

BDM Lab -- Installation & Configuration

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Preface

Since the command tools are not easy to observe and we need to remember plenty of query commands, we usually use some softwares to manage `MySQL` database while developing an application like blog, personal homepage or iOS App. Some popular database manage softwares:

1. `MySQL Workbench` ----- official tool.
2. `phpMyAdmin` ----- works as a website, built by PHP.
3. `SQLyog` ----- lite, only 11mb.
4. `DataGrip` ----- cross-platform IDE for databases by JetBrains.
5. `Navicat` ----- powerful collaboration tools.

Each of tools has its pros and cons, e.g. `phpMyAdmin` will only used in the web application that built by `PHP`, `Navicat` will be garbled in some `Linux` environment, `workbench` and `SQLyog` are only support for `MySQL`, `DataGrip` is not free, and so on.

I will introduce two tools here, `phpMyAdmin` and `DataGrip`, because `phpMyAdmin` is widely used and friendly to beginners and `DataGrip` is very powerful, convenient and free to students.

Configure phpMyAdmin

This segment will tell you how to configure your environment and make everything work, and I will try to make everything clear.

For Windows

`wampServer` is strongly recommended, which stands for "Windows + Apache + MySQL + PHP" server. WampServer is an integrated environment for Windows, all the needed software will be configured. You could download it from [Wampserver](http://wampserver.com), it's free.

The installation is very easy, always click `next`. Here is a video tutorial I have found on YouTube [How to install WampServer on Windows | lynda.com tutorial](https://www.youtube.com/watch?v=lynda.com).

When you launch `wampServer`, you will find a icon on the lower right corner of your screen. You could change the language preference by right click.

Left click the icon, you will find the main menu of the server. Start all services, then click on `localhost`, if you see a default `wampServer` page on a webpage it means the installation has been done successfully.

If not, there are some possible reasons:

If you have installed `MySQL` before, a collision will occur between two MySQL databases. If you don't know what does "port" mean, you'd better to backup (or export) your old database as a `.sql` file and uninstall the previous `MySQL`, you could import data files into new `MySQL` later. If you know the port of `MySQL`, you could configure it in `my.ini` to avoid the database collision.

If you have installed a web server before, like `Nginx`, `IIS` or `Apache` or you have bound some service to `80 port`, there will be a collision between web services. You need to release `80 port` or bind `Apache` to a new port, you could find `httpd.conf` in Apache menu.

Click on `phpMyAdmin`, you will see the homepage of it. There is no initial password of `root`, you'd better to add a password.

For Mac OS

Since Mac OS have already installed `Apache` and `PHP`, what we only need to do is to install `MySQL` and configure them. Here is a video tutorial I have found on YouTube [Apache, MySQL, PHP & phpMyAdmin on OSX](#), you could search for more videos by key words "phpmyadmin Mac".

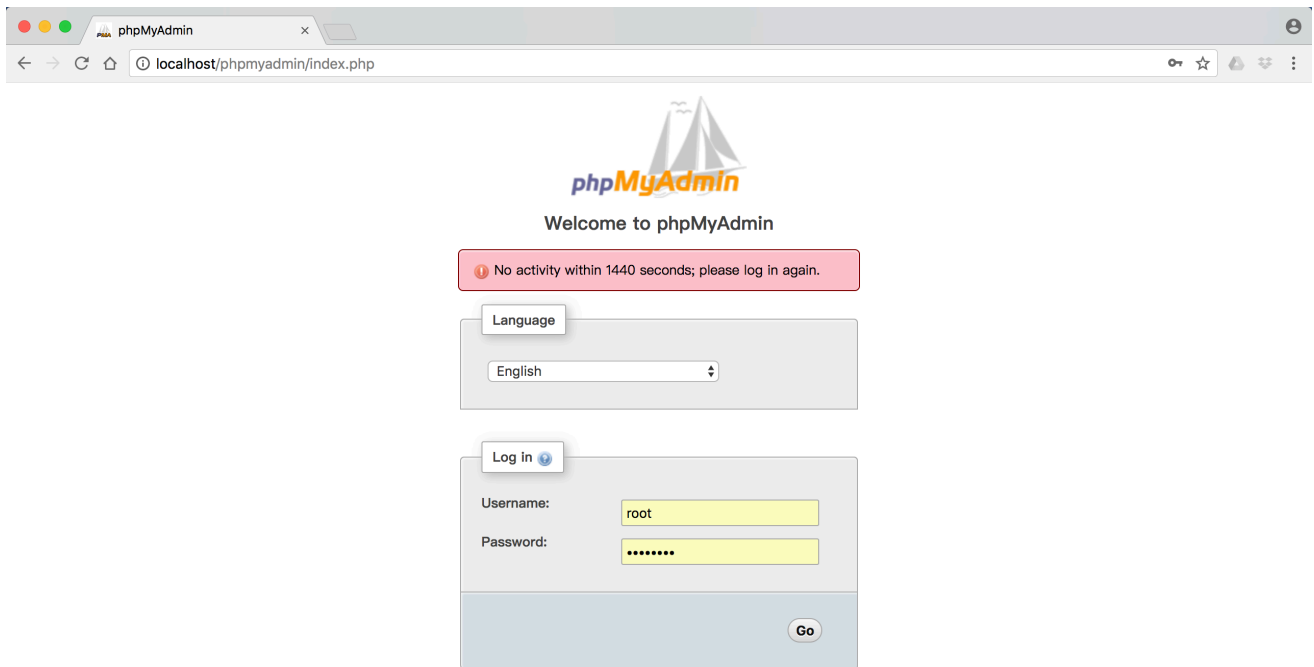
Configure with the default Apache and PHP may lead to a mess if you are not familiar with the shell command, in this case, you could google "MAMP" or "XAMPP" which is quite similar with WampServer.

Here some problems may occur while installation and using:

1. Be aware of system update, configuration will loss sometimes.
2. Official MySQL of Mac OS will crash sometimes.
3. You need to add MySQL folder to your `Path` to use `mysql` in `Terminal`.
4. Be aware of `sudo` command, which could cause serious problems. Especially `sudo rm -rf`, never try, and don't ask me why I know it.
5. If you have multi-version Apache and PHP, try to figure out which one is active.

Dash Board

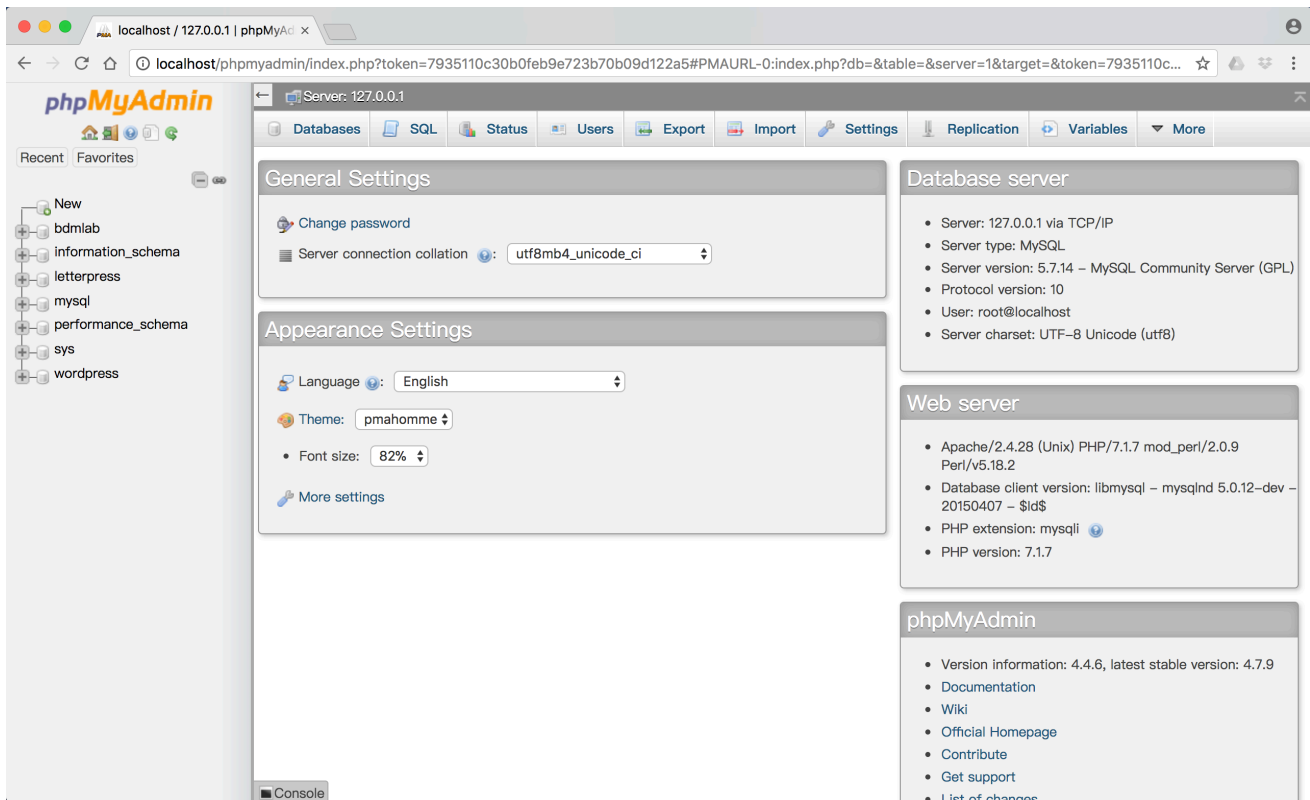
If you see the homepage of `phpMyAdmin`, like this:



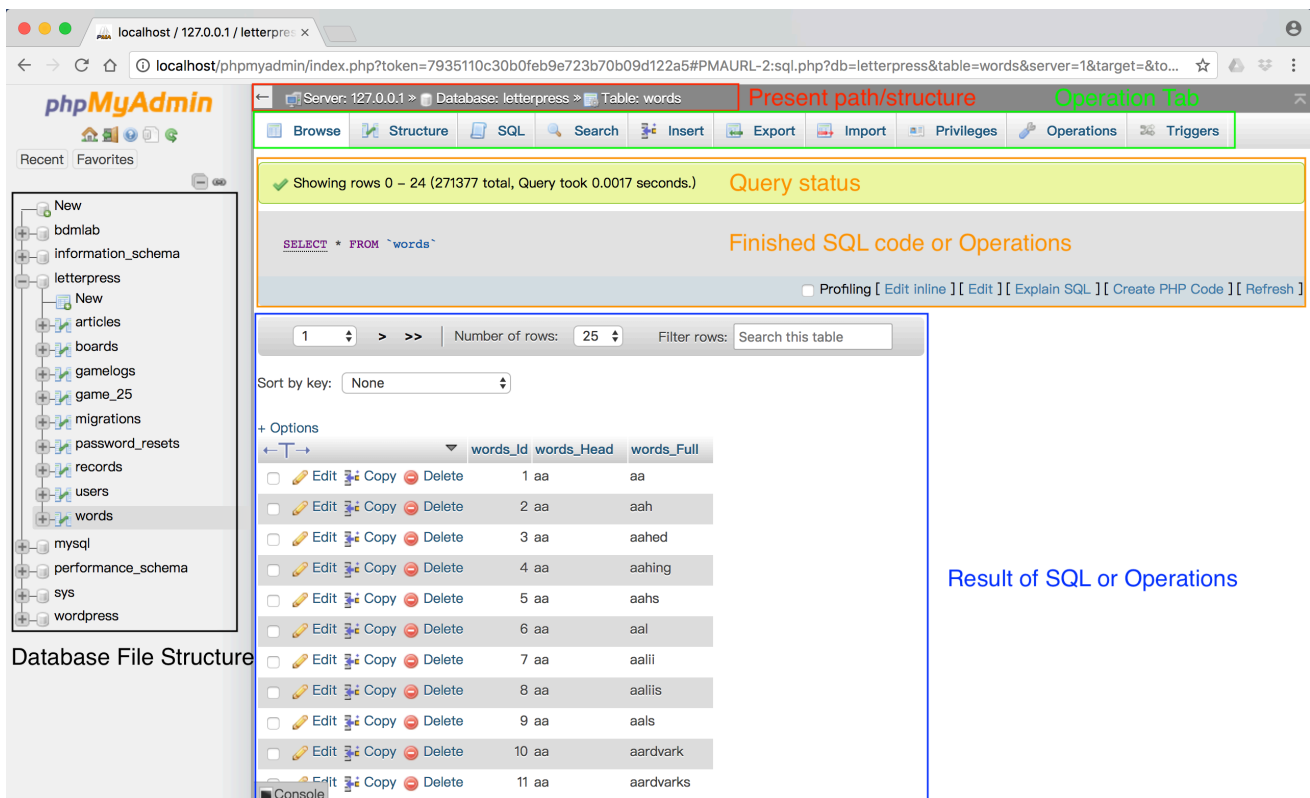
Congratulations! You have finished the most difficult part of using `phpMyAdmin`.

For `wampServer` user, the password of `root` is empty you could just press `go` to login, since you have not setup the password for `MySQL` during the installation. For others, the password is what you have set. From the experimental view, your web service will not open to `LAN` or Internet, so that you could set an easy password like "123", "root" and "0000" in case you forget the password.

When you login, you will see the dash board:



I will use one table in my database as instance to show you how to use phpMyAdmin.



The main parts of dash board are marked by different colors.

On the left, the black area, the panel looks like files system in Windows is the structure of the server. On my server, you could see that there are 7 databases, `dbmlab`, `Information_schema`, `letterpress`, `mysql`, `permanence_schema`, `sys` and `wordpress`. Under `letterpress`, we could see there are 9 tables. By click the toggle of each table, we could also see the attributes (fields) of tables. The level of structure is always organized as `Server -> Database -> Tables/Views -> Fields`.

On the top, red area, the panel shows the present "location", which means the present active file and level. For instance, as the image shows, we are working on the table `words` of database `letterpress`. Related, the green area, all the operations will focus on present file and level. For instance, for the condition as image shows, all the operation could just make changes on `words`, not on other tables and databases.