

A generic Web Submission System

Step-by Step Installation Guide

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Abstract

This Step-by-Step Installation Guide helps you to set up your computer for using and developing the web submission system if you are using MAC or Windows.

First you need to install PHP, a database, an IDE and a local Mail server.

And then you have to make some special settings, which are very important. So this part is also for those, who are familiar with the rest.

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1 Introduction

The project covers the following two folders:

- generic-system
- additional-files

If you are unfamiliar with NetBeans, PHP or MySQL Database I would recommend following this Tutorial step by step. Otherwise it should be no problem to skim over the installation parts.

In order to use the project, you need a local Web environment. Therefore, your server should supports

- PHP 5 or more

and you need

- a MySQL Database
- a local Mail server.

For taking a look at the code and developing or testing the code you need to install

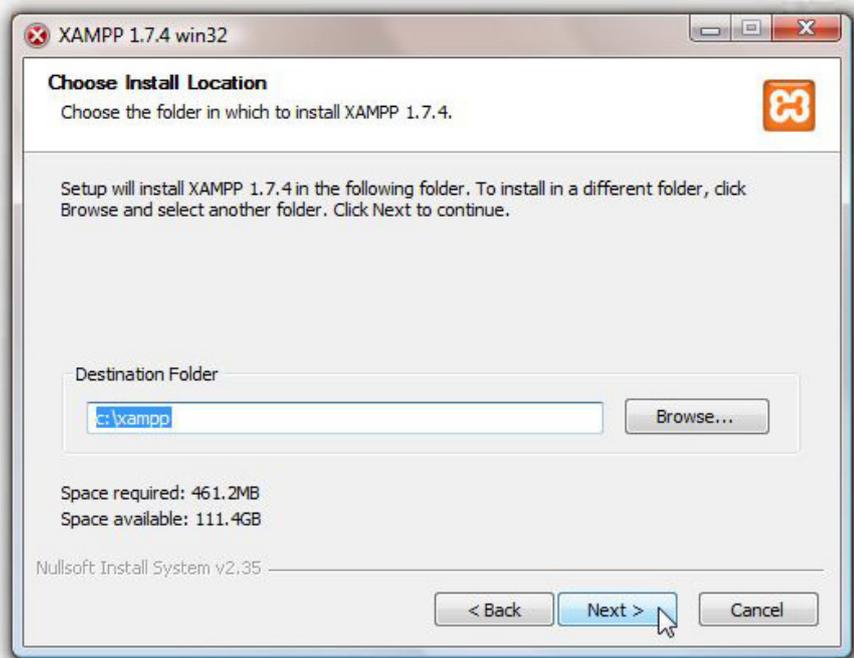
- NetBeans IDE for PHP.

2 Installation on Windows

2.1 The XAMPP Package

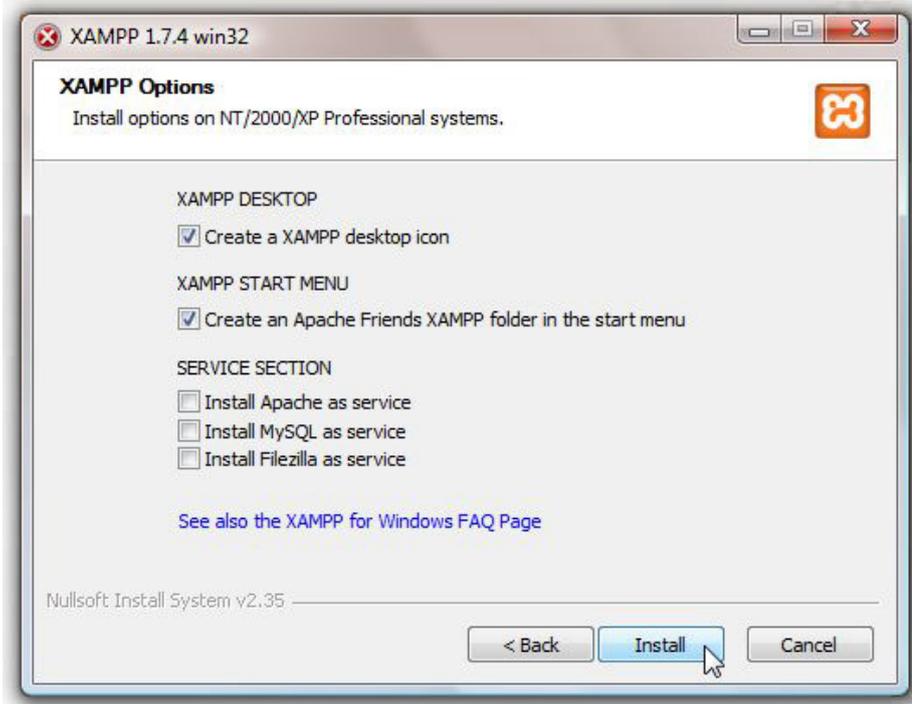
With the XAMPP Package you can get all requirements at once.

1. Go to <http://www.apachefriends.org/en/xampp-windows.html>, scroll down to the *Jump off point Download* and click on *XAMPP*.
2. Download and execute the *Installer*.
3. Select your language and click *OK*.
4. Click *next*.
5. Enter the destination folder: *C:\xampp*

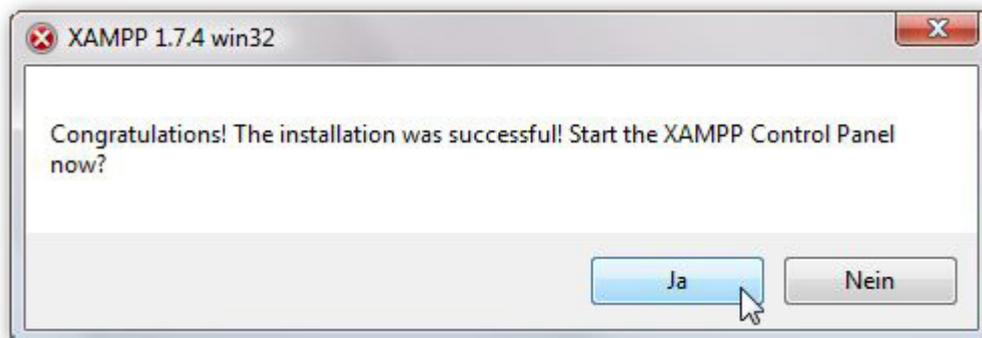


Installation on Windows

6. Ensure that all boxes of the *SERVICE SECTION* are unchecked. Click *install*.



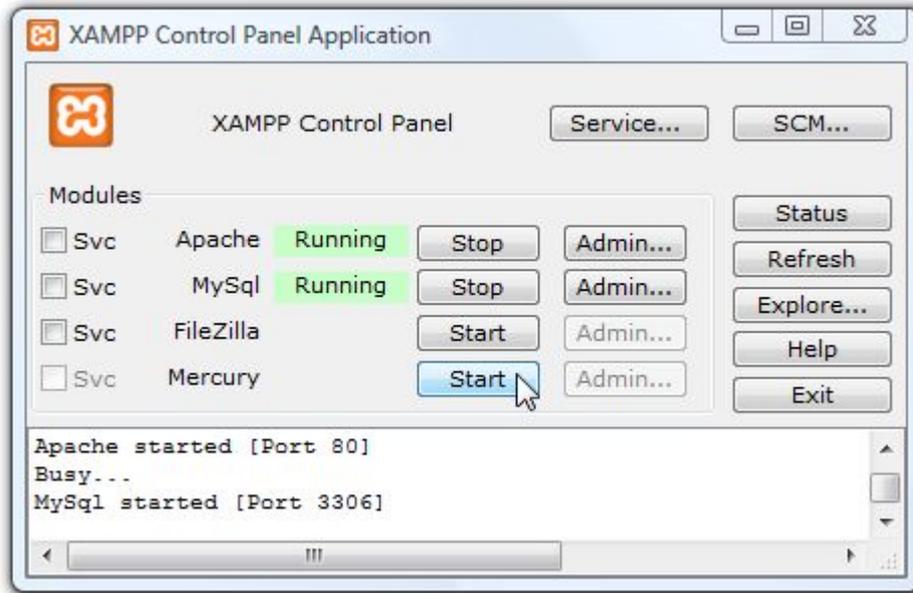
7. Finish the Installation.
8. Start the *XAMPP Control Panel*.



Alternatively you can open the *XAMPP Control Panel* under *Start > Programs > XAMPP*.

Installation on Windows

9. Start the Apache, MySQL and Mercury.



10. Copy the project folder *generic system* and the folder *additional-files* into `C:\xampp\htdocs`

2.2 MySQL Database

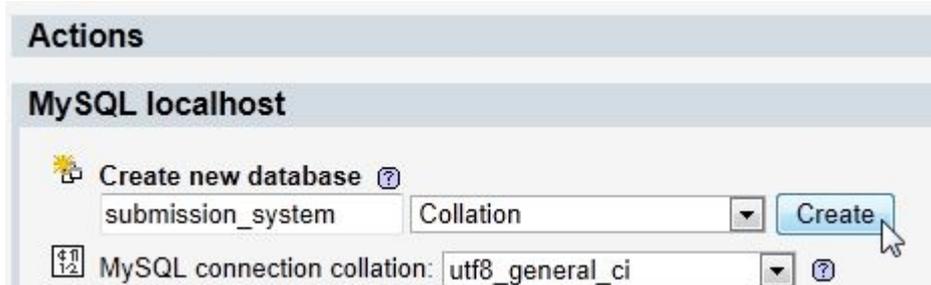
Open your browser and go to <http://localhost/phpmyadmin>. *PhpMyAdmin* is a nice software tool to handle the administration of MySQL over the World Wide Web.

1. First go to *Privileges* and check if there is already a user with the following settings:
 - User: `root`
 - Password: `No` (so it has no password)

If there is no user called *root*, add a user with this requirements.

It is no problem, if you do not want to have an empty password. You only have to change it in the source code. This step will be explained in *2.5 Special Settings paragraph 2*.

2. Go to *Home*  and create a new database called *submission_system*.



3. Go to *Privileges* and check if the user *root* is in the list and has all privileges. If not, add it.
4. Go to *Import* and browse the file `C:\xampp\htdocs\generic-system\submission_system.sql` to set the location of the text file and click *Go*.

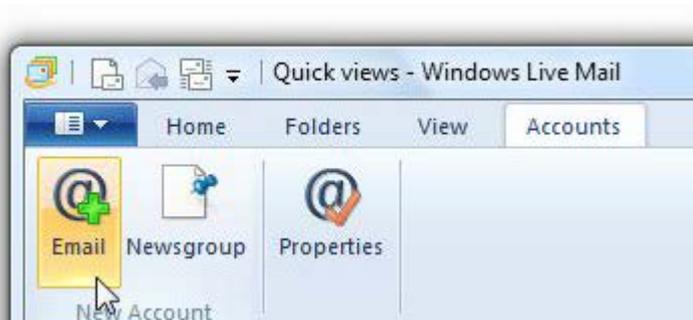
2.3 Local Mail Account

For using this system, it is very important to have the possibility to receive emails from a local mail address. The Mercury Mail server is integrated in the XAMPP package, which allows you sending e-mail to local addresses.

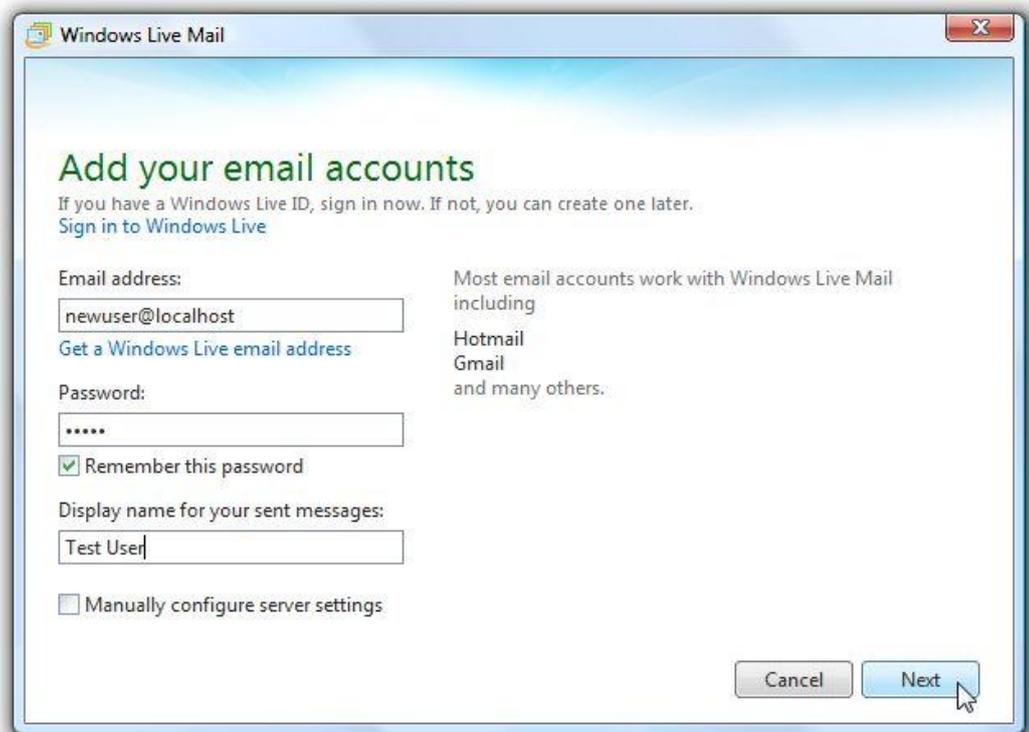
Now you have to create a new email account in your Windows Live Mail or another mail-program to receive these emails.

Here is the instruction for Windows Live Mail:

1. Open *Windows Live Mail*
2. Go to *Accounts* and hit the *Email* button.

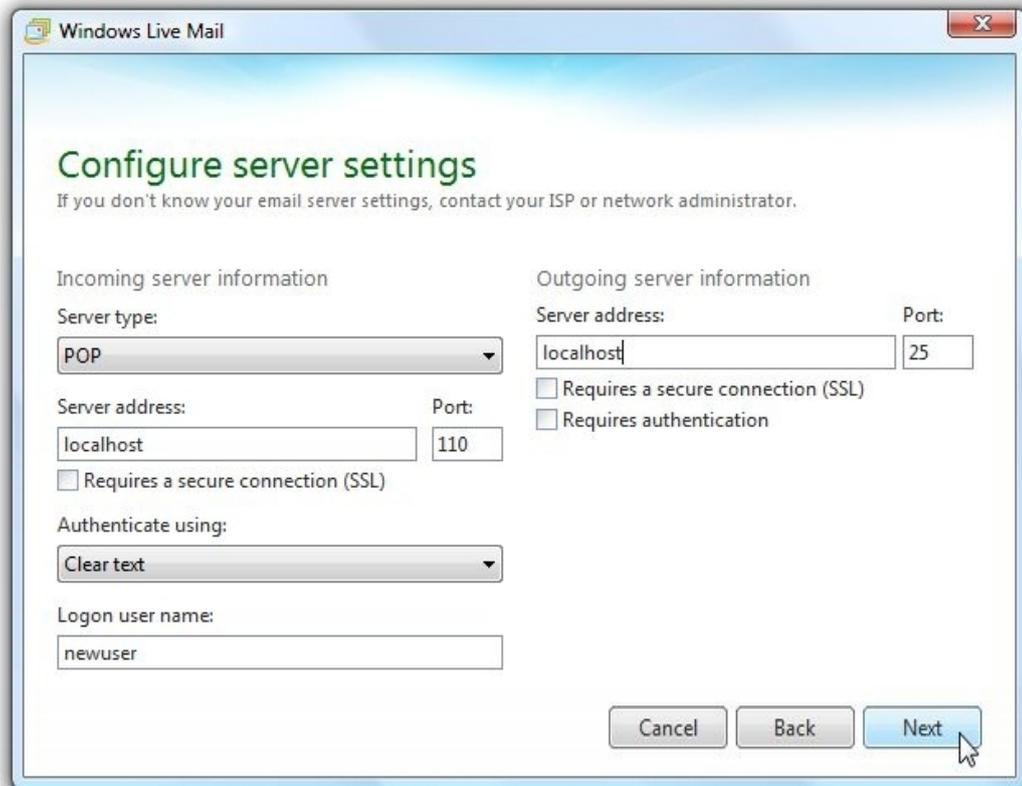


3. Enter the following:
 - Email address: *newuser@localhost*
 - Password: *wampp*and enter a *display name*.



Installation on Windows

4. Select *POP* as your *server type* and set the *incoming* and *outgoing server* addresses to *localhost*. Ensure that your *logon user name* is *newuser*. Click *next*.



5. Click *finish*.

2.4 NetBeans IDE

1. Download NetBeans IDE 7.0 for PHP from: <http://netbeans.org/downloads/index.html>.
2. Start NetBeans IDE
3. Go to *File->Open Project* navigate to the folder *generic-system*

2.4.1 PHPUnit

To run the unit tests you need to install PHPUnit. We install it with the *PEAR Installer*.

1. Open your command prompt, for example open *cmd.exe* under *Start -> Run*
2. Enter :

```
cd C:\xampp\php
```

3. The PEAR channel (*pear.phpunit.de*), which provides the PHPUnit package, needs to be registered with the local PEAR environment. Therefore, enter this line:

```
pear channel-discover pear.phpunit.de
```

4. Furthermore, component that PHPUnit depends upon are hosted on additional PEAR channels. So enter:

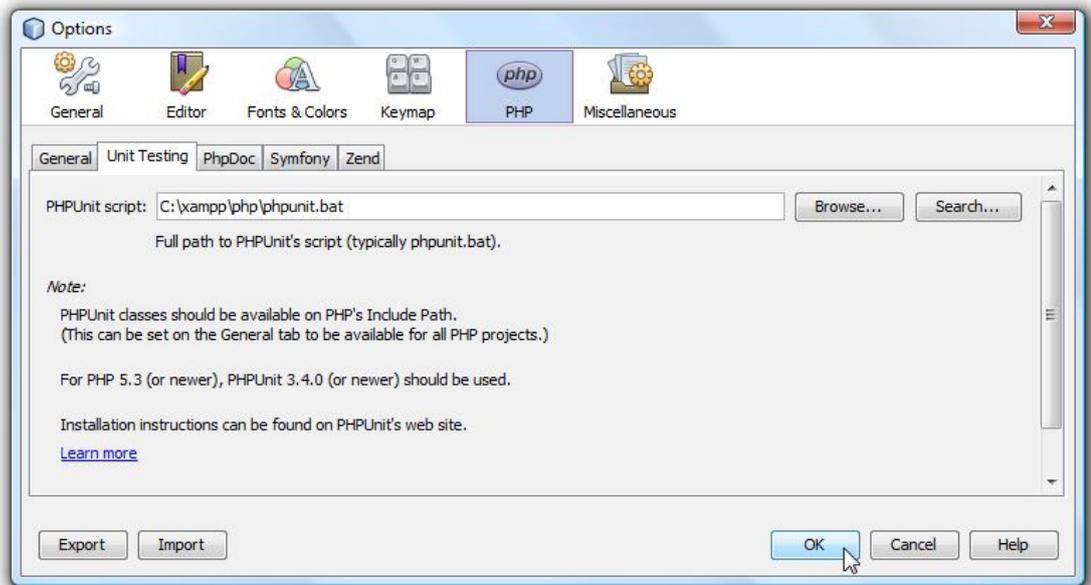
- `pear channel-discover components.ez.no`
- `pear channel-discover pear.symfony-project.com`

Installation on Windows

5. Now the PEAR Installer is ready to be used to install packages from the PHPUnit channel. Enter:

```
pear install phpunit/PHPUnit
```

6. Open NetBeans IDE and go to *Tools -> Options*. Look at the *PHP* window and open the *Unit Testing* tab. Now verify that PHPUnit script is set to *C:\xampp\php\phpunit.bat*. If the path is not there, browse for it.



2.4.2 XDebug

XDebug is a nice debugger for PHP. It helps you to find bugs faster. NetBeans supports XDebug, but it is not installed yet.

1. Open your browser and enter the url http://localhost/additional-files/php_info.php
2. Copy the html code and paste it in the text field from the site <http://xdebug.org/find-binary.php> .
Click the *Analyse my php_info()* output button.
3. Download the recommended file and save it in *C:\xampp\php\ext*
4. Edit the file *C:\xampp\php\php.ini* as follows:
 - Locate the line `zend_extension = "C:\xampp\php\ext\php_xdebug.dll"` and uncomment it with putting a ";" before:
`zend_extension = "C:\xampp\php\ext\php_xdebug.dll"`
 - To load the right xdebug file, enter
`zend_extension = C:\xampp\php\ext\php_xdebug-2.1.1-5.3-vc6.dll`
 - Finally, add the following lines at the end of the file:
`xdebug.remote_enable=on`
`xdebug.remote_log="/var/log/xdebug.log"`
`xdebug.remote_host=localhost`
`xdebug.remote_handler=dbgp`
`xdebug.remote_port=9000`
 - Save the file.

Installation on Windows

5. Open NetBeans IDE and go to *Tools -> Options*. Look at the *PHP* window and open the *General* tab.
 - Verify that the PHP 5 Interpreter is set to *C:\xampp\php\php.exe* or browse for it.
 - Set the *Debugger Port* to *9000*
 - Insert *netbeans-xdebug* as the *Session ID*

2.5 Special Settings

1. Go to *C:\xampp\php\PEAR\fpdf* and replace the file *fpdf.php* with the one of the project folder *additional-files*.
2. If your password from user *root* from the database is not empty, you have to update it in the project.
 - Start NetBeans IDE
 - Open the file *generic-system /Source Files/DB/class.DB.php* and change

```
protected $db_password = "";
```

to

```
protected $db_password = "your_password";
```

where *your_password* is your password from user *root*.

3 Installation on MAC OS X

3.1 MySQL Database

Usually, the MySQL Database is already installed on your system.

1. To check if the MySQL installed on your computer and you have a version up to date, open your shell and try

- `mysql`
- `mysql -version`

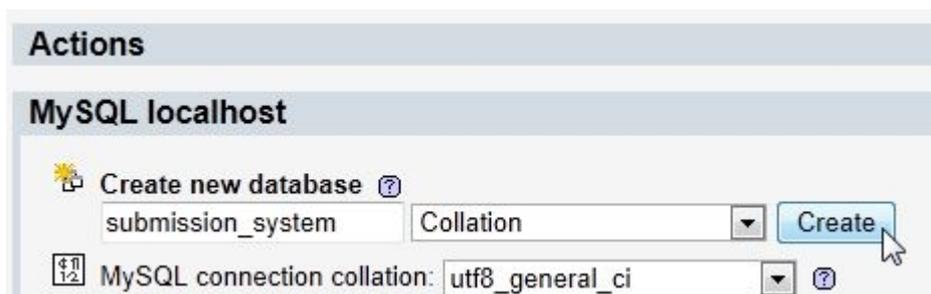
If the version of your MySQL is older than 5.5 or you have none, go to <http://www.MySQL.com/downloads/MySQL/#downloads> and download the newest version for MAC-OS X.

2. Add the following lines to `/etc/php.ini`
; copied and corrected from php.ini.default
`pdo_mysql.default_socket=/tmp/mysql.sock`
`mysql.default_socket = /tmp/mysql.sock`
`mysqli.default_socket = /tmp/mysql.sock`
3. Open your browser and go to <http://localhost/phpmyadmin>.
4. Go to *Privileges* and check if there is already a user with the following settings:
 - User: root
 - Password: No (so it has no password)

If there is no user called *root*, add a user with this requirements.

It is no problem, if you do not want to have an empty password. You only have to change it in the source code. This step will be explained in 3.4 *Special Settings paragraph 3*.

5. Go to *Home*  and create a new database called *submission_system*.



6. Go to *Privileges* and check if the user *root* is in the list and has all privileges. If not, add it.
7. Go to *Import* and browse the file *generic-system/submission_system.sql* to set the location of the text file and click *Go*.

3.2 Local Mail Account

MAC OS X provides a local Mail server called postfix so you are already able to send emails between local addresses. Use your email address `[user]@localhost`, where `[user]` should be replaced with your username.

3.3 NetBeans IDE

1. Download NetBeans IDE 7.0 for PHP from: <http://netbeans.org/downloads/index.html>.
2. Start NetBeans IDE
3. Go to *File->Open Project* navigate to the folder *generic-system*

3.3.1 PEAR

You need PEAR to install PHPUnit.

1. MAC OS X provides PHP, but it may be disabled. To activate PHP, you have to load the PHP 5 module in the Apache configuration file. Therefore, open `/etc/apache2/httpd.conf` file and search for the line

```
#LoadModule php5_module
```

and uncomment it. That means, remove the `#` from the beginning of the line.

2. Open your Shell and restart apache with:

```
sudo apachectl restart
```

The Apache web server is started with the newly activated PHP 5 module.

3. Insert the following lines

```
- curl http://pear.php.net/go-pear.phar > go-pear.phar  
- sudo php go-pear.phar
```

4. Enter `all` to change install location to `/usr/local/pear`

5. Add `/usr/local/pear/bin/pear` to your (bash/tcsh) path

6. Verify that `/etc/php.ini` correctly specifies the include path
`“./usr/local/pear/share/pear”`

7. Run

```
php -i | grep include_path
```

and check that all is ok.

8. To check that pear works, run

```
pear help
```

9. If necessary, set the proxy server for pear with the following command:

```
pear config-set http_proxy  
http://username:password@yourproxy:80
```

3.3.2 PHPUnit

To run the unit tests you need to install PHPUnit. We install it with the *PEAR Installer*.

1. Open your Terminal.
2. The PEAR channel (pear.phpunit.de), which provides the PHPUnit package, needs to be registered with the local PEAR environment. Therefore, enter the following line:

```
sudo pear channel-discover pear.phpunit.de
```

3. Run the following commands:
 - `sudo pear channel-discover components.ez.no`
 - `sudo pear channel-discover pear.symfony-project.com`
4. Now the PEAR Installer is ready to be used to install packages from the PHPUnit channel. Enter:

```
sudo pear install phpunit/PHPUnit
```

5. You should now find PHPUnit installed here: `/usr/local/pear/share/pear/PHPUnit`
There should also be an executable here: `/usr/local/pear/bin/phpunit`
6. Open NetBeans IDE and go to *Tools -> Options*. Look at the *PHP* window and open the *Unit Testing* Tab. Now verify that PHPUnit script is set to `/usr/local/pear/bin/phpunit`. If the path is not there, browse for it.

3.3.3 XDebug

XDebug is a nice debugger for PHP. It helps you to find bugs faster. NetBeans supports XDebug, but it is not installed yet.

1. Open your Terminal and run

```
php -i
```

2. Copy the output and paste it in the text field from the site <http://xdebug.org/find-binary.php>
Click the *Analyse my php_info()* output button.

3. Download the recommended file, for example `xdebug-2.1.1.tgz`

4. Unpack the downloaded file with

```
tar -xvzf xdebug-2.1.1.tgz
```

5. Enter the following commands:

```
- cd xdebug-2.1.1
- phpize
- ./configure
- Make
- cp modules/xdebug.so /usr/lib/php/extensions/
no-debug-non-zts-20090626`
```

6. Update the file `/etc/php.ini` with the correct path to xdebug. So add the following lines at the end of the file:
 - `zend_extension = /usr/lib/php/extensions/no-debug-non-zts-20090626/xdebug.so`
 - `xdebug.remote_enable=on`
 - `xdebug.remote_log="/var/log/xdebug.log"`
 - `xdebug.remote_host=localhost`
 - `xdebug.remote_handler=dbgp`
 - `xdebug.remote_port=9000`
7. Restart the Apache web server in the Terminal with the command:

```
sudo apachectl restart
```
8. Open NetBeans IDE and go to *Tools -> Options*. Look at the *PHP* window and open the *General* Tab.
 - Verify that the PHP 5 Interpreter is set to *your php.exe* file or browse for it.
 - Set the *Debugger Port* to *9000*
 - Insert *netbeans-xdebug* as the *Session ID*

3.4 Special Settings

1. Go to the folder `PEAR\fpdf` and replace the file `fpdf.php` with the one of the project folder *additional-files*.
2. Update the file `/etc/php.ini` with the correct time zone:

```
date.timezone = "Europe/Berlin"
```
3. If your password from user *root* from the database is not empty, you have to update it in the project.
 - Start NetBeans IDE
 - Open the file `generic-system /Source Files/DB/class.DB.php` and change

```
protected $_db_password = "";
```

to

```
protected $_db_password = "your_password";
```

where *your_password* is your password from user *root*.

Start the System

4 Start the System

4.1 Windows

Open your favorite browser and go to: <http://localhost/generic-system/View/index.php>

The administrator is already registered. So use

- user name: *administrator*
- password: *000000*

to log in.

4.2 MAC OS X

Open your browser and go to: [http://localhost/~\[user\]/generic-system /View/index.php](http://localhost/~[user]/generic-system /View/index.php)

The administrator is already registered. So use

- user name: *administrator*
- password: *000000*

to log in.

4.3 Bug

There is still a bug in the system. If you use the system local on your MAC or on the web open the project in NetBeans and open the file *Model/class.Mailer.php*. Go to the method *sendActivationMail(User \$user)* and change the variable *\$link*.

- For local use:

```
$link = http://localhost/~[user]/generic-system /View/activation.php?username=  
".$user->getUsername()."&code=".$user->getActivationCode()
```

Where [user] should be replaced with your user name.

- For web:

```
$link = [url of page]/View/activation.php?username=".$user->getUsername()."&code=  
".$user->getActivationCode()
```

Where [url of page] should be replaced with the URL of the web page.