

FX.php

A FREE, Open Source PHP class for accessing FileMaker Pro data by Chris Hansen with Chris Adams, Gjermund Thorsen, and others.

FileMaker Pro has quite a following, and with good reason: it mixes the power of a relational database with phenomenal ease-of-use. PHP is a free, embedded scripting language in use on nearly half of all Apache web servers (which themselves account for about 60% of web servers.) PHP can access just about any data source, but there was no easy way for it to pull data from FileMaker until now. Thanks to FX.php, FileMaker enthusiasts can now access their data via PHP.

FX.php is a PHP class which parses the XML output by FileMaker Pro's web companion into a multi-level array which is easily manipulated using PHP. The array is organized like this (these are the relevant index values):

Level 1: 'linkNext', 'linkPrevious', 'foundCount', 'fields', 'data', 'URL', 'errorCode', 'valueLists'

Level 2: (of 'data') *RecordID.ModificationID*

Level 3: *fieldName*

Level 4: Numbers, starting at zero; one for each value

So, a reference to a specific value might look like this:

```
$dataArray['data']['12.3']['First_Name'][0]
```

Look at the sample code to get a better feel for how things work. You can also see it at work on my site:

www.iviking.org/FX/

Of course, to take advantage of this class, you'll need to install PHP. PHP is available for a number of platforms. The source code for PHP and links to Windows binaries and information on other distributions are located on this page:

<http://www.php.net/downloads.php>

PHP is included with recent releases of Mac OS X. More information and additional Mac OS X binaries are available here (this site will also tell you how to configure PHP on Mac OS X):

<http://www.entropy.ch/software/macosx/php/>

If you'd like to run PHP in the MacOS classic environment, you'll need to install

WebTen from Tenon Intersystems:

www.tenon.com/products/webten/

IMPORTANT: In my experience running this combination on the MacOS (up to and including under Mac OS X 10.0.? -- this has been **fixed** since version 10.1.2), it is important that you not attempt to access FileMaker Pro and your web server over the same network interface. (i.e. you'll either need a second machine, or a second network card.) On my old PowerMac G3 Server running Mac OS X, I got a kernel panic when I attempted to use a single interface. Each interface should, of course, have it's own IP address.

There are example databases and several example PHP pages included with this README. In order to use these files do the following:

- 1) Open the 'Book_List.fp5' database (and Tester.fp5, if desired) in FileMaker Pro.
- 2) Make sure that the Web Companion is active under plug-ins in FileMaker's application preferences (FileMaker has reserved port 591 and FX uses that port by default, to set the port used by the Web Companion, select Web Companion and click the configure button in the plug-ins preference screen.)
- 3) Make sure that Web Companion sharing is enabled for the example database.
- 4) Place the 'FX' folder at the root level of your web server.
- 5) Enter the IP address of your FileMaker Pro machine in server_data.php after the equals sign in this expression: `$serverIP = ;` Make sure that the line ends with a semi-colon. If you configured the Web Companion to use a port other than 591, you'll need to change the value for `$webCompanionPort` accordingly.
- 6) You should now be able to access the files from your browser like this:

`http://your.web.site/FX/` (for the book list demo)
`http://your.web.site/FX/FXExamples.php` (this file can be used with most FM DBs)

Adding the functionality of FX.php to your own PHP files is as simple as using an 'include' statement in a PHP file. Although there are multiple functions that can be used to accomplish this, I would suggest using 'include_once()' or 'require_once()', since PHP will throw up an error if there are multiple declarations of a single class.

Also, there are a number of things that may be helpful to know about FX.php itself (look at the example files to see these at work):

- 1) First, declare an instance of the FX class like this (substituting the IP address of your FileMaker machine):

```
$SomeQuery = new FX("172.0.0.1");
```

- 2) Specify database and layout details:

```
$SomeQuery->SetDBData("DatabaseName", "LayoutName");
```

3) Specify the parameters that you wish to pass to the database using one line like this for each field:

```
$SomeQuery->AddDBParam("FieldName", "FieldValue");
```

4) Specify sort fields and sort orders if you desire (there are ways that PHP can sort your results for you, too):

```
$SomeQuery->AddSortParam("SortFieldName", "descending");
```

5) Submit the query and store the result using ONE of the following (if, for some reason, you do not want to retrieve FileMaker data, just pass these functions the value 'false' -- without the quotes):

```
$ReturnedData = $SomeQuery->FMDelete(); -- delete a record  
$ReturnedData = $SomeQuery->FMEdit(); -- edit the contents of a record  
$ReturnedData = $SomeQuery->FMFind(); -- perform a find as specified  
$ReturnedData = $SomeQuery->FMFindAll(); -- like 'Show All'  
$ReturnedData = $SomeQuery->FMFindAny(); -- find a random record  
$ReturnedData = $SomeQuery->FMNew(); -- create a new record  
$ReturnedData = $SomeQuery->FMView(); -- shows value lists and fields only
```

There are other commands, too, but these should get you started. Look through FX.php. The actions that FX can perform are grouped towards the bottom of the file. Feel free to email me any questions that you may have:

FX@iviking.org

Finally, there is no way that I could completely cover all of the possibilities that PHP opens to you. Fortunately, there is a wealth of information out there. PHP's on-line manual is excellent (I don't feel that way about any other on-line documentation that I've seen.) It can be found at:

www.php.net/manual/en/

This is the URL of the English Language version of the manual. Other languages are linked from the site, too. There are also a number of books on PHP. I've found these two very helpful:

PHP Pocket Reference by Rasmus Lerdorf (the creator of PHP) and published by O'Reilly

PHP4 Bible by Tim Converse and Joyce Park, pulished by IDG

But don't just take my word for the books you get; spend some time in your local bookstore comparing books and find one that makes sense to you. I would suggest that you take a good look at the index of each book (you're liable to refer to it frequently.)

I hope all of this is of some help. Good luck and happy programming!

--Chris Hansen