponding cell of this column.

Output column: The eleventh column of the table. 1-2-3 enters information in this column that is determined by a user's actions in a dialog box. You can use this information in a macro.

Note 1-2-3 requires that the "twelfth" column--that is, the first column to the right of the output column--be blank. This column is not, however, part of the dialog-description table.

For information about valid data for the input column and about what 1-2-3 enters in the output column, see the following:

Push Button, Default Push Button, Bitmap Button

Input column

To make the button appear dimmed, enter the value NA.

Output column

Depending on which button the user presses to close the dialog box, 1-2-3 enters one of the following values in the output cell.

When a user chooses	1-2-3 enters
A default push button	1
The Cancel button	0
Any other push button	Button ID number

Radio Button

Input column

Enter a value to specify the initial state of the button when 1-2-3 displays the dialog box.

Value in input column	Result when the dialog appears
0	Button is off.
1	Button is on.

NA	Button is dimmed.

Only one radio button's input cell can contain 1. If no cell contains 1, the first button is selected. If more than one cell contains 1, only the button corresponding to the first cell that contains 1 is selected.

Output column
When a user selects a radio button, 1-2-3 enters the value 1 in the output cell. If a radio button remains unselected, 1-2-3 enters the value 0.

Check Box

Input column
Note Enter a value to specify the initial state of the check box when 1-2-3 displays the dialog box.

Value in input column	Result when the dialog appears
0	Box is unselected
1	Box is selected; an X appears in the box
NA	Box is dimmed

Output column
When a user selects a check box, 1-2-3 enters the value 1 in the output cell. If a check box remains unselected, 1-2-3 enters the value 0.

Edit Box

Input column
To display an edit box with default text in it, enter the data as a label in the input cell. If the input cell contains the value NA, the box is dimmed.

Output column
When the user closes the dialog box, 1-2-3 enters the text in the edit box as a left-aligned label in the output cell.

List Box

8th column
To display a list box with a default item selected, enter the item as a label in the 8th column.

Input column
Enter the address or name of a single-column range that contains the items to appear in the list box. List the items, one per cell, in the order that you want them to appear in the list box. End the list of items with a blank cell or a cell that contains the value ERR or NA. Be sure the cells to the right of the range are blank.

Note If the input cell contains the value NA, the box is dimmed.

Output column
1-2-3 enters the index number of the item selected by the user in the output cell. The first item in the list is numbered 0, the second item is numbered 1, and so on.

If the user does not choose an item, 1-2-3 enters the value -1 in the output cell.

If multiple selections are possible in the list box, 1-2-3 enters the total number of selected items in the output cell. In the cells to the right of the range containing the list-box items, 1-2-3 enters the value 1 if the item was selected and the value 0 if the item was not selected.

Combo Box

8th column
To display a combo box with a default item selected, enter the item as a label in the 8th column.

Input column
Enter the address or name of a single-column range that contains the items to appear in the list box. List the items, one per cell, in the order that you want them to appear in the list box. End the list of items with a blank cell or a cell that contains the value ERR or NA.

If the input cell contains the value NA, the box is dimmed.

Output column

The edit portion of a combo box is always blank when the dialog box first appears, (unless a default value is specified in the 8th column.)

When the user closes the dialog box, 1-2-3 enters the text in the edit portion of the combo box as a left-aligned label in the output cell.

Group Box

Input column
To make a group box and all controls inside it appear dimmed, enter the value NA.

Output column
1-2-3 leaves the output cell blank.

Static Text and Static Bitmaps

Input column
To make the static text or bitmap appear dimmed, enter the value NA.

Output column
1-2-3 leaves the static control's output cell blank.

Note To enter the value NA in a cell of the input column, type @NA.

{DIALOG?}

{DIALOG? *name*} displays a 1-2-3 dialog box, and waits for you to click OK or press ENTER.

Arguments

name is text that specifies the name of the dialog box to display.

The name of a dialog box appears in the title bar when you choose the command that displays the dialog box.

If the dialog-box name contains more than one word, substitute hyphens for spaces between the words.

If the dialog-box name contains an & (ampersand), substitute the word and.

To display the Range Name dialog box, use the command {DIALOG? "range-name"}.

Notes

You cannot display a dialog box that does not apply to the current selection.

Examples

The following command displays the File Save As dialog box and waits for the user to enter information and click OK.

{DIALOG? "save-as"}

{GET-FORMULA}

{GET-LABEL}

{GET-NUMBER}

{GET-RANGE}

Display a dialog box that contains a text box and wait until the user clicks Cancel or OK. When the user clicks Cancel or OK, 1-2-3 enters the data from the text box in the sheet and resumes running the macro at the next command.

The user can enter up to 511 characters in the text box.

{GET-FORMULA [*prompt*];*result*;[*default*];[*title*];[*x*];[*y*]}

Lets the user enter a formula. {GET-FORMULA} enters the formula in the sheet rather than evaluating the formula and entering the result as a number, like {GET-NUMBER}.

If the user clicks OK after entering a formula or a reference to a cell that contains a number or formula, 1-2-3 enters the formula in *result*.

If the user enters nothing or something besides a number, formula, or reference to a cell that contains a number or formula, and then clicks OK, 1-2-3 enters the value ERR in *result*.

If the user clicks Cancel, 1-2-3 makes *result* blank and continues the macro.

{GET-LABEL [*prompt*];*result*;[*default*];[*title*];[*x*];[*y*]}

Lets the user enter anything that you want 1-2-3 to store in the sheet as a label.

If the user types data in the text box and clicks OK, 1-2-3 enters the contents of the text box as a left-aligned label in *result*.

If the user types nothing in the text box and clicks OK when the text box is blank, 1-2-3 enters the ' (apostrophe) label-prefix character in *result*.

If the user clicks Cancel, 1-2-3 makes *result* blank and continues the macro.

{GET-NUMBER [*prompt*];*result*;[*default*];[*title*];[*x*];[*y*]}

Lets the user enter a number or a numeric formula. {GET-NUMBER} enters the number in the sheet or evaluates the formula and enters the result as a number.

If the user clicks OK after typing a number, numeric formula, or reference to a cell that contains a number or numeric formula, 1-2-3 evaluates the entry and stores the result in *result*.

If the user types nothing and clicks OK when the text box is blank, 1-2-3 enters the value ERR in *result*.

If the user clicks OK after typing something besides a number, numeric formula, or reference to a cell that contains a number or numeric formula, 1-2-3 enters the value ERR in *result*.

If the user clicks Cancel, 1-2-3 makes *result* blank and continues the macro.

{GET-RANGE [*prompt*];*result*;[*default*];[*title*];[*x*];[*y*]}

Lets the user enter a range name or address. {GET-RANGE} enters the name or address in the sheet or as a left-aligned label.

If the user types a range name or address in the text box and clicks OK, 1-2-3 enters the contents of the text box as a left-aligned label in *result*.

If the user types nothing in the text box and clicks OK when the text box is blank, 1-2-3 enters the ' (apostrophe) label-prefix character in *result*.

If the user clicks Cancel, 1-2-3 makes *result* blank and continues the macro.

Arguments

prompt is text that appears at the top of the dialog box. If you omit *prompt*, 1-2-3 does not display a prompt.

result is the name or address of a range where you want 1-2-3 to store what the user entered. If you specify a multiple-cell range for *result*, 1-2-3 enters the data in the top left cell of the range.

default is what appears by default in the text box when 1-2-3 displays the dialog box. If you omit *default*, the text box is blank.

title is text that appears in the title bar of the dialog box. If you omit *title*, 1-2-3 does not display anything in the title bar.

x is a value that specifies the horizontal position, in pixels, measured from the left side of the screen to the left side of the dialog box.

y is a value that specifies the vertical position, in pixels, measured from the top of the screen to the top of the dialog box.

If you omit *x* and *y*, the dialog box appears in the center of the screen.

SmartPak commands

If your macros currently contain the SmartPak commands {WGETFORMULA}, {WGETLABEL}, and {WGETNUMBER}, these commands produce the same results as {GET-FORMULA}, {GET-LABEL}, and {GET-NUMBER}.

1-2-3 for DOS commands

If your macros currently contain the 1-2-3 for DOS command {GETLABEL}, this command produces the same results as {GET-LABEL}, except when the user clicks Cancel. Instead of making *result* blank, 1-2-3 enters the ' (apostrophe) label-prefix character in *result*.

If your macros currently contain the 1-2-3 for DOS command {GETNUMBER}, this command produces the same results as {GET-NUMBER}, except when the user clicks Cancel. Instead of making *result* blank, 1-2-3 enters the value ERR in *result*.

{MENU-COMMAND-ADD}

{MENU-COMMAND-REMOVE}

{MENU-COMMAND-ADD *menu-description-range*;*menu-index*;*command-index*} adds a command to a pull-down menu.

{MENU-COMMAND-REMOVE *menu-index*;*command-index*} removes a command from a pull-down menu.

Arguments

menu-description-range is the name or address of a range that contains a description of the command to add. This range requires five or more rows and one column.

Row 1: Enter the name of the command to add.

Row 2: Enter a description of the command in the cell above. 1-2-3 displays the description in the title bar when you highlight the command.

Row 3: Indicate whether the command two cells above should appear dimmed, checked, or neither dimmed nor checked. A value of NA makes the command appear dimmed; 1 makes it appear checked; a blank cell makes the command appear neither dimmed nor checked.

Row 4: Leave it blank.

Row 5: Enter macro commands (up to 511 characters per cell) or the range name of a macro that you want 1-2-3 to perform when the user chooses the corresponding command. Starting at the fifth row, you can use as many subsequent rows as you need for macro commands.

menu-index specifies which menu to add the command to or remove the command from. *menu-index* is an integer that corresponds to the position of a menu in the menu bar. The first menu has a *menu-index* number of 1, the second 2, and so on.

command-index specifies where in the pull-down menu to add or remove the command. *command-index* is an integer that corresponds to the position of a command in the pull-down menu. The first command has a *menu-index* number of 1, the second 2, and so on.

Notes

After using {MENU-COMMAND-ADD} or {MENU-COMMAND-REMOVE}, you can use {MENU-RESET} to restore display of the default menu bar.

{MENU-COMMAND-DISABLE}

{MENU-COMMAND-ENABLE}

{MENU-COMMAND-DISABLE *menu-index*;*command-index*} disables a command in a custom menu. Disabled commands appear dimmed.

{MENU-COMMAND-ENABLE *menu-index*;*command-index*} enables a command disabled with {MENU-COMMAND-DISABLE}.

Arguments

menu-index specifies which menu to add the command to or remove the command from. *menu-index* is an integer that corresponds to the position of a menu in the menu bar. The first menu has a *menu-index* number of 1, the second 2, and so on.

command-index specifies where in the pull-down menu to enable or disable the command. *command-index* is an integer that corresponds to the position of a command in the pull-down menu. The first command has a *menu-index* number of 1, the second 2, and so on.

Notes

{MENU-COMMAND-ENABLE} and {MENU-COMMAND-DISABLE} work only with custom menus; you cannot disable commands on the default menu bar.

{MENU-CREATE}

{MENU-INSERT}

{MENU-CREATE *menu-description-range*} replaces the current 1-2-3 menu bar with a customized menu bar.

{MENU-INSERT *menu-description-range*;[*menu-index*]} adds a custom pull-down menu to the default 1-2-3 menu bar.

Arguments

For {MENU-CREATE}, *menu-description-range* is the name or address of a range that contains a description of each command name in the menu bar and points to a description of each command in the corresponding pull-down menu. This range requires 4 rows and can be up to 10 columns wide (9 commands and a blank cell to end the list).

For {MENU-INSERT}, *menu-description-range* is the name or address of a range that contains a description of the command name to insert in the default 1-2-3 menu bar and points to a description of each command in the corresponding pull-down menu. This range requires four rows and one column.

- Row 1: For {MENU-CREATE}, enter the names of the commands in the menu bar. The leftmost cell in this row contains the name of the left-most command in the menu bar, and succeeding cells to the right contain the names of succeeding commands in the menu bar. You can create up to 9 commands. End the row of commands with a blank cell or a cell that contains the value ERR or NA.

  For {MENU-INSERT}, enter the name of a command to insert.
- Row 2: Enter a description of the command in the cell above. 1-2-3 displays the description in the title bar when you highlight the command.
- Row 3: Indicate whether every command in the command two cells above pull-down menu should appear dimmed or not. A value of NA makes these items appear dimmed; a blank cell makes these items available.
- Row 4: Enter the range name or address of a pull-down-menu-description range for the corresponding command.

Pull-down-Menu-Description Range

A pull-down-menu-description range is the name or address of a range that contains a description of each command in a pull-down menu. This range requires 5 or more rows and can be up to 25 columns wide (24 commands and a blank cell to end the list).

- Row 1: Enter the name of a command in the pull-down menu. The left-most cell in this row contains the name of the first command in the pull-down menu, and succeeding cells to the right contain the names of succeeding commands in the menu. End the list of menu commands with a blank cell or a cell that contains the value ERR or NA.
- Row 2: Enter a description of the command in the cell above. 1-2-3 displays the description in the title bar when you highlight the command.
- Row 3: Indicate whether the command two cells above should appear dimmed, checked, or neither dimmed nor checked. A value of NA makes the command appear dimmed; 1 makes it appear checked; a blank cell makes the command appear neither dimmed nor checked.
- Row 4: Leave it blank.
- Row 5: Enter macro commands (up to 511 characters per cell) or the range name of a macro that you want 1-2-3 to perform when the user chooses the corresponding command. Starting at the fifth row, you can use as many subsequent rows as you need for macro commands.

menu-index specifies where to add the pull-down menu. *menu-index* is an integer that corresponds to the position of a menu in the menu bar. The first menu has a *menu-index* number of 1, the second 2, and so on.

If you omit menu index, 1-2-3 inserts the pull-down menu before the last menu in the menu bar. In the default 1-2-3 menu, 1-2-3 inserts the pull-down before the Window menu.

Notes

If your macros currently contain the SmartPak commands {MENUCREATE} and {MENUINSERT}, these commands will continue to work correctly.

After using {MENU-CREATE} or {MENU-INSERT}, you can use {MENU-RESET} to restore display of the default menu bar.

{MENU-RESET}

{MENU-RESET} displays the default 1-2-3 menu bar.

Notes

If your macros currently contain the SmartPak command {MENURESET}, this command will continue to work correctly.

After using {MENU-CREATE}, {MENU-INSERT}, {MENU-COMMAND-ADD}, or {MENU-COMMAND-REMOVE}, you can use {MENU-RESET} to restore display of the default menu bar.

Working with Custom Menus

These tips will help you create custom menus for 1-2-3.

Creating keyboard shortcuts

When you enter command names, & (ampersand) followed by a character creates a keyboard shortcut for a command. The letter that follows the & (ampersand) appears underlined; the user can choose this command from the keyboard by pressing ALT plus the underlined letter. For example, if you enter First&Quarter, 1-2-3 displays First<u>Q</u>uarter; the user can press ALT+Q to choose the command. To display & (ampersand) in the command name, enter && (two ampersands). For example, to display B&W, enter B&&W.

Restoring the default 1-2-3 menu bar

After executing a command that changes or updates the menu bar, 1-2-3 performs the next command in the macro. The custom or updated menu bar remains displayed until the next {MENU} command changes the menu bar, or until a {MENU-RESET} command restores the 1-2-3 default menu bar. Closing the file that contains the macro does not restore the 1-2-3 default menu bar.

Troubleshooting

While a custom menu bar or custom pull-down menu is displayed, moving or erasing the pull-down-menu-description range or renaming the file that contains the range causes the custom commands to stop working. If your custom menus stop working, follow these steps to restore the 1-2-3 default menu:

1. Move the cell pointer to a blank cell, type **{menu-reset}**, and press ENTER.
2. Press ALT+F3.

   The Macro Run dialog box appears.
3. Select "Macro"
4. Press ENTER.

{VIEW-ZOOM}

{VIEW-ZOOM *how*} decreases or increases the display size of cells, or restores their default display size.

Arguments

how is text that specifies how to zoom.

how	**1-2-3 does this to the display size of cells**
in	Increases by 10% to as large as 400% of the normal size
out	Decreases by 10% to as small as 25% of the normal size
custom	Resets to the default display size

Examples

The following commands decrease the display size of cells by a total of 20%.

{VIEW-ZOOM "out"}

{VIEW-ZOOM "out"}

{WINDOW-ACTIVATE}

{WINDOW-ACTIVATE [*window-name*];[*reserved*];[*pane*]} makes a window the active window.

Arguments

window-name is text that specifies the name of an open window, as it appears in the title bar.

You do not need to include the file extension or path as part of *window-name* unless files with the same name but different extensions are open (for example, SALES.123 and SALES.WK4). If you specify a window that is not open, {WINDOW-ACTIVATE} returns an error.

reserved is reserved for use with 1-2-3 for Macintosh. Omit reserved by including an extra argument separator.

pane is an offset number that specifies the pane you want to make current. If you omit *pane*, 1-2-3 uses the current pane. If *pane* does not exist in the window, {WINDOW-ACTIVATE} returns an error.

Notes

The standard sheet has one window and one pane, numbered 0. In a split window, panes are ordered from left to right or top to bottom.

If your macro contains {WINDOW-SELECT} commands, they will continue to work.

Examples

The following command activates the sheet window EXPENSES.123.

{WINDOW-ACTIVATE EXPENSES.123}

Suppose that the file FINANCES.123 is split into two horizontal panes. The following command activates the file FINANCES.123 and makes the lower pane current.

{WINDOW-ACTIVATE FINANCES.123;;1}

{WINDOW-ARRANGE}

{WINDOW-ARRANGE *how*} sizes open windows and either places them side by side or arranges them one on top of the other, with just the title bars showing.

Arguments

how is text that specifies how you want to arrange the open windows.

how	**1-2-3 does this to open windows**
stack	Arranges them one on top of the other, with just the title bars showing, and with the active window in front
vertical-tile	Places them side by side, with the active window in the top-left corner of the workspace.

Examples

The following commands open three files and arrange them in a vertical-tile arrangement.

{FILE-OPEN d:\lotus\123\work\finance\april.123}

{FILE-OPEN d:\lotus\123\work\finance\may.123}

{FILE-OPEN d:\lotus\123\work\finance\june.123}

{WINDOW-ARRANGE "vertical-tile"}

{WORKSHEET-TITLES}

{WORKSHEET-TITLES *direction*} freezes (or unfreezes) columns along the top of the sheet, rows along the left edge of the sheet, or both.

Arguments

direction is text that specifies which titles to freeze.

direction	**1-2-3 does the following**
horizontal	Freezes all rows above the current cell
vertical	Freezes all columns to the left of the current cell
both	Freezes all rows above and all columns to the left of the current cell
none	Unfreezes all titles

Examples

The following commands move the cell pointer to A:B3 and then freeze column A and rows 1 and 2.

{EDIT-GOTO A:B3}

{WORKSHEET-TITLES "both"}

{MODELESS-DISPLAY} and {MODELESS-DISMISS}

{MODELESS-DISPLAY *message*;[*title*];[*on-top*];[*x*];[*y*]} displays a modeless dialog box until 1-2-3 reaches another {MODELESS-DISPLAY} command, a {MODELESS-DISMISS} command, or the end of the macro.

{MODELESS-DISMISS} closes the open modeless dialog box. If no modeless dialog box is open, {MODELESS-DISMISS} has no effect.

Arguments

message is text that appears in the dialog box. 1-2-3 can display a message that is up to 512 single-byte characters long.

title is text that appears in the title bar of the dialog box. 1-2-3 can display a title that is up to 64 single-byte characters long. If you omit *title*, 1-2-3 does not display anything in the title bar.

on-top is a yes/no argument that specifies whether the dialog box remains in the foreground even when it is not active. If you omit *on-top*, the dialog box does not remain in the foreground.

x is a value that specifies the horizontal position, in pixels, measured from the left side of the screen to the left side of the dialog box.

y is a value that specifies the vertical position, in pixels, measured from the top of the screen to the top of the dialog box.

If you omit *x* and *y*, the dialog box appears in the center of the screen.

{SEND-RANGE}

{SEND-RANGE *range*;*to*;[*subject*];[*body*];[*return-receipt*];[*route*];[*priority*];[*return-to-originator*];[*properties*]} sends a range of sheet data to other 1-2-3 users who have electronic mail. You can broadcast the range to all recipients at once, or you can route it from one recipient to the next.

Arguments

range is the name or address of the range you want to send.

to specifies who to send the range to and can be any text.

If *to* is text enclosed in " " (quotation marks), you can enter only a single name, for example, "Christine Marini."

If *to* is the name or address of a range that contains labels, you must enter the labels in a single row or column. 1-2-3 ignores cells that do not contain labels or text formulas. The range you specify can contain up to 100 cells.

subject is text that specifies the subject of the mail message, for example "Information About the Monthly Sales Meeting." If you omit *subject*, the mail message contains no subject.

body is text that specifies the body of the message. If you omit *body*, 1-2-3 includes no message with the mail.

If *body* is the name or address of a range that contains labels, you must enter the labels in a single row or column. 1-2-3 ignores cells that do not contain labels or text formulas.

If *body* is a multiple-cell range, each label is followed by a line feed and carriage return in the body of the mail message. 1-2-3 ignores cells that do not contain labels or text formulas. The range you specify can contain up to 100 cells.

return-receipt is a yes/no argument that specifies whether to send a delivery confirmation to each sender in a route list when the next person in the list receives the mail.

If you omit *return-receipt*, 1-2-3 sends no delivery confirmations.

route is a yes/no argument that specifies whether to route the range from one recipient to the next or send it to all recipients at once. If you omit *route*, 1-2-3 sends the range to all recipients at once.

priority is an integer that specifies a delivery priority.

priority	**Delivery priority**
1	Low
2	Normal;default if you omit the argument
3	Urgent

return-to-originator is a yes/no argument that specifies whether to add your name to the end of the list of recipients. If you omit *return-to-originator*, 1-2-3 does not add your name to the end of the list.

properties is text that specifies how to save values from *range*.

properties	**1-2-3 does the following when saving *range***
formulas	Saves formulas without converting them to values;default if you omit the argument.
values	Converts formulas to values.

Notes

If *route* and *return-receipt* are both "yes," an updated copy of the file is sent to the originator each time the file is routed to the next person in the *to* list.

Use {SEND-RANGE-LOGIN} to automatically log in to your mail application.

Examples

The following command sends the range BUDGET, and the message in the cell UPDATE_MSG, to the users listed in the range DEPT_MGRS. The command sends the range to each person (sequentially), sends you a copy of the range that each person receives, sends a confirmation to each sender, and sends you the range after everyone on the list has updated it.

{SEND-RANGE BUDGET;DEPT_MGRS;;UPDATE_MSG;"yes";"yes;;"yes"}

{SEND-RANGE-LOGIN}

{SEND-RANGE-LOGIN [*message-container-path*];[*user-name*];[*password*]} automatically logs in to your mail application.

Arguments

message-container-path is text that specifies the path, including the drive letter, to your cc:Mail post office database. Only use *message-container-path* if cc:Mail is your mail application.

user-name is text that specifies your user name for your mail application.

If you omit *message-container-path* or *user-name*, 1-2-3 looks in your operating system's registry.

password is text that specifies your password for your mail application.

Notes

You can help ensure the security of your password by entering it in a cell and hiding either the row or column that contains the cell. Then, enter the name or address of the cell as the *password* argument.

Examples

The following command automatically logs the user Richard Smith into Lotus Notes, using a password stored in the current file in a cell named SECRET.

{SEND-RANGE-LOGIN ;"richard smith";secret}

{SCENARIO-REMOVE-VERSION}

{SCENARIO-REMOVE-VERSION *scenario-name*;[*scenario-creator*];*version-range*} removes a version from a scenario (now called a version group).

Arguments

scenario-name is text that specifies the name of the scenario. 1-2-3 is case-sensitive for *scenario-name*.

scenario-creator is text that specifies the name of the user who created the scenario. If you omit *scenario-creator*, 1-2-3 uses the most recently created scenario specified by *scenario-name*.

version-range is the name of range that contains the version to remove from the scenario. *version-range* must be an existing named range in the current file.

Notes

The scenario (now called version group)cannot be protected or hidden.

The version in *version-range* cannot be hidden.

Examples

The following command removes the version in the range CASSETTES from a scenario Regional Sales that was created by Isabella Martinez.

{SCENARIO-REMOVE-VERSION "Regional Sales";"Isabella Martinez";cassettes}

{VERSION-REPORT}

{VERSION-REPORT *version-range*;[*formulas-range*];[*include-data*];[*include-audit*];[*arrange-data*];*version1*;[*version2*];...;[*version10*]} creates reports showing selected versions and their effect on the outcome of a formula.

Arguments

version-range is the name of range that contains the versions for which you want a report. *version-range* must be an existing named range in the current file.

formulas-range lets you include the effect of the selected versions on formulas in the sheet. *formulas-range* is the name or address of a range in the current file that contains formulas. If you omit *formulas-range*, 1-2-3 does not include the effect of the selected versions on formulas.

include-data is a yes/no argument that specifies whether to include the data for the selected versions. If you omit *include-data*, 1-2-3 includes the data.

include-audit is a yes/no argument that specifies whether to include the names of the users who created and last modified the version and the date and time the version was created and last modified. If you omit *include-audit*, 1-2-3 includes this information.

arrange-data is text that specifies how 1-2-3 arranges the data in the report.

arrange-data	**1-2-3 arranges the data**
columns	By column;default if you omit the argument
rows	By row

version1 is text that specifies the name of a version to include in the report.

version2;...;*version10* let you specify the names of up to 9 additional versions to include in the report.

1-2-3 is case-sensitive for version names.

Notes

{VERSION-REPORT} creates a version report in a new file. 1-2-3 gives the file a unique name beginning with REPORT (for example, REPORT01.123).

Examples

The following command creates a report on the versions named Slow Growth and Moderate Growth for the range COG. The report shows the effects of the two versions on the formula in cell B:A5, and includes the data and audit information for the versions. Data in the report is arranged by row.

{VERSION-REPORT COG;B:A5;"yes";"yes";"rows";"Slow Growth";"Moderate Growth"}

{MAP-NEW}

{MAP-NEW *location*;[*map-type*]} draws a map at *location,* using data from the currently selected range.

Arguments

location is the name or address of a cell in the current file. 1-2-3 places the top left corner of the map at *location*. If *location* is a range, 1-2-3 places the top left corner of the map at the top left corner of the range and draws the map in the default size, regardless of the size of the range.

map-type is text that specifies the map type. *map-type* must be the name of the map type listed in the operating system's registry file (typically under [MAPS]). 1-2-3 lists a section for each map type. In the section for the map type, the entry "name=" identifies the name you must use for *map-type*. Below is the list of maps that come with 1-2-3.

map-type	**1-2-3 creates this map**
World Countries	Countries of the world
USA by State	Continental United States, excluding Alaska and Hawaii
Alaska	Alaska
Hawaii	Hawaii
Canada by Province	Canada by province
European Union by Region	European Union by region
Europe by Country	Europe by country
Japan by Prefecture	Japan by prefecture
Mexico by Estado	Mexico by state
Australia by State	Australia by state

If you omit *map-type*, 1-2-3 determines the map type by the map codes or region names in the currently selected range.

Additional maps

You can install additional maps by using 1-2-3 Install, or you can copy additional maps from the 1-2-3 97 CD in the \EXTRA\123\MAPS directory if you already have maps installed. Copy the map (.TV and .TVC) files into your \lotus\123\maps directory and 1-2-3 will be able to access them by the map name shown when you choose Create - Map.

Examples

The following macro creates a map from data in the range JULY SALES and places the top left corner of the map at B:D15. 1-2-3 displays the data on a map of Canada.

{SELECT JULY SALES}

{MAP-NEW B:D15; "canada by province"}

The following macro creates a map from data in the range JULY SALES and places the top left corner of the map at the cell named SALES MAP. 1-2-3 determines the map type by data in the leftmost column of JULY SALES.

{SELECT JULY SALES}

{MAP-NEW SALES MAP}

{MAP-REDRAW}

{MAP-REDRAW} redraws all maps in the current file.

Notes

You can make 1-2-3 redraw maps automatically or manually during macro execution.

To make 1-2-3 redraw maps automatically when data in the range of map data changes, include this command in your macro:

{SET "map-draw";"automatic"}

To make 1-2-3 redraw maps only when it reaches a {MAP-REDRAW} command, include this command in your macro:

{SET "map-draw";"manual"}