
ODM Documentation

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INTRODUCTION TO ODM

ODM (Offline Data Monitor) is

- a central place for finding run-related information
- a place for searching and retrieving desired list of runs or automatically generated figures
- a place for prompt analysis in order to quickly identify existing or potential problems
- technically, a convenient front end of various databases and flat files

ODM is not

- a replacement of online monitors
- a replacement of detailed offline analysis

Dive Into ODM (<http://dayabay.ihep.ac.cn/cgi-bin/DocDB/ShowDocument?docid=5517>) is a good introduction to the basic philosophy and implementation behind ODM.

Beginner web developers should start from the *Get Started* (page 3) Chapter. Experienced developers can go directly to the API Documentations.

2.1 Language Prerequisite

- PHP & SQL
- JavaScript
- HTML / CSS

You don't need to read too deep into the languages, just enough to get you started. The best way to learn a language is by using it in your project, not by reading the book.

2.2 Framework Prerequisite

- PHP Framework: [CodeIgniter](http://codeigniter.com/) (<http://codeigniter.com/>)
- JavaScript Framework: [JQuery](http://jquery.com/) (<http://jquery.com/>)

After you have learned some basics of the languages, you can start trying out the two wonderful frameworks that are used in ODM. There are two excellent video tutorial series for beginners ([CodeIgniter From Scratch](http://net.tutsplus.com/sessions/codeigniter-from-scratch/) (<http://net.tutsplus.com/sessions/codeigniter-from-scratch/>) | [JQuery For Absolute Beginners](http://net.tutsplus.com/articles/web-roundups/jquery-for-absolute-beginners-video-series/) (<http://net.tutsplus.com/articles/web-roundups/jquery-for-absolute-beginners-video-series/>)) that should get you started.

2.3 Setup a Test Web Server

You will need a test web server during development. The recommended way to setup the web server on each platform is:

- Windows: [XAMPP](http://www.apachefriends.org/en/xampp-windows.html) (<http://www.apachefriends.org/en/xampp-windows.html>)
- Mac: [MAMP](http://www.mamp.info/en/index.html) (<http://www.mamp.info/en/index.html>)
- Linux: following google to setup the **LAMP** server

To make sure the web server is set up correctly, write a simple php file, for example

```
<?php echo phpinfo(); ?>
```

put it to the correct document root directory, and see if it can be displayed on your web browser with the correct url.

2.4 Setup a Code Development Environment

The ODM code is hosted on the official Daya Bay svn repository. Change to your web document root directory and check out the code

```
svn co http://dayabay.ihep.ac.cn/svn/dybsvn/groups/Web/ODM
```

Try to see if you can understand the basic code structure.

You will need to create a “.htaccess” file under the “ODM” directory that you just checked out with the following content:

```
<IfModule mod_rewrite.c>
    RewriteEngine On
    RewriteBase /path/to/ODM/
    RewriteCond %{REQUEST_FILENAME} !-f
    RewriteCond %{REQUEST_FILENAME} !-d
    RewriteRule ^(.*)$ index.php/$1 [L]
</IfModule>

<IfModule !mod_rewrite.c>
    ErrorDocument 404 /index.php
</IfModule>
```

Replace “/path/to/ODM/” with the correct relative url of your test ODM site. Does the ODM site show up in your web browser?

You will need a good Code Editor or IDE for the developing. While *vi* or *emacs* has been the long time favorite by the programmers, web developers tend to use something more ‘modern’. [Aptana](http://www.apтана.com/products/studio2) (<http://www.apтана.com/products/studio2>) is a good free IDE that is available on all platforms. If you are using a mac, then [TextMate](http://macromates.com/) (<http://macromates.com/>) is highly recommended even though it’s not free.

Congratulations! Now you are ready for the actual coding. The fun part begins.

BACK-END PROGRAMMING

Back-end programming refers to the scripts that are run on the server side. ODM uses the PHP with the CodeIgniter Framework at the back-end.

3.1 Model

3.2 View

3.3 Controller

FRONT-END PROGRAMMING

Front-end programming refers to the scripts that are run on the client side. ODM uses the JavaScript with the CodeIgniter Framework at the front-end. Front-end programming also includes the markup of the html files, typically realized using Cascading Style Sheets (CSS).

4.1 Javascript APIs

4.2 External Plugins

4.3 Style Guide

This Document is generated using [Sphinx](http://sphinx.pocoo.org/) (<http://sphinx.pocoo.org/>)

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