

Appendix B

Valid names used in CGI requests for FileMaker XML data

This appendix describes the valid names of requests and their parameters you can use in a CGI (Common Gateway Interface) command when requesting FileMaker Pro data in XML format. Included are HREF link and HTML form examples of each request. For scripting examples of each request, see the JavaScript library, FMP.js, in the XML Examples folder (see “Installing the FileMaker Developer software package” on page 1-2 for information).

The CGI command requesting FileMaker Pro data in XML format always begins with the action as FMPPro? and the format file as either -dso_xml, -dso_xml_dtd, -fmp_xml, or -fmp_xml_dtd.

The following is a list of the request names and parameters:

<u>Request names</u>	<u>Parameter names</u>
-find	-db
-findall	-lay
-findany	-format
-view	-recid
-new	-modid
-edit	-lop, -op
-delete	-max
-dbnames	-skip
-layoutnames	-sortorder, -sortfield
-scriptnames	-script, -script.prefind, -script.presort
-dbopen	-styletype, -stylehref
-dbclose	-password

Note The name of a database field can also be used in a CGI command. It is not a parameter or a request name, and therefore is not preceded by a hyphen (-).

Generating a -find, -findall, or -findany request

Name/Value Type: Find Record(s) Request

What it does: Submits a search request using defined criteria.

A web user must have browsing access privileges with the database in order to execute these requests.

Required parameters: -db, -format

Optional parameters: -lay, -recid, -lop, -op, -max, -skip, -sortorder, -sortfield, -script, -script.prefind, -script.presort, field name, -styletype, -stylehref

Examples of -find, -findall, and -findany requests

To find a record using a hypertext link:

```
<a href="FMPPro?-db=employees.fp5&-format=-fmp_xml &Country=USA&-max=1&-find">Find first USA record</a>
```

To find all records in the database using a hypertext link:

```
<a href="FMPPro?-db=employees.fp5&-format=-fmp_xml &-findall">Find all records</a>
```

To find any record using a hypertext link:

```
<a href="FMPPro?-db=employees.fp5&-format=-fmp_xml &-findany">Find a random record for today's daily quote</a>
```

To find some records using a form action:

```
<form action="FMPPro" method="post">
<input type="hidden" name="-db" value="employees.fp5">
```

```
<input type="hidden" name="--format" value="--fmp_xml">
<input type="hidden" name="--max" value="all">
<input type="text" size=12 name="Country" value="USA">
<input type="submit" name="--find" value="Find Records">
</form>
```

Generating a –view request

Name/Value Type: View Request

What it does: Retrieves layout information from a database and displays it in the FMPXMLLAYOUT grammar.

Required parameters: –db, –lay, –format (= –fmp_xml)

Optional parameters: –styletype, –stylehref

Examples of –view requests

To retrieve layout information using a hypertext link:

```
<a href="FMPro?–db=employees.fp5&–lay=LayoutOne&–format=–fmp_xml&–view">"Take me to a search page"</a>
```

To retrieve layout information using a form action:

```
<form action="FMPro" method="post">
<input type="hidden" name="--db" value="employees.fp5">
<input type="hidden" name="--lay" value="LayoutOne">
<input type="hidden" name="--format" value="--fmp_xml">
<input type="submit" name="--view" value="Show Search Page">
</form>
```

Generating a –new request

Name/Value Type: New Record Request

What it does: Creates a new record and populates that record with the contents of any field name/value pairs.

A web user must have access privileges for creating records in order to execute this request.

Required parameters: –db, –format, one or more field name(s)

Optional parameters: –styletype, –stylehref

Note To include new data for a portal, you must also specify the layout and the relationship name for the related database followed by two colons. You can only add one row/record to a portal per request. (See “Requests for adding records to a portal” on page 7-9 for information.)

Examples of –new requests

To create a new record using a hypertext link:

```
<a href="FMPro?–db=employees.fp5&Country=Australia&–format=–fmp_xml&–new">
```

To create a new record using a form action:

```
<form action="FMPro" method="post">
<input type="hidden" name="--db" value="employees.fp5">
<input type="hidden" name="--format" value="--fmp_xml">
<input type="text" size=12 name="Country" value="Australia">
<input type="submit" name="--new" value="New Record">
</form>
```

Generating an –edit request

Name/Value Type: Edit Record Request

What it does: Updates the record specified by –recid, populating the fields with the contents of any field name/value pairs.

The –recid parameter indicates which record should be edited. In order to edit a record, the web user must have editing privileges for the database.

Required parameters: –db, –format, –recid, one or more field name(s)

Optional parameters: –modid, –styletype, –stylehref

Note To edit records in a portal, you must also include the layout name and the relationship name followed by two colons. To specify each record in the portal, include a period and a consecutive number after the related field name, such as address::city.1 for the first row (record) in the portal and address::city.2 for the second. (See “Requests for editing multiple records in a portal” on page 7-9 for information.)

Examples of –edit requests

To edit a record using a hypertext link:

```
<a href="FMPro?–db=employees.fp5&–format=–fmp_xml&–recid=13&Country=USA&–edit">
```

To edit a record using a form action:

```
<form action="FMPro" method="post">
<input type="hidden" name="–db" value="employees.fp5">
<input type="hidden" name="–format" value="–fmp_xml">
<input type="hidden" name="–recid" value="13">
<input type="text" size=12 name="Country" value="Type a country name here">
<input type="submit" name="–edit" value="Edit This Record">
</form>
```

Generating a –delete request

Name/Value Type: Delete Record Request

What it does: Deletes the record as specified by –recid parameter. In order to delete a record, the web user must have record deleting privileges for the database.

Required parameters: –db, –format, –recid

Optional parameters: –styletype, –stylehref

Examples of –delete requests

To delete a record using a hypertext link:

```
<a href="FMPro?–db=employees.fp5&–format=–fmp_xml&–recid=4&–delete">Delete record with ID 4</a>
```

To delete a record using a form action:

```
<form action="FMPro" method="post">
<input type="hidden" name="–db" value="employees.fp5">
<input type="hidden" name="–format" value="–fmp_xml">
<input type="hidden" name="–recid" value="4">
<input type="submit" name="–delete" value="Delete This Record">
</form>
```

Generating a –dbnames request

Name/Value Type: Database Names Request

What it does: Retrieves the names of all databases that are open and shared via the Web Companion.

Required parameters: –format

Optional parameters: –styletype, –stylehref

Examples of *-dbnames* requests

To retrieve the database names using a hypertext link:

```
<a href="FMPro?-dbnames &-format=-fmp_xml&-styletype=
text/css&-stylehref=mystylesheet.css">
```

To retrieve the database names using a form:

```
<form action="FMPro" method="post">
<input type="hidden" name="-format" value="-fmp_xml">
<input type="hidden" name="-styletype" value="text/css">
<input type="hidden" name="-stylehref" value="mystylesheet.css">
<input type="submit" name="-dbnames" value="Show Database List">
</form>
```

Generating a *-layoutnames* request

Name/Value Type: Layout Names Request

What it does: Retrieves the names of all available layouts for a specified database that is open and shared via the Web Companion.

Required parameters: *-db*, *-format*

Optional parameters: *-styletype*, *-stylehref*

Examples of *-layoutnames* requests

To retrieve the names of available layouts using a link:

```
<a href="FMPro?-db=employees.fp5&-layoutnames&-format=
-fmp_xml&-styletype=text/css&-stylehref=mystylesheet.css">
```

To retrieve the names of available layouts using a form:

```
<form action="FMPro" method="post">
<input type="hidden" name="-db" value="employees.fp5">
<input type="hidden" name="-format" value="-fmp_xml">
<input type="hidden" name="-styletype" value="text/css">
```

```
<input type="hidden" name="-stylehref" value="mystylesheet.css">
<input type="submit" name="-layoutnames" value="Show List of
Layouts">
</form>
```

Generating a *-scriptnames* request

Name/Value Type: Script Names Request

What it does: Retrieves the names of all available scripts for a specified database that is open and shared via the Web Companion.

Required parameters: *-db*, *-format*

Optional parameters: *-styletype*, *-stylehref*

Examples of *-scriptnames* requests

To retrieve the names of all scripts using a link:

```
<a href="FMPro?-db=employees.fp5&-scriptnames&-format=
-fmp_xml&-styletype=text/css&-stylehref=mystylesheet.css">
```

To retrieve the names of all scripts using a form:

```
<form action="FMPro" method="post">
<input type="hidden" name="-db" value="employees.fp5">
<input type="hidden" name="" value="">
<input type="hidden" name="-format" value="-fmp_xml">
<input type="hidden" name="-styletype" value="text/css">
<input type="hidden" name="-stylehref" value="mystylesheet.css">
<input type="submit" name="-scriptnames" value="Show List of Scripts">
</form>
```

Generating a *-dbopen* request

Name/Value Type: Open Database Request

What it does: Opens a specified database that's located in the Web folder with Remote Administration enabled in the Web Companion (web users must enter "Admin" as the user name)

Required parameters: -db, -format

Optional parameter: -password

Examples of *-dbopen* requests

To open a remotely administered database using a link:

```
<a href="FMPro?-db=employees.fp5&-dbopen&-format=-fmp_xml&-styletype=text/css&-stylehref=mystylesheet.css">
```

To open a remotely administered database using a form:

```
<form action="FMPro" method="post">
<input type="hidden" name="-db" value="employees.fp5">
<input type="hidden" name="-format" value="-fmp_xml">
<input type="hidden" name="-styletype" value="text/css">
<input type="hidden" name="-stylehref" value="mystylesheet.css">
<input type="submit" name="-dbopen" value="Open Employees Database">
</form>
```

For more information, see "Opening password-protected databases remotely" on page 6-15.

Generating a *-dbclose* request

Name/Value Type: Close Database Request

What it does: Closes an open database that's located in the Web folder with Remote Administration enabled in the Web Companion (web users must enter "Admin" as the user name)

Required parameters: -db, -format

Examples of *-dbclose* requests

To close a remotely administered database using a link:

```
<a href="FMPro?-db=employees.fp5&-dbclose=&-format=-fmp_xml&-styletype=text/css&-stylehref=mystylesheet.css">
```

To close a remotely administered database using a form:

```
<form action="FMPro" method="post">
<input type="hidden" name="-db" value="employees.fp5">
<input type="hidden" name="-format" value="-fmp_xml">
<input type="hidden" name="-styletype" value="text/css">
<input type="hidden" name="-stylehref" value="mystylesheet.css">
<input type="submit" name="-dbclose" value="Close Employees Database">
</form>
```

For more information, see "Opening password-protected databases remotely" on page 6-15.

Specifying parameters for the request

The following are the parameters for requesting FileMaker Pro data in XML format. Some parameters are required to be present in the CGI command along with certain requests; others are optional.

-db (Database)

Name/Value Type: Parameter

What it does: Specifies the database that all processing for the request will refer to.

Value is: Name of the database, including the extension if any. The FileMaker Pro Web Companion uses only the name of the database; do not include any path information. The database must be open in FileMaker Pro.

Required with: All requests except the `-dbnames` request

Example: `FMPPro?-db=employees.fp5&-format=-fmp_xml&-find`

-lay (Layout)

Name/Value Type: Parameter

What it does: Specifies the layout that is used in the database. The `-lay` parameter is used in `-find`, `-findall`, and `-findany` requests to specify the fields that are returned and in `-view` requests to specify the layout information that's returned.

Value is: Name of the layout to use. If no layout is given, then the layout is considered to contain all fields in the database (but not related fields).

Required with: `-view` requests, and `-edit` or `-new` requests for data in related fields or portals

Optional with: `-find`, `-findall`, or `-findany` requests

Example: `FMPPro?-db=employees.fp5&-format=-fmp_xml&-lay=LayoutOne&-view`

-format (Format)

Name/Value Type: Parameter

What it does: Specifies the XML grammar used for returning the results of a request.

Value is: `-dso_xml`, `-dso_xml_dtd`, `-fmp_xml`, or `-fmp_xml_dtd`.

Required with: All requests

Examples:

To generate this XML grammar	Specify this format
FMPDSORESLT	FMPPro?-db=employees.fp5&-format="-dso_xml"&-find
FMPDSORESLT + document type definition	FMPPro?-db=employees.fp5&-format="-dso_xml_dtd"&-find
FMPXMLRESULT	FMPPro?-db=employees.fp5&-format="-fmp_xml"&-find
FMPXMLRESULT + document type definition	FMPPro?-db=employees.fp5&-format="-fmp_xml_dtd"&-find
FMPXMLLAYOUT	FMPPro?-db=employees.fp5&-format="-fmp_xml"&-view
FMPXMLLAYOUT + document type definition	FMPPro?-db=employees.fp5&-format="-fmp_xml_dtd"&-view

-recid (Record ID)

Name/Value Type: Parameter

What it does: Defines which record should be operated on. Used mainly by the `-edit`, and `-delete` requests.

Value is: A record ID, which is a unique specifier to a record in a FileMaker Pro database.

Required with: `-edit` and `-delete` requests

Optional with: –find requests

Example: FMPPro?–db=employees.fp5&–format= –fmp_xml&–recid=22&–delete

–modid (Modification ID)

Name/Value Type: Parameter

What it does: Refers to the latest version (incremental counter number) of the record. This allows you to take necessary measures to ensure an –edit request is applied to the most current version of the record, by including a warning and an option to retrieve the most current record before the –edit request is allowed.

Value is: A modification ID, which is a unique identifier for the current version of a record in a FileMaker Pro database.

Optional with: –edit requests

Requires: The –recid parameter

Example: FMPPro?–db=employees.fp5&–format= –fmp_xml&–recid=22&–modid=6&last_name=Jones&–edit

–lop (Logical operator)

Name/Value Type: Parameter

What it does: Specifies how the find criteria are combined as either an AND or OR –find request.

Value is: Either AND or OR. If the –lop parameter name is not used, then the find request is assumed to be an AND request.

Optional with: –find requests

Example: FMPPro?–db=employees.fp5&–format= –fmp_xml&Last+Name=Smith&Birthdate=2/5/1972&–lop=and&–find

–op (Comparison operator)

Name/Value Type: Parameter

What it does: Specifies the comparison operator to apply to the field name/value pair that follows it in a –find request.

Value is: The operator to use. There are short and long versions of each operator. The default operator is "begins with". Valid operators are as follows:

Short	Long	FileMaker Pro equivalent operator
eq	equals	=word
cn	contains	"word"
bw	begins with	word*
ew	ends with	*word
gt	greater than	> word
gte	greater than or equals	>= word
lt	less than	< word
lte	less than or equals	<= word
neq	not equals	omit, word

You can use any FileMaker Pro –find operator by specifying the begins with (bw) parameter. For example, to specify the "Find Content Match" (=) operator, you would specify the begins with parameter (bw) and then you would place the characters "==" before the actual search criteria. The required lines would look like this:

```
<input type="hidden" name="–op" value="bw">
<input type="text" name="FirstName" value==" =Sam">
```

Optional with: –find requests

Requires: A field name and a value

Example: FMPPro?–db=employees.fp5&–format= –fmp_xml&–op=eq&FirstName=Sam&–find

-max (Maximum records)**Name/Value Type:** Parameter**What it does:** Specifies the maximum number of records that should be returned.**Value is:** A number from 1 through 2147483647, or the word "All". The default value is 25.**Optional with:** -find requests**Example:** FMPPro?-db=employees.fp5&-format= -fmp_xml&-max=10&-find***-skip (Skip records)*****Name/Value Type:** Parameter**What it does:** Tells FileMaker Pro how many records to skip in the found set.**Value is:** A number from 0 through 2147483647, or the word "All". If the value is greater than the number of records in the found set or the value is "All" then the last record is displayed. The default value is 0.**Optional with:** -find requests**Example:** FMPPro?-db=employees.fp5&-format= -fmp_xml&-skip=10&-max=5&-find

In this example, the first 10 records in the found set are skipped and records 11 through 15 are returned.

-sortfield (Sort field)**Name/Value Type:** Parameter**What it does:** Specifies the field that will be used for sorting. The -sortfield parameter can be used multiple times to perform multiple field sorts. The position in which -sortfield appears in the CGI command will determine the sort order of the fields.**Value is:** Name of a FileMaker Pro field.**Optional with:** -find or -findall requests**Example:** FMPPro?-db=employees.fp5&-format= -fmp_xml&-sortfield=First+Name&-find***-sortorder (Sort order)*****Name/Value Type:** Parameter**What it does:** Indicates the direction of a sort. If used, -sortorder must directly follow the -sortfield parameter it applies to.**Value is:** The sort order. Valid sort orders are as follows, where Custom is the value list name:

Keyword (short)	Keyword (long)	FileMaker Pro Equivalent Operator
Ascend	Ascending	Sort a to z, -10 to 10
Descend	Descending	Sort z to a, 10 to -10
Custom		Sort using the value list associated with the field on the layout

Optional with: -find or -findall requests**Requires:** The -sortfield parameter**Example:** FMPPro?-db=employees.fp5&-format= -fmp_xml&-sortfield=First+Name&-sortorder=descend&-find

–script (Script)**Name/Value Type:** Parameter**What it does:** Specifies the FileMaker Pro script that will be performed after finding and sorting records (if specified) during processing of the `–find` request.**Value is:** Name of the script to perform.**Optional with:** `–find` or `–findall` requests**Example:** `FMPPro?–db=employees.fp5&–format= –fmp_xml&–script=Omit+Script&–find`***–script.prefind (Script before Find)*****Name/Value Type:** Parameter**What it does:** Specifies the FileMaker Pro script that will be performed before finding and sorting of records (if specified) during processing of the `–find` request.**Value is:** Name of the script to perform.**Optional with:** `–find` or `–findall` requests**Example:** `FMPPro?–db=employees.fp5&–format= –fmp_xml&–script.prefind=My+Script&–find`***–script.presort (Script before Sort)*****Name/Value Type:** Parameter**What it does:** Specifies the FileMaker Pro script that will be performed after finding records and before sorting records (if specified) during processing of the `–find` request.**Optional with:** `–find` or `–findall` requests**Example:** `FMPPro?–db=employees.fp5&–format= –fmp_xml&–script.presort=OmitOne&–find`***–styletype (Style type)*****Name/Value Type:** Parameter**What it does:** Tells the FileMaker Pro Web Companion to generate an XML-stylesheet processing instruction within the grammar—setting the value of the type attribute (`type=text/css` or `type=text/xsl`)—so you can use cascading style sheets (CSS) or Extensible Stylesheet Language (XSL) documents with your XML document. This parameter is used in conjunction with the `–stylehref` parameter.**Optional with:** All requests**Requires:** The `–stylehref` parameter**Example:** `FMPPro?–db=employees.fp5&–format= –fmp_xml&–styletype=text/css&–stylehref=mystylesheet.css&–find`***–stylehref (Style href)*****Name/Value Type:** Parameter**What it does:** Tells the FileMaker Pro Web Companion to generate an XML-stylesheet processing instruction within the grammar—setting the value of the href attribute (`href=document.css` or `href=document.xsl`)—so you can use cascading style sheets (CSS) or Extensible Stylesheet Language (XSL) documents with your XML document. This parameter is used in conjunction with the `–styletype` parameter.**Optional with:** All requests**Requires:** The `–styletype` parameter**Example:** `FMPPro?–db=employees.fp5&–format= –fmp_xml&–styletype=text/xsl&–stylehref=mystylesheet.xsl&–find`

–password (Database password)

Name/Value Type: Parameter

What it does: Specifies the database password (set in the Access Privileges > Define Passwords dialog box) to open a database with.

Optional with: The –dbopen request

Example: FMPPro?–db=employees.fp5&–dbopen&–password=dbpassword&–format= –fmp_xml& –styletype=text/css& –stylehref=mystylesheet.css

field name (Name of specific field)

Name/Value Type: Field name

What it does: Field names are used to control –find criteria or to modify the contents of a record. When a value for a specific field needs to be sent to FileMaker Pro, the name portion of the name/value pair is the name of the field in the FileMaker Pro database. Field names used in this manner should not start with the hyphen (–) character.

Name is: Name of the field in the database.

Value is: For –new and –edit requests, the value contains the data for a record. Multiple occurrences of a field allow the data to be put into separate repetitions of a repeating field. For –find requests, the value is a find request on the specified field. For all other requests, these name/value pairs are not needed.

Required with: –new and –edit requests

Optional with: –find requests

Example: FMPPro?–db=employees.fp5&–format= –fmp_xml& –op=eq&FirstName=Sam&–max=1&–find