

Set up a developer workspace environment for  
the development of the WordPress.

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For DonationBox project.

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## Introduction.

This document was created to help anyone who wants to contribute at the project, to build the development environment that you require. So this document is intended to become as good as possible guide/tutorial. A good starting point, for new developers can start their work with this project easily.

All of the following instructions are for GNU/Linux operating systems. Tested in **Debian GNU/Linux 8.8 (*jessie*)** distribution.

## 1 Installation of the MariaDB database.

First of all you need to install a database. MariaDB is a community-developed fork of the MySQL relational database management system intended to remain **free** under the GNU GPL.

Development is led by some of the original developers of MySQL, who forked it due to concerns over its acquisition by Oracle Corporation. MariaDB intends to maintain high compatibility with MySQL, ensuring a "drop-in" replacement capability with library binary equivalency and exact matching with MySQL APIs and commands.

The installation of MariaDB is very easy, open a terminal and execute the following commands:

```
$ apt-get install mariadb-common mariadb-client mariadb-server
```

When asked, enter the password for the root user of the database.

That's all! So easy, now you have installed the MariaDB on your system.

## 2 Creating a database for the WordPress.

We need to create a database where the WordPress will be used.

Open a terminal and execute the following commands:

```
$ mysql -u root -p
```

and type the password of root user.

Create database with name "**wordpress**":

```
CREATE DATABASE wordpress DEFAULT CHARACTER SET utf8 DEFAULT COLLATE  
↪ utf8_general_ci;
```

Create specific user for this database:

```
CREATE USER 'tas-sos'@'localhost' IDENTIFIED BY '123456789';
```

granting privileges to this user for this database:

```
GRANT ALL PRIVILEGES ON wordpress.* TO 'tas-sos'@'localhost';
```

finally save it and exit from the mysql environment:

```
FLUSH PRIVILEGES;  
Quit;
```

Now, you have the database that will be used from WordPress.

## 3 PHP 5.

### 3.1 Installing PHP 5.

To install PHP, run the following command :

```
$ apt-get install php5 php5-common php5-cli php5-json php5-readline  
↪ php5-gd php5-curl php5-mysql
```

If you want to see the version of it and if it was installed correctly run the following command :

```
$ php -v  
PHP 5.6.30-0+deb8u1 (cli) (built: Feb  8 2017 08:50:21)  
Copyright (c) 1997-2016 The PHP Group  
Zend Engine v2.6.0, Copyright (c) 1998-2016 Zend Technologies  
    with Zend OPcache v7.0.6-dev, Copyright (c) 1999-2016, by Zend  
    ↪ Technologies
```

### 3.2 Configure PHP : Set up PHP in developer mode.

Because we will be developing on that particular environment and because by default PHP is being installed in production mode, it will not show the PHP errors. So we have to set it up in development-mode. So there is a ready-made configuration file where it has all the necessary settings for the development-mode.

#### 3.2.1 For Debian GNU/Linux distribution systems.

The file we need is here :

```
/usr/share/php5/php.ini-development
```

The php configuration files are here:

```
$ ls /etc/php5/  
apache2  cli  mods-available
```

The directory we are interested is the "cli" (Command **L**ine usage), because we will run the PHP from this environment (through the NetBeans).

```
$ ls -Alh /etc/php5/cli/
total 76K
drwxr-xr-x 2 root root 4,0K May 23 22:19 conf.d
lrwxrwxrwx 1 root root 35 May 24 00:16 php.ini
```

So to using the configuration file we want when it is running, execute one by one the following commands with root privileges:

```
mv /etc/php5/cli/php.ini /etc/php5/cli/php.ini.backup
```

```
cp -s /usr/share/php5/php.ini-development /etc/php5/cli/php.ini
```

Now the directory will be as follows:

```
$ ls -Alh /etc/php5/cli/
total 76K
drwxr-xr-x 2 root root 4,0K May 23 22:19 conf.d
lrwxrwxrwx 1 root root 35 May 24 00:16 php.ini ->
↳ /usr/share/php5/php.ini-development
-rw-r--r-- 1 root root 71K May 8 11:07 php.ini.backup
```

### 3.2.2 For Ubuntu Server GNU/Linux distribution systems.

Use the "locate" command to find the file :

```
$ locate php.ini-development
/usr/lib/php/7.0/php.ini-development
```

Then, follow the same logic as before, create a backup file from current php.ini file :

```
$ sudo mv /etc/php/7.0/apache2/php.ini /etc/php/7.0/apache2/php.ini.backup
```

and finally create a symbolic link to the current php.ini file to refer to php.ini-development :

```
$ sudo cp -s /usr/lib/php/7.0/php.ini-development
↪ /etc/php/7.0/apache2/php.ini
```

## 4 NetBeans IDE.

### 4.1 What is NetBeans IDE.

The NetBeans is an integrated development environment (IDE), a software development platform written in Java. The NetBeans IDE is primarily intended for development in Java, but also supports other languages, in particular PHP, C/C++ and HTML5. It also has a wide range of very useful add-ons designed to help the developer in software development.

### 4.2 Download and install NetBeans.

To install NetBeans, follow the below steps.

- Download from the official page, the version for PHP.
- After that, go to our favorite terminal and go to the directory where the NetBeans installation file was downloaded ( in my case in the "**Downloads**" directory ).

Add the execution permission :

```
:~/Downloads$ chmod +x netbeans-8.2-php-linux-x64.sh
```

Running the file :

```
$ ./netbeans-8.2-php-linux-x64.sh

Configuring the installer...
Searching for JVM on the system...
Preparing bundled JVM ...
Extracting installation data...
Running the installer wizard...
```

So now you have the latest NetBeans IDE in your system.



### 4.3 Configure NetBeans IDE to work with WordPress.

In this part we will see how we will work with WordPress through the NetBeans. As mentioned above, the NetBeans has a wide range of add-ons for various functions. One of these add-ons is the **PHP WordPress Blog/CMS**, who will make our lives easier. However first of all, we must have the WordPress in our computer (for better development and direct testings).

#### 4.3.1 Download WordPress into your workspace.

Create your workspace :

```
$ mkdir wordpressDonationBox  
$ cd wordpressDonationBox/
```

Download the latest version of WordPress :

```
$ wget https://wordpress.org/latest.tar.gz
```

Uncompress :

```
$ tar -xzf latest.tar.gz
```

Delete the compressed file:

```
$ rm latest.tar.gz
```

View the path of your workspace :

```
$ pwd  
~/bla/bla/bla/wordpressDonationBox
```

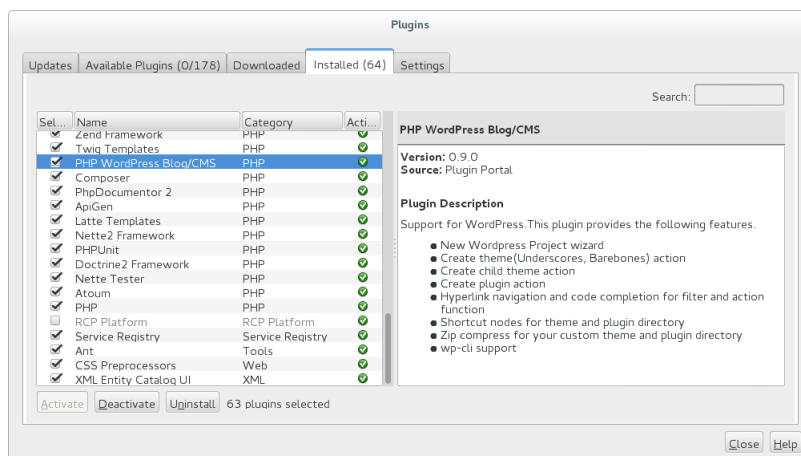
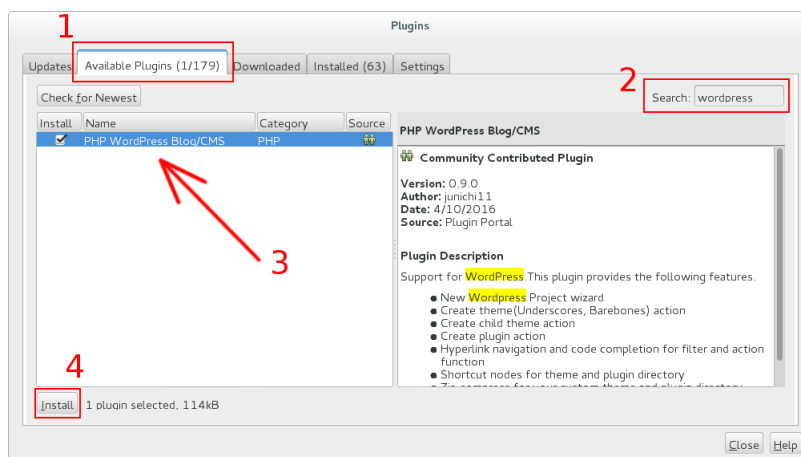
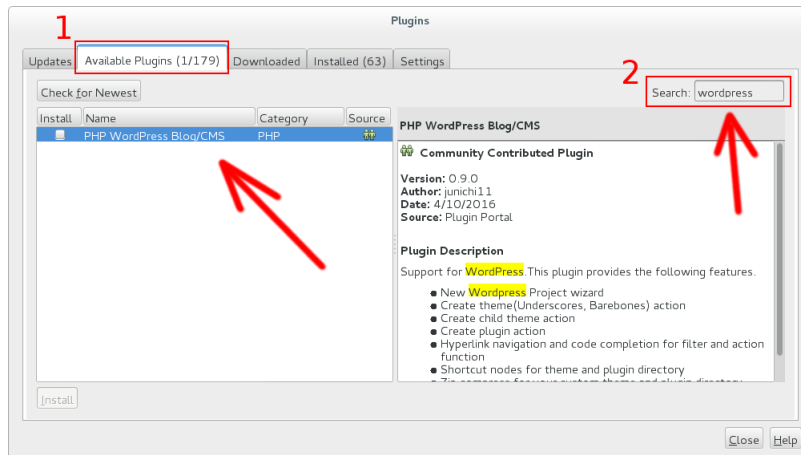
#### 4.3.2 Install WordPress plugin in NetBeans.

Start the NetBeans.

From the menu, click :

Tools - Plugins - Available Plugins - Type to search "**wordpress**".

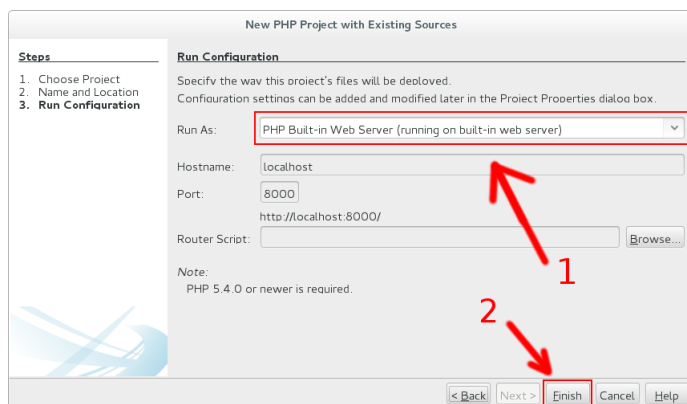
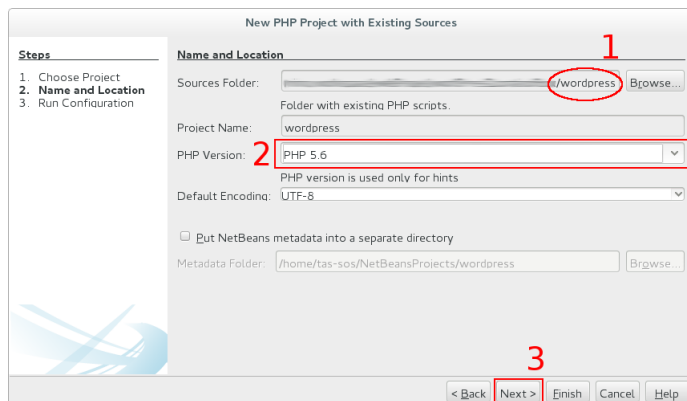
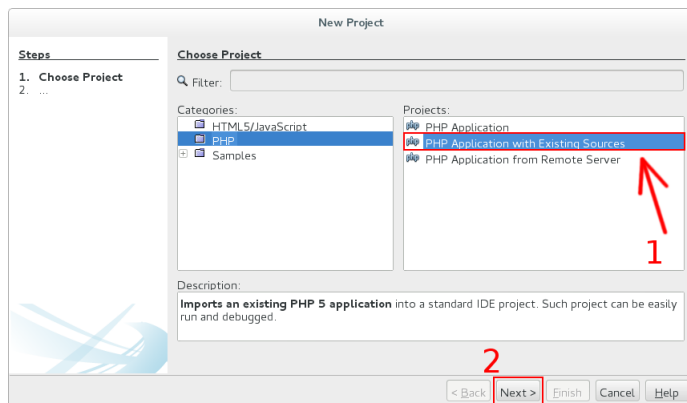
Please follow the images below to install the add-on :



### 4.3.3 Create new project with Existing Sources.

Now it's all ready! All that remains is to create a new project and connect it to the workspace directory where we earlier decompressed the wordpress.

Follow the below images :





## References

- [1] MariaDB official page: <https://mariadb.org> .  
MariaDB wikipedia: [wikipedia.org](https://en.wikipedia.org/wiki/MariaDB)
- [2] PHP official page: [php.net](https://www.php.net) .  
PHP CLI: [php.net](https://www.php.net)  
PHP wikipedia: [wikipedia.org](https://en.wikipedia.org/wiki/PHP)
- [3] NetBeans official page: [netbeans.org](https://netbeans.org) .  
NetBeans wikipedia: [wikipedia.org](https://en.wikipedia.org/wiki/NetBeans)
- [4] DonationBox Official GSoC 2017 Repository: [github.com](https://github.com)
- [5] The project on Google Summer of Code website:  
[summerofcode.withgoogle.com](https://summerofcode.withgoogle.com)