WEB SERVER

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Introduction

The CatBase web server allows you to publish your data easily and efficiently on the Internet or your office Intranet. CatBase's web server is fast and robust, and can handle small-to-medium load sites.

Uses for the CatBase server include:

- Acting as an interactive site for potential and current customers to view your products, listings or information.
- Providing a powerful information system for your employees to access product information on your local intranet.

Regarding Single-User Systems

You can run a single-user version of CatBase as a web server as well as a data entry system. This is really only recommended when you do not update your database daily; if you update your database on a daily basis it is recommended that you purchase 2 copies of CatBase: one to run only as a web server and another for data entry. With the latter method you can take a copy of your datafile and open it with the web server version of CatBase (preferably when no one is accessing the web server).

Requirements

To use the CatBase web server you require:

- A dedicated computer to use as a web server.
- At least 14Mb free RAM. This is a MINIMUM, and you will need more memory if your site is very active.
- Apple Open Transport v1.1.2 or greater (MacTCP is not supported) on Mac. CatBase supports the standard Winsock (TCP/IP) software which comes with Windows 95/98 and NT.

On the internet:
- An active network connection using either an, ISDN, DSL, Cable Modem or leased line. Standard modems are not recommended due to speed limitations.

On an (office) intranet:
- A network card.

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Web server Quick Start

We have provided you with a basic web site to get you started. You can design your own pages - this is explained later in this chapter. We recommend that you try the supplied web site first, to get a feel for how it can be used. To get the web server up and running:

1. Choose **Setup** from the **Admin** menu. The Setup window will open.
2. Click on the **Web Server** tab. The Web Server page looks like this:
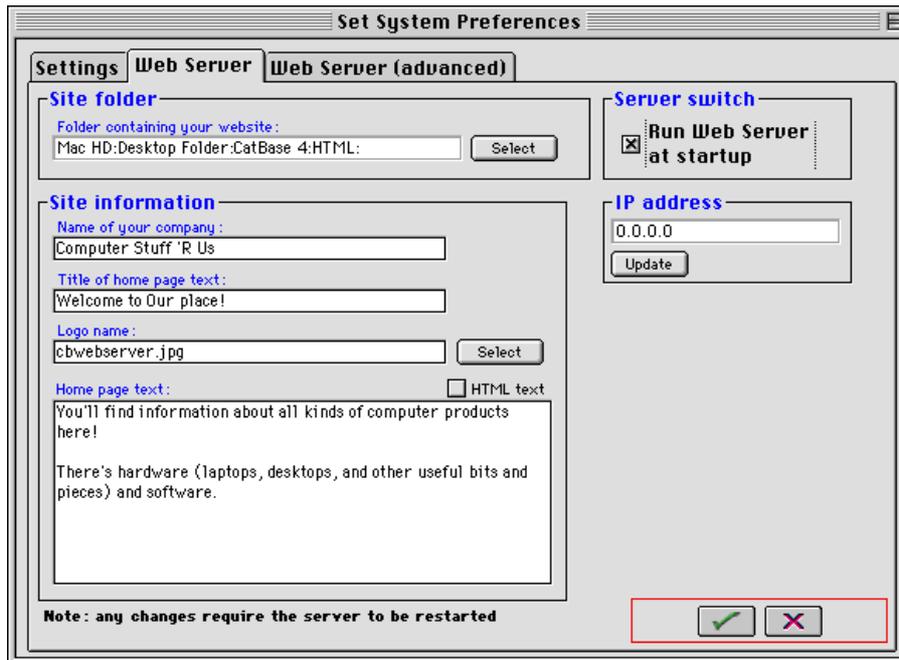
3. Click on the **Select** button (in the Site Folder area) and choose the web site folder (our demo web site is in the HTML folder inside your CatBase folder).
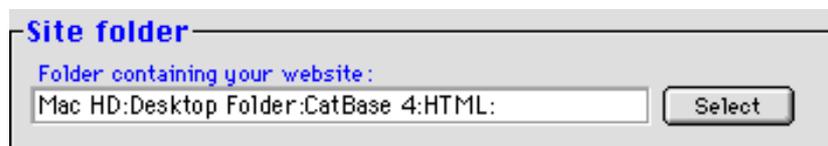
4. In the **Site Information area**, enter the name of your company, the title of the home page, and a brief introduction to your company. This area contains basic details about your company which appear on the demo web site and wherever you define on your own web site.
5. If you want to use your own logo, click on the **Select** button next to the Logo Name field and choose your logo file.

The logo file must be compatible with current browsers. JPEG (.jpg) and GIF (.gif) files are acceptable formats; TIF (.tiff/.tif) and PICTs are not acceptable. The logo must be in the 'images' folder contained within your web site folder.
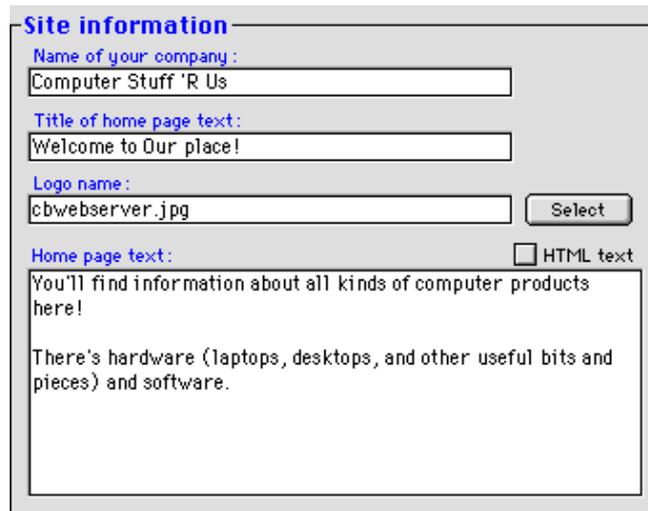
6. Check the **Run Web Server at startup** check box:

Every machine on the Internet/Intranet (TCP/IP networks) has an individual IP address. This IP address can be either dynamic or static. If you are planning on making the web server permanent, the computer must have a static address, i.e. one that doesn't change (static addresses are usually ones that are on a permanent Internet connection: for example, a leased line).

To find out the IP address of the machine CatBase is running on, just click on the **Update** button in the IP Address area:
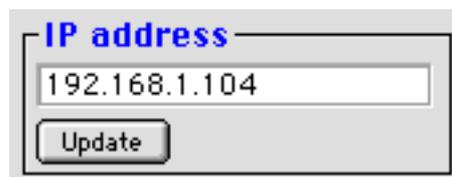
7. Save the Setup screen.

Next time you start up the database, it will run as a Web server. To start it running now, without having to Quit, choose **Turn Web Server On** from the **Admin** menu on the CatBase main screen.

To test your web server:
1. On either another computer **on the same network** or the same machine, start up your web browser (Netscape Navigator or Internet Explorer).
2. Enter the web server machine's IP address into the Location or Go To sec-

tion of your browser. If all is set up correctly the following example home page should be displayed:
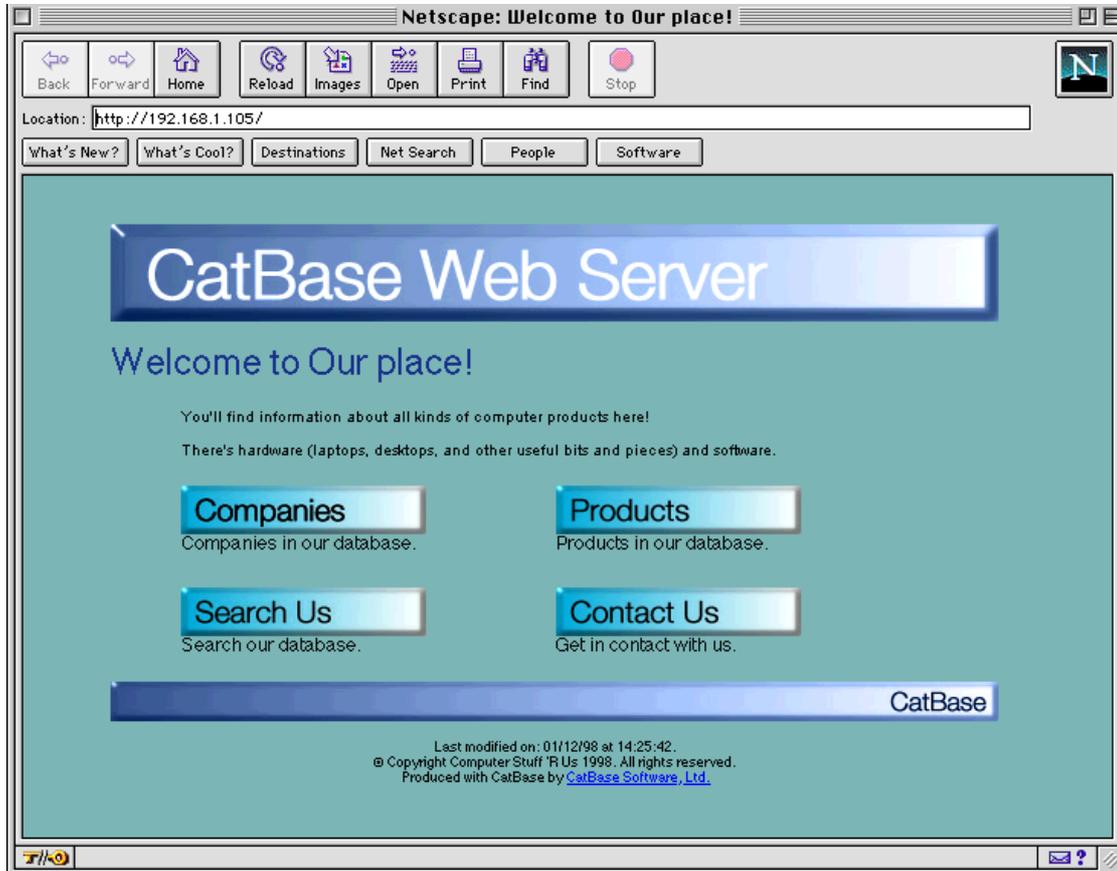
• Click on the Companies or Products button to view a list of Companies or Products. For example:

- Click on the Search button to search for a specific Company or Product record.
- Click on the Contact Us button to send an email to somebody:
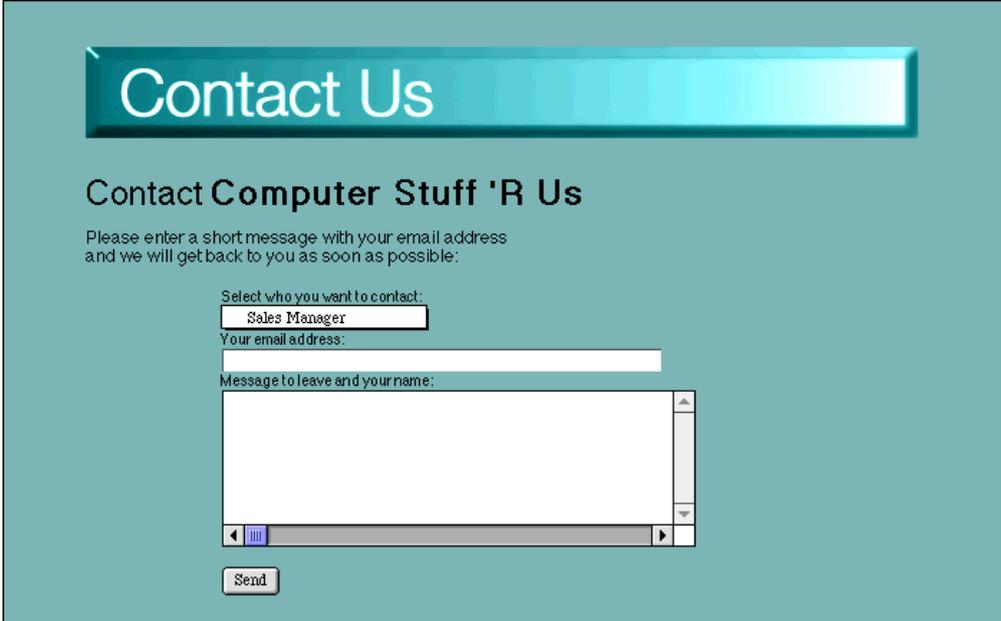
The pop-up list of names comprises all Users in the database for whom the **Can Receive Web Messages** check box has been checked. (Users are described in detail in Chapter Two.)

Our example web site is quite basic, as we really have no idea how you want to present your data. However, you can design your own web site. In the next section, we describe how to link into the database to retrieve your data.

Designing your own Web Site

Our example web site is OK for a quick start, but you will probably want to design your own. Following are instructions on how to do this.

You will need to have an understanding of HTML in order to set up your own web site. Please contact the CatBase Sales Department if you would like us help you to set one up.

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Structure of your Web site

The web site is all contained in one folder, which can be located anywhere on the same computer as CatBase. In our example website, this folder is called HTML.

Your web site **MUST** contain the following folders and files:

companies folder
    Contains the HTML files for company records.

images folder
    Contains the general images for your web site (including your logo).

other folder
    Contains the HTML files for various functions.

products folder
    Contains the HTML files for product records.

index.shtml / default.shtml
    Your home page.
    Note: index.html / default.html can be used but are not recommended. The .shtml suffix means that CatBase should scan the file and swap any codes for the relevant information.

The contents of each folder are described in detail later on in this chapter.

CatBase Data Retrieval Commands

Using special features in CatBase's web server you can display lists, records, plus response and search forms. These features work by putting special commands into HREF links, in an HTML document. Following is a list of the commands:

Note: In this documentation, we refer to the CatBase tables by their original names: Companies, Contacts, Products, and Product Details. You may have changed the names of the tables in your database.

/catbase?listcompanies
Displays a list of all Company records. Uses the 'list.shtml' document in the 'Companies' folder. You can design your own list; just make sure that you name it list.shtml and put it into the Companies folder.
Example code:
```
<A HREF="/catbase?listcompanies">List all companies</A>
```

/catbase?listproducts
Displays a list of all Product records; uses the 'list.shtml' document in the 'products' folder. You can design your own list; just make sure that you name it list.shtml and put it into the Products folder.
Example code:
```
<A HREF="/catbase?listproducts">List all products</A>
```

You can also list products that belong to a specific company, using the following link:

```
<A HREF="/catbase?listproducts&conum=COMPANY NUMBER">...</A>
```

/catbase?search
Displays the file "search.shtml" in the "other" folder.
Example code:
```
<A HREF="/catbase?search">Search for products</A>
```

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Special Functions

CatBase has functions which can be inserted into your HTML directly. When CatBase sends the page out, it will swap the function for its actual contents. This is done automatically, as long as the document is named with a .shtml suffix.

Special functions must always have HTML comments tags around them, e.g. <!--ExampleFunction-->

IMPORTANT NOTE FOR WINDOWS USERS

The Windows version of CatBase does not use the diamond ( ) symbol like the Mac version does. Instead use a greater and less than sign together: <>. On the Mac, the   is created by typing Shift-Option-v.

The following functions are as defined on the Setup screen.

<!-- s80WebTitle-->
The web site title, as defined on the Setup screen.

<!-- tWebLogoPath-->
Your company image name, as defined on the Setup screen. The image must be located in the images folder in your web site folder. Example:

```
<IMG SRC="<!-- tWebLogoPath-->" BORDER=0>
```

<!-- s80WebCoName-->
Your company name, as defined on the Setup screen.

<!-- tWebMainText-->
The text to display on the home page, as defined on the Setup screen.

The following have *no* diamond symbols:

<!--dLastModDate-->

The date the current document was last modified. Note: no diamond symbol.

<!--s8LastModTime-->
The time the current document was last modified. Note: no diamond symbol.

Contents of the Various Web Site Folders

companies folder

This should contain 'entry.shtml', 'list.shtml' and 'view.shtml'.

list.shtml

The html template for listing a selection of company records. You may use company fields in this document (e.g. <!--[Companies]Company name-->) as well as the special <!--CB_LOOP--> and <!--/CB_LOOP--> tags which denote the area of the document which must be repeated for every record in the current selection.

You can access the list via a link like:

```
<A HREF="/catbase?listcompanies">Show a list of all companies</A>
```

The code example below shows a table which is repeated for every company record in the requested selection. If there are 10 records to be displayed, CatBase will send the contents of CBLoop and /CBLoop to the web browser 10 times, each time putting in the field's actual contents.

```
<TABLE BORDER="1" CELLSPACING="0" CELLPADDING="3" WIDTH="100%">
<!--CB_LOOP--><TR>
<TD><FONT FACE="HELVETICA" SIZE="3"><A HREF="/catbase?viewcompany&rec-
num=<!--[Companies]Recordnumber-->"><!--[Companies]Company name--
></A></FONT></TD>
<TD><FONT FACE="HELVETICA" SIZE="3"><!--[Companies]MailingAddress1--
></FONT></TD>
<TD><FONT FACE="HELVETICA" SIZE="3"><!--[Companies]MailingAddress2--
></FONT></TD>
<TD><FONT FACE="HELVETICA" SIZE="3"><!--[Companies]MailingAddressCity--
></FONT></TD>
</TR><!--/CB_LOOP-->
</TABLE>
```

view.shtml

The html template for viewing a company record. You may use company fields in this document (e.g. <!--[Companies]Recordnumber-->).

This is accessed via lists but you can access a company record directly via a link:

```
<A HREF="/catbase?viewcompany&recordnum=record number of company">..</A>
```

entry.shtml

The html template for entering data into a company record. You may use company fields in this document (e.g. <!--[Companies]Recordnumber-->).

It MUST have a POST form which uses the code:

```
<FORM METHOD="POST" ACTION="/catbase?postcompany">
```

Plus the hidden field:

```
<INPUT TYPE="hidden" NAME="recnum" VALUE="<!--[Companies]Recordnumber--
>">
```

And a Submit button with the NAME attribute equal to "wbSubmit":

```
<INPUT TYPE="SUBMIT" NAME="wbSubmit" VALUE="Save">
```

Note: the VALUE attribute can be set to whatever you like (e.g. Send, Submit, Accept, etc.) but it must not be blank.

This is accessed in the same way a view.shtml file would be accessed but is automatically sent instead if you have allowed modifications on the setup screen.

Finding companies' products
This works on 'entry.shtml' and 'view.shtml' but not 'list.shtml'.

Use the following code to find companies' products:

```
<A HREF="/catbase?listproducts&conum=<!--[Companies]Recordnumber-->">
... </A>
```

Feedback
(This folder is optional)
You can give users of your web site the ability to send memos to users of CatBase.

Note: all memos sent are PUBLIC, so in single-user setups the administrator can read all messages, no matter which user they were sent to.

Example code

Note the ACTION and NAME attributes plus their contents, as they MUST be included in your HTML.

```
<FORM ACTION="/catbase?postcontact" METHOD="POST">
<SELECT NAME="waiMsgSendTo"><!-- wtmsghtml--></SELECT>
<INPUT NAME="ws80email" TYPE="TEXT" SIZE=30>
<TEXTAREA NAME="wtmessage" ROWS="7" COLS="40"></TEXTAREA>
<INPUT TYPE="submit" ACTION="POST" VALUE="Send" NAME="wbsubmit">
</FORM>
```

Also note the <!-- wtmsghtml--> tag - this is special code for auto-generating

the list of users that can receive messages sent via the web.

images folder

If specified on the Setup screen, this folder must contain your company logo. It is perfectly acceptable to put other images here as well.

If you decide that you want to set your site up differently you may dispose of this folder. If so, make sure you clear the 'Logo Name' field on the Setup screen.

Searching for products (Other folder)

The Other folder contains the search.shtml file.

CatBase allows you to search for products that are in a certain category. To let a user do this kind of search you must give them a pop-up (to choose the category), and a narrow-down button which finds level 2 or 3 categories for the currently selected category.

Use this form tag:

```
<FORM METHOD="POST" ACTION="/catbase?postsearch">
```

Create a pop-up which allows you to select a category to search in:

```
<SELECT ALIGN="TOP" NAME="wiCatPopup">
<!--tSearchPopup-->
</SELECT>
```

Use this code to create a button which lets you find all categories related to the currently selected category (via the popup menu):

```
<INPUT TYPE="submit" ACTION="POST" VALUE="Show sub categories"
NAME="wbshowsubcats">
```

This is the search field code:

```
<INPUT TYPE="TEXT" NAME="ws80searchtext" SIZE=50>
```

This is the code for the Search button:

```
<INPUT TYPE="submit" ACTION="POST" VALUE="Search" NAME="wbsubmit">
```

For a better understanding of this code, see the example web site that comes with CatBase.

products folder

This should contain 'entry.shtml', 'list.shtml' and 'view.shtml'.

list.shtml

The html template for listing a selection of product records. You may use product fields in this file (e.g. <!--[Products]Product Name-->) as well as the spe-

cial
<!--CB_LOOP--> and <!--/CB_LOOP--> tags which denote the area of the document that is repeated for every record in the current selection.

You can access the list via a link like:
```
<A HREF="/catbase?listproducts">Show a list of all products</A>..</A>
```

view.shtml

The html template for viewing a product record. You may use product fields in this file and they will be inserted into the document when a user requests the record.
This is accessed via lists but you can access a product record directly via a link:
```
<A HREF="/catbase?viewproduct&recordnum=record number of product">..</A>
```

entry.shtml

The html template for entering data into a product record. You may use product fields in this file and they will be inserted into the document when a user requests the record.
It MUST have a POST form which uses the code:

```
<FORM METHOD="POST" ACTION="/catbase?postproduct">
```

Plus the hidden field:

```
<INPUT TYPE="hidden" NAME="recnum" VALUE="<!--[Products]Recordnumber-->">
```

And a submit button with the NAME attribute equal to "wbSubmit":

```
<INPUT TYPE="SUBMIT" NAME="wbSubmit" VALUE="Save">
```

Note: the VALUE attribute can be set to whatever you like (e.g. Send, Submit, Accept, etc.) but it must not be blank.
This is accessed in the same way a view.shtml file would be accessed but is automatically sent instead if you have allowed modifications on the Setup screen.

To find a product's company use the following code on the 'view.shtml' or 'entry.shtml':

```
<A HREF="/catbase?viewcompany&recnum=<!--[Products]CompanyNumber-->">
... </A>
```

Advanced Web Server Settings

The advanced web server settings aren't as complicated as they sound, and you will need to change some settings to get the desired performance from CatBase.

You can access the Advanced settings from the tab on the Setup screen:
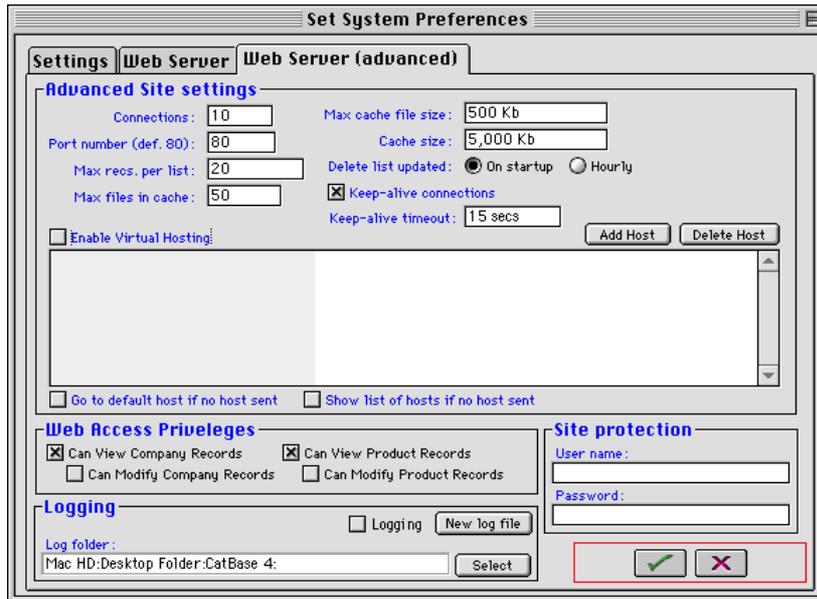
Connections

The Connections value is the maximum number of active connections from another machine to the web server. The amount of memory required for a connection varies according to the amount of data being sent. If you are getting lack of memory errors when the web server is running you must either increase the amount of memory available to CatBase or reduce the number of connections.

Port Number

The Port Number is normally set to 80, as most web servers work at this port. If you wish to have more than one web server working on your machine you can set CatBase's port number to a different value, so they do not conflict.

Max recs per list

Max recs per list is the maximum number of records that can be displayed in a list at a time. If there are any more, a link will be added to the bottom of the list which the user can click on.

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The Cache

The cache stores frequently requested files in it. It is faster for CatBase to access the cache than read the file directly from hard disk.

Max files in cache

The maximum amount of files that CatBase will store in the cache.

Max cache file size

CatBase will not cache files larger than this value. This number cannot be greater than the cache size (see below).

Cache Size

Cache size is the total size of the cache. Do not set this to a very high figure unless you have enough memory to support it.

Delete list updated

The Delete List is a list of records in memory that cannot be displayed because they are flagged for deletion. If CatBase is running on a multi-user system and people are changing records regularly you may wish to set this to 'Hourly', so any changes will be updated every hour. If, on the other hand, you don't ever update the database until you change datafiles, you can leave it set to 'On Startup'.

Keep-alive connections

Keep-alive connections allow for increased performance when a web browser is retrieving multiple small files from the server. Keep-alive connections are different from normal connections because they wait for more incoming requests after a file is sent, rather than just close and re-open when a new request comes in. This option should be left on, unless you are experiencing problems. Also note you will need to set the number of open connections higher, as they are more likely to be busy for a longer period of time.

Keep-alive timeout

This is the amount of time a single connection should wait, after sending a file to the web browser, for another request. The default is 15 seconds.

Virtual Hosting

Virtual Hosting allows your web server to 'pretend' to be more than one server.

For example,

You want to serve the following websites:

 www.mycompany.com   and **www.mybusiness.com**

To do this you must set the names to point to your web server (this is normally done by your ISP or system administrator on your local network).

E.g.. If your computer's IP address is 192.168.1.101 then the domains (www.mycompany.com and www.mybusiness.com) must both point to this address.

Click Enable Virtual Hosting on the Web Server (advanced) screen:

Then click the Add Host button and the following window will appear:
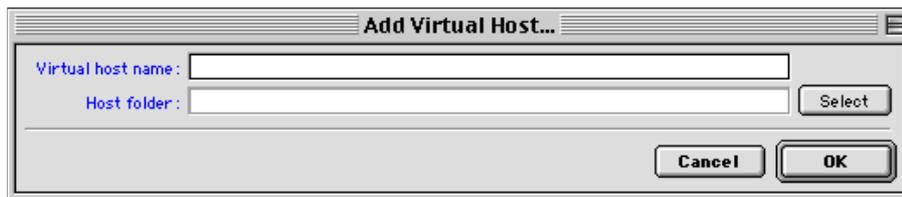
Type in the first domain name (www.mycompany.com) into the Virtual Host name field then click the Select button to choose the location of its website on your hard disk. Repeat this step for the other domain.

Now when a user with a web browser types in the www.mycompany.com they will be brought directly to that website.

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If the user has an old version of Internet Explorer (version 3 or less), an error will occur, as it does not properly support virtual hosting. In this case you must check **Go to default host if no host sent** and that will always bring them to the site folder chosen on the first Web Server page. Otherwise you must disable virtual hosting.

If a user types in the IP address of your machine rather than a domain name, the server will not be able to determine which virtual web site to look at. If **Show list of hosts if no host sent** is checked then the web server will show the user all of the available domains, and let them go to the sites directly.

Do not select this if you want privacy for the sites hosted on your server.

Web Access Privileges

You can limit access to certain areas of CatBase.
The options are pretty straight forward – just check the options you want, to control whether people can view and/or modify Company and Product records.
If any options are un-checked CatBase will not allow access to that area.

Site Protection

If you enter a user name and password into the boxes shown above, CatBase will request this information any time you access the web server from a browser. This feature provides simple protection from unwanted guests during, for example, the development phase of your web site.

To turn off site protection simply clear the user name and password.
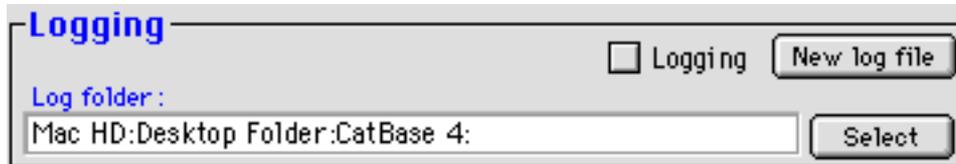
Logging

CatBase can produce log files which are compatible with standard log file format. You can therefore process them using most log file processor applications and determine who accesses your site and when.

To enable logging, check the **Logging** box.

<u>Log folder</u>
You must also choose a log file folder. Make sure the folder exists already and click on the **Select** button, next to the log folder box; navigate your hard disk until you find the folder, then click on the **Select** button in the file dialogue.

<u>New log file</u>
If you want to start a new log file while the server is running, just click on the **New log file** button. You can then move the old log file, make backups of it and process it.

Web Fields

To include CatBase fields in your HTML, simply use the CatBase table name, placed within square brackets, followed by the ORIGINAL database field name, and surround it with HTML comment tags (<!-- ...... -->). For example, to use the Company Name field from the Companies table, you would include a tag like this:
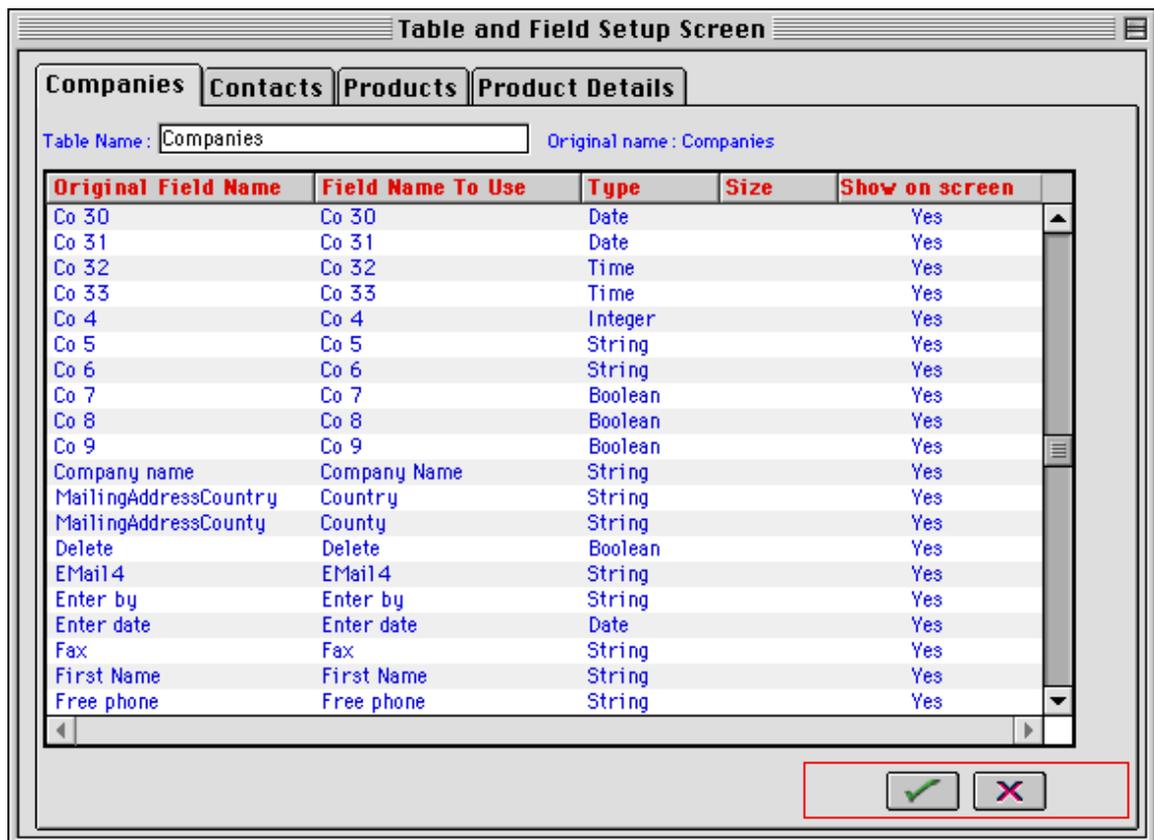
<!--[Companies]Company name-->

Important Notes!

1. Do not allow any extra spaces to creep in (especially between the table name and the field name).
2. The table and field names to use are the ORIGINAL database table and field names. To find out what the original names are, open up the Table and Field Setup window (under the Admin menu). It lists the original field names and other information, such as the type of each field and the name that you may have chosen to use:

Table and Field Setup Screen				

Companies | Contacts | Products | Product Details

Table Name : Companies   Original name : Companies

Original Field Name	Field Name To Use	Type	Size	Show on screen
Co 30	Co 30	Date		Yes
Co 31	Co 31	Date		Yes
Co 32	Co 32	Time		Yes
Co 33	Co 33	Time		Yes
Co 4	Co 4	Integer		Yes
Co 5	Co 5	String		Yes
Co 6	Co 6	String		Yes
Co 7	Co 7	Boolean		Yes
Co 8	Co 8	Boolean		Yes
Co 9	Co 9	Boolean		Yes
Company name	Company Name	String		Yes
MailingAddressCountry	Country	String		Yes
MailingAddressCounty	County	String		Yes
Delete	Delete	Boolean		Yes
EMail4	EMail4	String		Yes
Enter by	Enter by	String		Yes
Enter date	Enter date	Date		Yes
Fax	Fax	String		Yes
First Name	First Name	String		Yes
Free phone	Free phone	String		Yes

3. You must only use fields in the appropriate place: company fields can only be used in the company entry, view and list HTML files, etc.

Error messages

File not found

The file you are looking for does not exist in the location you are trying to access.

Solution: Have you made a spelling mistake, or are you incorrect in thinking a file exists at that location?

Bad request - The request you sent was invalid

The link you have clicked on or entered into the browser is trying to access a script with incorrect values.

Solution: have you made a typing error when making the link. E.g. /catbase?listproduct instead of /catbase?listproducts

### 401: You are not authorised to access this site

You have entered an incorrect username or password.

Solution: check with the administrator to see what the current password and username are; they are on the Setup screen.

No access allowed - You cannot access companies/products from this server

Access to the companies or products has been disabled.

Solution: open the Setup screen, go to the Advanced Web Server Settings page and check either of the boxes shown below:

☒ Can View Company Records   ☒ Can View Product Records
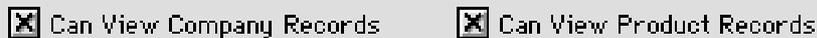
No access allowed - You cannot save records

You have somehow tried to modify a record and access has not been allowed. Note: this error should never happen but is a safeguard against hackers.

Solution: if you want to allow anyone to edit records, open the Setup screen, go to the Advanced Web Server Settings page and check either of the boxes shown below:

☒ Can Modify Company Records   ☒ Can Modify Product Records

Record not found - The record you requested was not found

The record you are trying to access has been deleted, made inactive, or never existed in the first place.

Solution: make sure the record number you entered / clicked on matches the record number in the database.

'<template filename>.shtml' was not found! - CatBase is not set up correctly

<template filename> is one of the templates used by CatBase to produce

lists, records, search forms and feedback forms.
Solution: check in the relevant folder (Companies if you are accessing companies, etc.) to see if the template file actually exists, and make sure it is spelled correctly (see the respective part in the chapter for the correct spelling).

No products found - There are no products

There are no product records in the database.
Solution: enter some.

No products found - This company does not have any products

You have requested all products belonging to a company to be displayed, but none are found.
Solution: the company has no products..

No companies found - There are no companies

There are no Company records in the database.
Solution: enter some.

Method not allowed - You cannot access the server in that way

You have tried to access the server in a way it cannot understand or does not support. It is more than likely an HTML form-related error.
Solution: check the HTML code which posts the form to the server for errors.

Bad request - You have tried to access a non-existent script

The link you have clicked on or entered into your browser is trying to access a script which CatBase does not support. For example, the 'catbase?' script is a valid script.
Solution: Have you made a spelling mistake, or are you trying to perform something that CatBase cannot do?

Troubleshooting

The web folder you have selected doesn't exist: please select a valid one

The folder specified on the Setup screen does not exist; CatBase cannot serve documents and therefore the web folder should be changed to a valid location.

The log folder you have selected does not exist: please select a valid one

CatBase cannot make a log file in the location specified. Choose a valid folder.