

MODX Quick Start Immersion Tutorial

1. Introduction

This quick start is for those who are already familiar with the phpBB MOD Text Template. It is written from the perspective that you already know how to use the Text Template. Those learning new should read the full document.

MODX has been designed to have maximum compatibility with the Text Template, but there are several differences that are new.

This tutorial will only teach you how to use the MODX format; it will not teach you how to write PHP code, or how to modify the code of phpBB.

2. Start Here

- Step 1.** Start by opening Notepad, or another text editor of your choice
- Step 2.** Save the file as “quickstart.xml” to a new directory (e.g. /quickstart)
- Step 3.** Paste the code from Code Block 2.1 into a new document and save
- Step 4.** Copy the file modx.subsilver.en.xsl to the same directory

```
<?xml version="1.0" encoding="utf-8" standalone="yes"?>
<?xml-stylesheet type="text/xsl" href="modx.subsilver.en.xsl"?>
<!--For security purposes, please check: http://www.phpbb.com/mods/ for the
latest version of this MOD. Although MODs are checked before being
allowed in the MODs Database there is no guarantee that there are no
security problems within the MOD. No support will be given for MODs not
found within the MODs Database which can be found at
http://www.phpbb.com/mods/-->
<mod xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns="http://www.phpbb.com/mods/xml/modx-1.0.xsd">
<!-- the MOD goes in here -->
</mod>
```

Code Block 2.1

This code is the part of MODX that describes it as an XML file in the MODX format, and links to the stylesheet. As you can see because it is XML, the layout is very similar to HTML. The security disclaimer comment must be included, even though people will not be reading the file source. The MOD itself is described between the `mod` tag, i.e. where the `<!-- the MOD goes in here -->` comment is.

2.1. The Header

You still have access to all your header information, plus a few new items.

Step 5. Paste the code in Code Block 2.2 replacing the comment between the `mod` tag in your file.

```
<header>
  <license>http://opensource.org/licenses/gpl-license.php GNU General Public
    License v2</license>
  <title lang="en-gb">MOD Title</title>
  <description lang="en-gb">MOD Description</description>
  <author-notes lang="en-gb">Author Notes</author-notes>
  <author-group>
    <author>
      <realname>Real Name</realname>
      <email>E-mail address</email>
      <username>username</username>
      <homepage>homepage</homepage>
    </author>
  </author-group>
  <mod-version>
    <major>1</major>
    <minor>0</minor>
    <revision>0</revision>
  </mod-version>
  <installation>
    <level>easy|intermediate|advanced</level>
    <time>0</time>
    <target-version>
      <target-primary>2.0</target-primary>
      <target-major allow="exact">2</target-major>
      <target-minor allow="exact">0</target-minor>
    </target-version>
  </installation>
</header>
```

Code Block 2.2

The following is a line-by-line run through of the example file so far. While it has a specific order, the nature of XML may mean other files have their elements in a different order and still be valid.

Where used, the language attribute is required; in this case, it is en-gb as required by the phpBB MOD Team. You can repeat elements with extra languages if you wish to include more than one language.

- Line 1: XML Declaration
- Line 2: XSLT reference
- Line 3: Security Disclaimer Comment
- Line 4: Document root element
- Line 5: Header element starts here
- Line 6: License element, the GPL has been referenced here which is usually required for phpBB, however any license can be used that you are legally entitled to use
- Line 7: Title Element, it is same as the Text Template. That is the title of your MOD.
- Line 8: Description element, give the MOD a description.
- Line 9: Author notes element, you can put some notes in here.
- Line 10: Start of the author block, you can nest multiple authors, but there is currently only one there.
- Line 11: Start of an author's details element
- Line 12: The author's real name
- Line 13: The author's e-mail address
- Line 14: The author's phpBB.com username
- Line 15: The author's homepage
- Line 16: End of the author's details element
- Line 17: End of the author element
- Line 18: Start of the mod-version element
- Line 19: The MODs major version number
- Line 20: The MODs minor version number
- Line 21: The MODs revision version number
- Line 22: End of the mod-version element
- Line 23: Start of the installation details element
- Line 24: Installation level; can be one of 'easy', 'intermediate', 'advanced'
- Line 25: Installation time, this is given in seconds
- Line 26: Start of the target-version element, this is the phpBB version the MOD is designed for
- Line 27: The target-primary element is used for a textual representation of the target version.
- Line 28: The target-major element is useful to ensure the major version of the software matches exactly.
- Line 29: The target-minor element is useful to ensure the minor version of the software matches exactly. You can also use 'after', 'before', 'after-equal', 'before-equal', and 'not-equal' values for the allow attribute.
- Line 30: End the target-version element
- Line 31: End the installation details element
- Line 32: End of the header element. There are other fields that can be used that haven't been here.

Now let us modify this a bit:

- Step 6.** Leave the license as the GPL.
- Step 7.** Change the title of the MOD to "Hello World"
- Step 8.** Edit the description to say "Quick Start Tutorial sample"
- Step 9.** Edit the author notes to say "This is a tutorial, do not install this MOD".

- Step 10.** Edit the author information of the author currently listed to your information, if there is a field you do not want to include, delete the entire element, or leave it empty. A valid phpBB.com username must however be used in the `username` field.
- Step 11.** Change the mod-version to 1.0.0a. Hint, there is a field: `<release></release>` that has not been shown in the template.
- Step 12.** Change the installation-level to easy, this field is case sensitive
- Step 13.** Change the installation-time to 300, which is 5 minutes ($300/60 = 5$).
- Step 14.** Add a MOD History section (use the sample shown in Code Block 2.3). Do not forget to use the language “en-gb”. Make the history entry’s version 1.0.0a, and its change log a single change “Completed MODX Quick Start Tutorial”. In addition, use today’s date in the format shown in the date field.

```
<history>
  <entry>
    <date>yyyy-mm-dd</date>
    <rev-version>
      <major>1</major>
      <minor>0</minor>
      <revision>0</revision>
    </rev-version>
    <changelog lang="en-gb">
      <change>Version 1.0.0 is the first release of the MOD.</change>
    </changelog>
  </entry>
</history>
```

Code Block 2.3

- Step 15.** Change the target-version to require at least the latest version of phpBB (2.0.20 at time of writing) (Hint, there is also a target-release field)

2.2. Actions

In MODX, actions are still executed from first to last. All actions are nested within a single `<action-group></action-group>` element which in-turn it nested under the root `<mod>` element. There are four types of actions, `<sql>`, `<copy>`, `<open>`, and `<diy-instructions>`. With these four elements, you can do everything the Text Template could and more. Generally, they are executed in the order listed above by installers; however, this may not always be the case.

A little known feature of XML when listing character data is to encapsulate character data in a `<![CDATA[]>` block so you don't have to escape greater than, less than, and quote characters. Example usage is shown in Code Block 2.4.

Step 16. Let us now add an `<sql>` action. The SQL action to add is shown in Code Block 2.4, and is fictional. Remember to create a new `<action-group></action-group>` element nested under the `<mod>` element, then to nest the `<sql></sql>` element under the `<action-group>` element.

```
<sql><![CDATA[CREATE TABLE phpbb_sessions_keys (  
    key_id varchar(32) DEFAULT '0' NOT NULL,  
    user_id mediumint(8) DEFAULT '0' NOT NULL,  
    last_ip varchar(8) DEFAULT '0' NOT NULL,  
    last_login int(11) DEFAULT '0' NOT NULL,  
    PRIMARY KEY (key_id, user_id),  
    KEY last_login (last_login)  
); ]]></sql>
```

Code Block 2.4

Step 17. Let us now copy a few files, we use the `<copy>` action to do this as shown in Code Block 2.5.

```
<copy>  
    <file from="root/index.php" to="index.php" />  
    <file from="root/common.php" to="common.php" />  
</copy>
```

Code Block 2.5

Step 18. Let us now perform a few file edits. Firstly we will do a simple FIND and REPLACE as shown in Code Block 2.6. As you can see, an `<edit>` is nested in an `<open>` element with a single argument 'src' indicating which file to edit. Each edit to the file is nested in an `<edit>` element.

```
<open src="index.php">
  <edit>
    <find>text to find</find>
    <action type="replace-with">text to be replaced with</action>
  </edit>
</open>
```

Code Block 2.6

Note: CDATA can also be used here as it is standard XML.

Step 19. Let us now perform a simple FIND and AFTER, ADD

```
<edit>
  <find>text to find</find>
  <action type="after-add">text to be added on the line after</action>
</edit>
```

Code Block 2.7

Step 20. Let us now perform a simple FIND and BEFORE, ADD

```
<edit>
  <find>text to find</find>
  <action type="before-add">text to be added on the line before</action>
</edit>
```

Code Block 2.8

Step 21. Let us now perform a simple FIND and INCREMENT as shown in Code Block 2.9. The syntax is the same as the text template.

```
<edit>
  <find><![CDATA[Powered by <a href="http://www.phpbb.com/"
target="_phpbb" class="copyright">phpBB</a> &copy; 2001, {%:1} phpBB
Group<br />{TRANSLATION_INFO}</span></div>]]></find>
  <action type="operation">%:1 +10</action>
</edit>
```

Code Block 2.9

Step 22. We will now perform something a little more involved, a FIND, IN-LINE FIND, IN-LINE REPLACE WITH, IN-LINE AFTER, ADD, IN-LINE BEFORE, ADD, and IN-LINE INCREMENT

```
<edit>
  <find>text to find</find>
    <inline-edit>
      <inline-find>find</inline-find>
      <inline-action type="replace-with"> be replaced with</inline-
action>
    </inline-edit>
  </edit>
<edit>
  <find>text to find</find>
    <inline-edit>
      <inline-find>find</inline-find>
      <inline-action type="after-add">, err have a string appended
to</inline-action>
    </inline-edit>
  </edit>
<edit>
  <find>text to find</find>
    <inline-edit>
      <inline-find>find</inline-find>
      <inline-action type="before-add">have a sting pre-pended to on
the line to </inline-action>
    </inline-edit>
  </edit>
<edit>
  <find><![CDATA[Powered by <a href="http://www.phpbb.com/"
target="_phpbb" class="copyright">phpBB</a> &copy; 2001, {%:1} phpBB
Group<br />{TRANSLATION_INFO}</span></div>]]></find>
  <inline-edit>
    <inline-find>2001, {%:1} phpBB</inline-find>
    <inline-action type="operation">%:1 +10</inline-action>
  </inline-edit>
</edit>
```

Code Block 2.10

Step 23. Now we want to do a DIY-INSTRUCTION. Do not nest inside an open element; just nest it in the action-group element.

```
<diy-instructions lang="en-gb">CHMOD foo.php and bar.php to 777
Open in your web browser and follow the instructions in
db_install.php</diy-instructions>
```

Code Block 2.11

Answer

If you have come straight to the answer then you have not really gained anything from the tutorial, but here it is anyway if you have done the tutorial or need help understanding a step. I have used my phpBB.com username and today's date, so these will differ from your answer.

```
<?xml version="1.0" encoding="utf-8" standalone="yes" ?>
<?xml-stylesheet type="text/xsl" href="modx.subsilver.en.xsl"?>
<!--For security purposes, please check: http://www.phpbb.com/mods/ for the
latest version of this MOD. Although MODs are checked before being
allowed in the MODs Database there is no guarantee that there are no
security problems within the MOD. No support will be given for MODs not
found within the MODs Database which can be found at
http://www.phpbb.com/mods/-->
<mod xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns="http://www.phpbb.com/mods/xml/modx-1.0.xsd">
  <header>
    <license>http://opensource.org/licenses/gpl-license.php GNU
General Public License v2</license>
    <title lang="en-gb">Hello World</title>
    <description lang="en-gb">Quick Start Tutorial
sample</description>
    <author-notes lang="en-gb">This is a tutorial, do not install
this MOD</author-notes>
    <author-group>
      <author>
        <realname>David Smith</realname>
        <username>smithy_dll</username>
      </author>
    </author-group>
    <mod-version>
      <major>1</major>
      <minor>0</minor>
      <revision>0</revision>
      <release>a</release>
    </mod-version>
    <installation>
      <level>easy|intermediate|advanced</level>
      <time>0</time>
      <target-version>
        <target-primary>2.0</target-primary>
        <target-major allow="exact">2</target-major>
        <target-minor allow="exact">0</target-minor>
      </target-version>
    </installation>
    <history>
      <entry>
        <date>2006-03-19</date>
        <rev-version>
```

```

        <major>1</major>
        <minor>0</minor>
        <revision>0</revision>
        <release>a</release>
    </rev-version>
    <changelog lang="en-gb">
        <change>Completed MODX Quick Start
Tutorial</change>
    </changelog>
</entry>
</history>
</header>
<action-group>
    <sql><![CDATA[CREATE TABLE phpbb_sessions_keys (
key_id varchar(32) DEFAULT '0' NOT NULL,
user_id mediumint(8) DEFAULT '0' NOT NULL,
last_ip varchar(8) DEFAULT '0' NOT NULL,
last_login int(11) DEFAULT '0' NOT NULL,
PRIMARY KEY (key_id, user_id),
KEY last_login (last_login)
); ]]></sql>
    <copy>
        <file from="root/index.php" to="index.php" />
        <file from="root/common.php" to="common.php" />
    </copy>
    <open src="index.php">
        <edit>
            <find>text to find</find>
            <action type="replace-with">text to be replaced
with</action>
        </edit>
        <edit>
            <find>text to find</find>
            <action type="after-add">text to be added on the line
after</action>
        </edit>
        <edit>
            <find>text to find</find>
            <action type="before-add">text to be added on the
line before</action>
        </edit>
        <edit>
            <find><![CDATA[Powered by <a
href="http://www.phpbb.com/" target="_phpbb"
class="copyright">phpBB</a> &copy; 2001, {:%:1} phpBB Group<br
/>{TRANSLATION_INFO}</span></div>]]></find>
            <action type="operation">:%:1 +10</action>
        </edit>
        <edit>
            <find>text to find</find>
            <inline-edit>
                <inline-find>find</inline-find>
                <inline-action type="replace-with"> be replaced
with</inline-action>
            </inline-edit>
        </edit>
    </open>
</action-group>
```

```
<edit>
  <find>text to find</find>
  <inline-edit>
    <inline-find>find</inline-find>
    <inline-action type="after-add">, err have a
string appended to</inline-action>
  </inline-edit>
</edit>
<edit>
  <find>text to find</find>
  <inline-edit>
    <inline-find>find</inline-find>
    <inline-action type="before-add">have a sting
pre-pended to on the line to </inline-action>
  </inline-edit>
</edit>
<edit>
  <find><![CDATA[Powered by <a
href="http://www.phpbb.com/" target="_phpbb"
class="copyright">phpBB</a> &copy; 2001, {:%:1} phpBB Group<br
/>{TRANSLATION_INFO}</span></div>]]></find>
  <inline-edit>
    <inline-find>2001, {:%:1} phpBB</inline-find>
    <inline-action type="operation">:%:1
+10</inline-action>
  </inline-edit>
</edit>
</open>
<diy-instructions lang="en-gb">CHMOD foo.php and bar.php to 777
Open in your web browser and follow the instructions in db_install.php</diy-
instructions>
</action-group>
</mod>
```