



# **QR Marks the Spot@MdH Installation and Configuration Manual**

**Version 1.0**

QR Marks the Spot@MdH	Version: 1.0
Installation Manual	Date: 2010-01-14

## Revision History

Date	Version	Description	Author
2010-01-14	1.0	Initial Draft	Soumya Kanti Chakraborty

QR Marks the Spot@MdH	Version: 1.0
Installation Manual	Date: 2010-01-14

## 1. Introduction

### 1.1 Purpose of this document

The purpose of the document is to provide the details of the installation and configuration procedures that are required for the 'QR Marks the [Spot@MDH](#)' project.

### 1.2 Document organization

The document is organized as follows:

- Section 1, *Introduction*, describes contents of this guide, used documentation during developing process etc.
- Section 2, Installation of PHP, MySQL and Apache
- Section 3, Installation of CakePHP
- Section 4, Guideline to the Installation of Forum
- Section 5, Installation of QR Code generation module
- Section 6, Setting up of Database and Installing Wannabike Application.

### 1.3 Intended Audience

The intended audiences are the system administrators who would be involved in the deployment of the Wannabike web application.

### 1.4 Scope

The scope of the document involves in providing a detailed guide as of what are the various configurations and set up required for deploying and using Wannabike web Application.

### 1.5 Definitions and acronyms

#### 1.5.1 Definitions

Keyword	Definitions
Wannabike	Name of the project which involves using of free bikes in a region with the help of a QR Code.
CakePHP	CakePHP is an open source web application framework for producing web applications written in PHP

#### 1.5.2 Acronyms and abbreviations

Acronym or abbreviation	Definitions

### 1.6 References

QR Marks the Spot@MdH	Version: 1.0
Installation Manual	Date: 2010-01-14

## 2. Installation of PHP, MySQL and Apache in Debian Lenny

In the subsequent points the setting up of PHP 5.2.6-1 and MySQL 5.0.51a-24+lenny2 will be described in a Debian Lenny OS.

### 2.1 Installation of PHP 5.2.6-1

1. To search what modules are available do a

```
wannabike:/tmp# sudo aptitude search php5-
```

2. After the output of this command you will get a whole list of modules of php which can be installed. For our web application, installation of the following packages are needed - libapache2-mod-php5, php5, php5-common, php5-curl, php5-dev, php5-gd, php5-memcache, php5-mysql, and php5-xmllrpc. Thus execute the following command

```
wannabike:# sudo aptitude install libapache2-mod-php5 php5  
php5-common php5-curl php5-dev php5-gd php5-memcache php5-mysql  
php5-xmllrpc
```

3. The dependencies automatically get installed during Step 2. PHP 5.2.6.1 is installed now with all necessary dependencies. To check if the PHP got installed correctly or not, fire the command - **\$ php -v**
4. The above three steps installs PHP in the Debian Lenny box. For making some configuration changes to the working of PHP, go to the path **/etc/php5/cli** and edit the **php.ini** file. For our web application we made the following configuration change in the section “File Uploads” of **php.ini** file. In the below screenshot the “upload\_tmp\_dir” is directed to a user home directory folder, but it can be redirected to any other folder accessible to PHP.

```
;;;;;;;;;;  
; File Uploads ;  
;;;;;;;;;;  
  
; Whether to allow HTTP file uploads.  
file_uploads = On  
  
; Temporary directory for HTTP uploaded files (will use system default if not  
; specified).  
upload_tmp_dir = "/home/soumya/public_html/img"  
  
; Maximum allowed size for uploaded files.  
upload_max_filesize = 5M
```

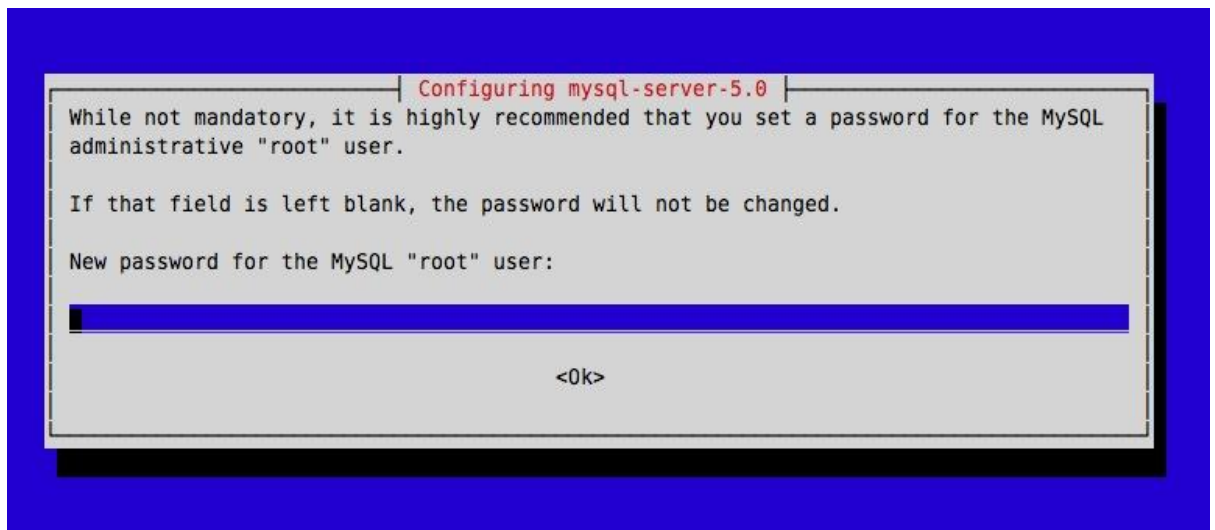
QR Marks the Spot@MdH	Version: 1.0
Installation Manual	Date: 2010-01-14

## 2.2 Installation of MySQL

1. Use the following command in the shell

```
wannabike:# sudo aptitude install mysql-server mysql-client  
libmysqlclient15-dev mysql-server
```

2. The MySQL installation will ask for the root password during installation –



3. After entering the root password and confirming it, MySQL gets installed on the Debian Lenny. To check and verify the installation try to enter into MySQL from the shell –

```
wannabike:~# mysql -u root -p  
Enter password:  
Welcome to the MySQL monitor.  Commands end with ; or \g.  
Your MySQL connection id is 12285  
Server version: 5.0.51a-24+lenny2 (Debian)  
  
Type 'help;' or '\h' for help. Type '\c' to clear the buffer.  
  
mysql> █
```

4. The above three steps verify that MySQL is successful installed in the system.

QR Marks the Spot@MdH	Version: 1.0
Installation Manual	Date: 2010-01-14

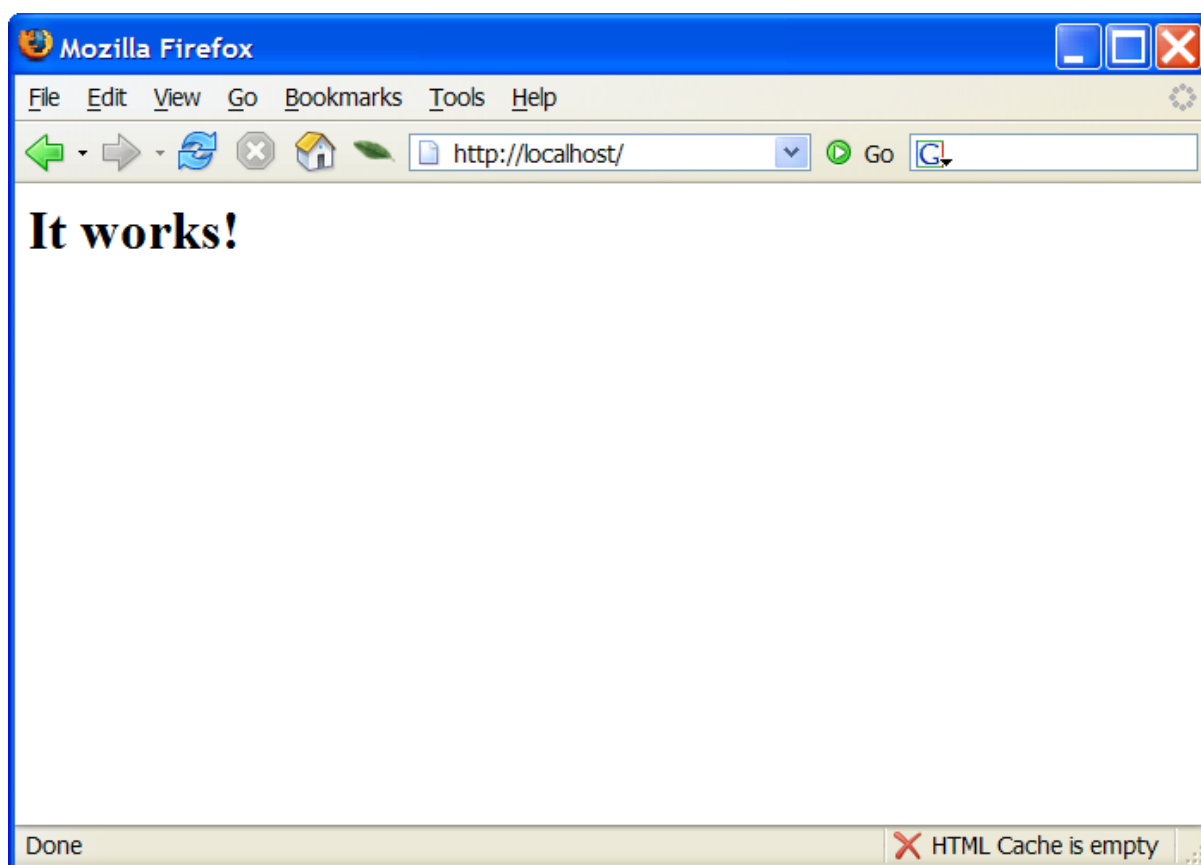
## 2.3 Installation of Apache and PHPmyadmin on Debian

1. For installing Apache in Debian enter the following command in the shell

```
wannabike:# sudo aptitude install apache2 apache2.2-common  
apache2-mpm-prefork apache2-utils libexpat1 ssl-cert
```

2. After installation, for checking the correctness of the installation type, enter the ip address of the website in a browser and hit enter. You should get the following output to ensure the installation is perfect.

`http:// 161.53.67.200 [Enter]`



3. For installing PHPmyAdmin on Debian type the following command –

```
wannabike:~# apt-get install phpmyadmin
```

4. For checking the installation, use the following URL in your browser  
<http://161.53.67.200/phpmyadmin> and enter with MySQL username and password.

## 3. Installation and configuration of CakePHP in Debian

Following the below steps one can install and configure CakePHP in Debian (**root privileges required**) –

QR Marks the Spot@MdH	Version: 1.0
Installation Manual	Date: 2010-01-14

1. Download the file “cake\_1.2.5.zip” from the website <http://www.cakephp.org>.
2. Unzip it and keep the contents in the folder named “**project**” in the path **/var/www/**.
3. Configure the section of **database.php** section in the location **/var/www/project/app/config** as given below –

```
class DATABASE_CONFIG {  
  
    var $default = array(  
        'driver' => 'mysql',  
        'persistent' => false,  
        'host' => 'localhost',  
        'login' => 'root',  
        'password' => '12345678901234567890',  
        'database' => 'qrmarks_logs',  
        'prefix' => '',  
    );  
  
    var $test = array(  
        'driver' => 'mysql',  
        'persistent' => false,  
        'host' => 'localhost',  
        'login' => 'root',  
        'password' => '12345678901234567890',  
        'database' => 'test',  
        'prefix' => '',  
    );  
}  
?>  
wannabike:/var/www/project/app/config# █
```

The database name and password to be changed in accordance to the configuration of the database created. The database config will be totally exported as a file which is present in the website’s Final documentation section which needs to be imported into the MySQL database to get the whole table structure, schema and constraints. For our Web application the ‘database’ = **qrmarks\_logs** and for Forum the ‘database’ = **test**.

4. For CakePHP to work perfectly we need Apache to be configured. Below are the steps to configure Apache for making CakePHP work perfectly –
  - i. Go to the folder **sites-available** under **/etc/apache2**. Edit the file **000-default** inside it as given in the screenshot below –

QR Marks the Spot@MdH	Version: 1.0
Installation Manual	Date: 2010-01-14

```
wannabike:/etc/apache2/sites-enabled# cat 000-default
<VirtualHost *:80>
    ServerAdmin webmaster@localhost

    DocumentRoot /var/www/project/app/webroot/
    <Directory />
        Options FollowSymLinks
        AllowOverride All
    </Directory>
    <Directory /var/www/>
        Options Indexes FollowSymLinks MultiViews
        AllowOverride All
        Order allow,deny
        allow from all
    </Directory>
```

The parts changed inside the document is “**DocumentRoot**”, “**AllowOverride**” All and the “**Directory**” directive.

ii. Save the above file and then do a force reload of the Apache by the below command –

```
wannabike:/etc/apache2/sites-enabled# /etc/init.d/apache2 force-reload
Reloading web server config: apache2.
wannabike:/etc/apache2/sites-enabled# █
```

iii. Go to the folder of unzip of CakePHP i.e. **/var/www/project**. Change the permissions of **tmp** folder in **app** directory to 777. This can be done by the following command –

```
wannabike:/var/www/project# chmod -R 777 app/tmp
```

5. Hit the following in the browser and you could see the CakePHP default page – **http:// localhost:8088** (Your PuTTY tunneling should be active at this moment) #

# = The document for how to tunnel your services from remote is provided in User Manual System setup document in the Final Document Deliverables

#### 4. Guideline to the installation of the Forum

Our Forum was installed in a User directory rather than with CakePHP. We tried the installation alongside CakePHP but in that we faced many issues so we reverted back to the User Directory with the user name **soumya**. Creating any other user will also do, as we installed the Forum in User Directory rather than under **/var/www/**. Configuring Apache for using the files and folders under User’s “**public\_html**” folder is given below –

1. Go to the path **/etc/apache2/mods-enabled** and type the following –

```
wannabike:/etc/apache2/mods-enabled# a2enmod
Your choices are: actions alias asis auth_basic auth_digest authn_alias authn_anon authn_dbd authn_dbm authn_default authn_file authnz_ldap authz_dbm
authz_default authz_groupfile authz_host authz_owner authz_user autoindex cache cern_meta cgi cgid charset lite dav day_fs day_lock dbd deflate dir di
sk cache dump io env expires ext filter file_cache filter_headers ident imagemap include info ldap log_forensic mem_cache mime_mime_magic negotiation
perl php5 proxy proxy_ajp proxy_balancer proxy_connect proxy_ftp proxy_http python rewrite setenvif spelling ssl status substitute suexec unique_id use
rdir usertrack version vhost_alias
Which module(s) do you want to enable (wildcards ok)?
userdir
```



QR Marks the Spot@MdH	Version: 1.0
Installation Manual	Date: 2010-01-14

- When you hit enter by giving the command **a2enmod**, Apache asks the user which module to enable. In this case when user enter the module as “userdir” and hits enter Apache enables the “userdir” module. Then we need to restart the Apache by executing **/etc/apache2/apache2 restart**. After this we can start using the “public\_html” folder inside any user home directory. An example will be **/home/soumya/public\_html**.

Forum installation guideline can be accessed online at <http://wiki.mybboard.net/index.php/Installer>. Step by step following of the page will lead successfully to set the forum. But just for our forum setup we had few changes that like –

- In **Database Configuration** section of that of the wiki link given above change the following parameters – Database Username = **root**, Database Password = **root** password, Database Name = **test**. Table Prefix = **soumya\_**
- In **Board Configuration** section the parameters will be – Forum Name – **Forum**, Forum URL – <http://161.53.67.200/~soumya/Forum>, Website name – **Wannabike**, Website URL – <http://161.53.67.200> , Cookie Domain - **.161.53.67.200**, Cookie Path - **/~soumya/Forum/**
- For more detailed description see the Forum Installation document under Final Documentation. This installs your forum successfully.

## 5. Installation of QR Code generation module

- Unzip the “**qr\_img\_gen.zip**” file into the location **/home/soumya/public\_html/qr\_img\_gen**
- Modify the file **qr.php** inside **/var/www/project/app/controllers/components** and change **\$domain** according to the domain name.
- Go to the path **/var/www/project/app/webroot** and change directory permissions of “**img**” directory to **777**

```
wannabike:/var/www/project/app/webroot# chmod -R 777 img
```

## 6. Setting up the Database and Installing Wannabike Application

All the Database configuration will be exported as a zip file available in the Final Document Deliverables. The only thing needed is to get into phpMyAdmin and import that particular zip file into the database to regain all the configurations like tables, schemas, constraints into the new database.

The zip file will be available at the location

[http://www.fer.hr/rasip/dsd/projects/qr\\_marks\\_the\\_spotmdh/documents](http://www.fer.hr/rasip/dsd/projects/qr_marks_the_spotmdh/documents)

The Wannabike Zip file will be available at

[http://www.fer.hr/rasip/dsd/projects/qr\\_marks\\_the\\_spotmdh/documents](http://www.fer.hr/rasip/dsd/projects/qr_marks_the_spotmdh/documents)

For Installing Wannabike Application unzip it to the folder **/var/www/project** . After unzipping make all the configurations above as CakePHP and voila everything of the Wannabike application will work.

After that you can access the application at <http://161.53.67.200>