garage

Anja C. Frese

COLLABORATORS

	TITLE : garage		
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Chapter 1

garage

1.1 CYCAS DEMO - Help - Garage

Example : Plan of a garage. Show

This example is meant to demonstrate how you create a
ground plan. Going through this tutorial you will try
several wall functions. Using the dialog windows you can
edit the height measurements of the walls. Later on you
can look at and correct the height measures in the
various projections.

Before you begin, you choose from the function list
Project the item New in order to erase all elements
which might be in the drawing area. If you start drawing
a plan you do not need to decide in which scale your
drawing shall be designed. The decision about the final
scale of your drawing will be made if you do the output
to printer, etc. This means that you always draw in the
scale of 1:1. Choosing a scale in the view menu is just
meant to display the drawing elements on your monitor in
different detail enlargements. The garage shall have the
external dimensions of 4.99m to 6.99m, the outer walls
measure is 0.36m and there will be a garage door and a
window. To start with, choose from the function list
Wall the item Wall and select the scale 1:500 (in the
view menu underneath the drawing area).

Input of walls:

The 1st Wall: Show
About in the middle of the drawing area you situate
(watch the Help-bar below the drawing area) the "1.
Corner point:" of the first wall. Confirm this point
using the enter key, or you catch the same point with
another mouseclick, the snap must be activated. The "2.
Corner point" will be placed exactly upon the first one.
Now you enter the length of the wall using the key
board. Hit the cursor right key "X+:" and you enter
"4.99" m. One enter moves the cross which marks the

point the distance you entered. Then you define the
thickness of the wall. Hit the cursor down key and move
the cross "0.365"m downwards. One enter moves the cross
and you confirm the point with a final enter.

Test the display menu:

Choose Zoom. Define the range of a new detail
enlargement positioning two points. So you set two
points, in a way that the first wall will be within the
range of the two points. Or, try A; it is the
abbreviation for "all", which means that all existing
elements will be displayed. Further on, try -> The
detail enlargement will be moved the distance you enter
with two mouseclicks. All functions in the view menu can
be activated while entering or altering drawing
elements. If the display function is terminated you may
continue entering drawing-elements.

Back to the garage:

Activate the buttons + and - of the view menu until the
scale 1:100 is displayed. Now you select the scale
button (the one in between the + and the -) and
position the middle-point of the new detail enlargement
upon the first wall.

The 2nd wall: Show

Catch the lower left corner point of the first wall.
confirm the "1. Corner point". "Move/Confirm:" move the
second cornerpoint downwards entering "6.26" m and now
move it to the right entering "0.365" m. after that, you
confirm the lower corner point of the second wall.

The 3rd wall: Show

Copy the second wall to the right. To do so, choose from
the main menu the menu list Edit, then select the item
Copy. Instead of the function list the selection menu
appears. All items for selecting elements are displayed.
Use the options Active and Element in order to activate
the second wall. Active Elements are displayed white.
You confirm the activated elements klicking on OK. Now,
you need to enter the distance where to move the copy of
the wall. Help-bar: "Move/Start point:" Catch the upper
right corner point of the active wall. This shall be the
start point. Position the "End point:" of the distance
at the lower right corner of the first (horizontal)
wall. You confirm this point and you finish the
copy-function aborting it with the right mousebutton
somewhere outside of the drawing area, or choose another
function right away.

The dialog window:

Again, choose the function list Wall, then select the item Side. Now, have a look at the walls' dialog window. Click the item with the ? in its' button. Here you enter the preferences only concerning the wall elements. The name of the active dialog window is displayed in the walls' function list right beside the button with the ?. This is supposed to remind you which dialog window is active. Have a look at the dialog window: Using the index < > , you can choose one of the prearranged preferences; or you may enter your own preferences. Try the pen color red (ink pen 0.5mm) and the line. The wall thickness should be 0.365m. Confirm all these entries with clicking OK and the dialog window will be closed.

The 4th wall: Show

The "Start point:" needs to be situated upon the lower right corner point of the second wall. The end point shall be the lower, left corner point of the 3rd wall. So you also catch that point and confirm it. The Help-bar: "Select side:" You select the outer side of the garage. After this the wall thickness will be added, which was defined in the walls' dialog window.

The display of the last wall in the drawing area is not correct: To fix this, you choose the item in the view menu which looks like a sheet of paper (the big button right of the ->). You achieve a new plot of the drawing elements.

The joinings of the walls need to be corrected: Show

To do so, you choose further down in the walls' function list the item Join. Now you click using the pointer looking like a diagonal crosshair onto the second and the fourth wall. They will be joined to their intersection. Now they are mitre joint. Repeat this action clicking on the fourth and the third wall. In the end you have drawn the ground plan of the four walls in exact measure.

Further on, the display of the walls can be improved. To achieve this, you choose from the walls' function list the item All, you find it right below Connect. Automatically all wall endings will be connected of all those walls which have exactly matching corner points. All walls displayed in the same colour can be connected together.

Input of openings :

Select the function list Opening. Here you start having
a look at the dialog window of the openings. Click
underneath the item Opening on the button with the ?.
The symbol of the garages' door opening should be
arranged without a stop and just with one line at the
outside of the opening. Have a look at the input
gadgets; especially those with the topic: >Stop. Here
you enter the width and depth by typing "0.000"; if not
already existing. Now you select the symbol of the
opening; you achieve this using the index buttons
underneath the preview of the opening symbol. After that
you leave the dialog window with Continue.

The door: Show

This opening shall be entered positioning two points,
which means with a start- and an end point. Therefore
you deactivate the button with the ! . The deactivated !
-button means that the width mentioned next to it will
not be taken into account. Under these circumstances you
choose the item Opening. The Help-bar says: "Select
wall:" To select the wall you click with the mouse
looking like a diagonal crosshair onto the lower,
horizontal wall. Now you need to enter the exact
location of the opening. To achieve this, you snap the
inner lower left corner of the garage. From there you
move the start point of the opening about X+: 0.375
towards the right. Now you snap the inner lower right
corner and you move the end point about X-: 0.375m. If
you now look at the Help-bar, it should display "X:
3.5100" and "Y: 0.0000". If this is displayed you
confirm the entry with a final enter. Finally you select
the outer side of the wall. And the openings' symbol you
have chosen from the dialog window will be placed into
the wall.

The window: Show

Now you do the input of the window which shall be
positioned in the wall on the opposite side of the
garage door: Choose the item Window. Ensure that the
button with the ! is pushed in, therefore the width
signed up right beside this button will be taken into
account. Choose using the index buttons the width which
says: 1.01, or you enter it using the keyboard. Then you
need to choose from the windows' dialog window the
correct window symbol. After this you activate the upper
horizontal wall. It will be displayed white, which means
it is active. Snap the right corner of the garage door
and confirm that point. Within the active wall the
preview of the window will be displayed. If you move the
mouse to the left and right the preview will flip; this
shows you the width and the direction to which the

window could be placed. Click on the left side. Finally,
you select the outer side of the wall. The window with
the symbol from the windows' dialog window will be fit
into the wall.

With this input option showing you the input of points
using   projected   reference points this tutorial is
concluded.

All input-, edit- and modify-functions in Cycas root
back to the input options mentioned in this tutorial.
The way you get close to the aspired point using
reference points and using the additive numeric input
shall simulate the way you would proceed if you would
draw by hand. Confirming each step of input offers you
to combine the different Cycas input options.