Metube Project Template Ver. 2.0

1. Overview

Metube Project is a course project to build a database-driven video sharing website similar to Youtube. This document specifies the Metube Project template for a kick off. You can grab the idea and build your own Metube website.

The home page of the project is here. http://mmlab.cs.clemson.edu/metubeindex/metube.php

And the sample website is here. http://mmlab.cs.clemson.edu/metube_template/

2. Install and Run

- *Windows Installation*:

Install the latest version of **WAMP** (http://www.wampserver.com/en/) in windows. Open your IE or Firefox browser and type http://localhost/ to make sure that your apache runs. When the WAMP is running you'll find the WAMP daemon is shown in the right bottom of the screen. Make sure that the WAMP icon is shown  . Either yellow or red color of the icon is not correct. If your apache can't run, please check if your 80 port has been occupied by other programs.

- *Linux Installation:*

Install the latest version of ***APACHE, MYSQL, PHP*** and ***phpmyadmin***. If you are using RedHat/Fedora/CentOS Linux, you can install the four parts by yum. Otherwise if you are using Debian/Ubuntu, you can install them by apt-get.

- *Test and Run:*

Use any text editor to write a *hello.php* including the content in Example 1.

```
<?php echo "hello world";?>
```

Example 1: First Hello World Program in hello.php file

Then put the *hello.php* file under path *WAMP_INSTALL\www* in Windows, */var/www* in Debian/Ubuntu, */var/html/www* in RedHat/Fedora/CentOS. Next, in your browser, you can type http://localhost/hello.php to check if your PHP runs. Furthermore, you can write a *phpinfo.php* file to view all your PHP configurations, shown in Example 2.

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

Example 2: View all PHP and Apache configurations

Finally, install and use *phpmyadmin* to check whether your MySQL runs well. You should activate your *phpmyadmin* under URL http://localhost/phpmyadmin in your browser.

- ***Metube-Template:***
  1) Assume your WAMP_INSTALL is C:\wamp in Windows, copy everything in the template to WAMP_INSTALL\www\metube_template\
  2) Login the *phpmyadmin* to control the MySQL database.
  3) Create a database for your project, you can choose any database name.
  4) In the *phpmyadmin*, click *Import* button, find *metube.sql.gz* in the Metube_template folder, and import the *metube.sql.gz* into your new database.
  5) In the *config.php* file, you should change the username / password and the database name to your settings of MySQL.
  6) At this time, your PHP program should be able to connect with MySQL database. You may write some test programs by including the *mysqlClass.inc.php* file to check whether you can maneuver your new database.
  7) If you did everything correct, you can access http://localhost/metube_template/ to access the template. The initial Username and password is metube 123456. You can modify the database to create your own username/password.
  8) If you are using Linux, you might go to "metube_template\uploads" directory to change the permission of the "uploads" directory to "write and access" in order to allow upload files.

3. Document Description

- ***mysqlClass.inc.php*:**
  This file stores the configuration and connection methods to MySQL database. In the end of the file, you might need to change the username/password to login the database which you would be assigned in the project.
- ***function.php:***
  This file is almost included in every other page to provide the common functions that might be used for several times. This is also a good place to create functions dealing with SQL query. You can write your own functions here.
- ***Index.php:***
  This page is login page. If a user is logged in, the session will record the username during the whole session time. If the password is wrong, the CSS styled message box will be shown.
- ***browse.php:***
  List all the media in the database. Download media and play media. In this file, An javascript Ajax function of jQuery Plugin (http://jquery.com/) is used to record the download information in the database.
- ***Media_download_process.php:***
  The file called by the Ajax function from browse.php. It execute SQL to store the download information in the database.
- ***Media_upload.php and media_upload_process:***

Two things need to be done. Firstly, it uploads the file onto certain directory on the server machine. Secondly, it executes the SQL to store the upload information in the database.

- ***media.php:***
  This file retrieves the media's path from the database and gets the media from the server. It distinguishes whether it is a video file or a picture file. If it is a video file it plays it. If it is a picture file, it just shows it.

4. How to use the machine mmlab.cs.clemson.edu?

- **How to access the machine?**

You can use SSH to access the machine.

If you are working on a Windows machine, you have to install a SSH client. You can download SSH from the link below.
http://www.clemson.edu/ccit/software_applications/software/licenses/ssh.html.

If you work on a Unix machine, you only need to open a terminal. Then follow the steps below.

When you are off campus, you should follow two steps. Step 1: use VPN to connect to campus network. For computer science students, you can also type "ssh <your Clemson account>@access.cs.clemson.edu" and your password on your terminal to connect to the server in School of Computing.

Step 2: Type "ssh <your username on the machine>@mmlab.cs.clemson.edu" and your password to connect to the machine for this course.

Things get easier when you are on campus. Skip step 1 and go directly to step 2.

- **Your account on the machine**

For undergraduate groups, the usernames are u1 – u6.

For graduate groups, the usernames are g1 – g12.

The initial password for each group is the same as the group name (e.g. if you are group "u1", then your password is "u1" by default). Please log into the system and change your password immediately for safety consideration.

- **Working directory on the machine**

Each group has a working directory of its own. It is located in the directory /var/www/spring12/. (e.g. the working directory for group "u1" is /var/www/spring12/u1/).

- **Your account of database on the machine**

Your database account is the same as your system account on the machine. Please change your password immediately after you log into the database for the first time.

- **How to access the database?**

You can use SQL command to access the database. Log into the machine, and then type the command "mysql -u <your database account> -p" and your password to log into MySQL.

OR you can use a convenient tool to access MySQL and manage your own database. Here is the URL of the tool. http://mmlab.cs.clemson.edu/phpmyadmin/

5. Other FAQs

- **Why can't I play .avi or .rm movie?**

  This template only gives decode to run *WMV* movie. If you want to run other movie, you must use other decode format. You can search embed object online about different format.

- **Where is the file uploaded?**

  The file will be uploaded into a temporary directory configured by the *php.ini*. If the file is uploaded successfully, it will be move to your upload directory afterwards. You can search online with the keywords: *PHP upload*

- **Why I can't upload file size bigger than 10M?**

  There are server side and client side configuration of the uploaded file size.

  Client: In the media_upload.php Line 16:

  <input type="hidden" name="MAX_FILE_SIZE" value="10485760" />

  It decides the largest size (10M) of an uploaded file by client side.

  Server: You need to change several parameters in the php.ini file. View the link:

  http://www.radinks.com/**upload**/config.**php**

  The default upload size is only 2M so that you need to configure it.

- **What is jQuery used in the browse.php?**

  jQuery is a useful Javascript Library to build Web 2.0 Webpage. It simplifies the complexity of Ajax. There are a lot of existing jQuery Plugins which makes life easier:

  http://www.noupe.com/tutorial/51-best-of-jquery-tutorials-and-examples.html

- **Why the password is not encrypted?**

  This is only a template. You should encrypted your password and then store it into the database. The easiest way to do it is to use the *Sha1* or *MD5* function provides by the PHP. Of course, you can use any other encryption method as you like.