

# Php MySQL

Somnath PaulChoudhury

## About me



**Somnath Paul Choudhury (Author)**  
**MSc(Information Technology)**

**Somnath Paul Choudhury lives in Siliguri, India. He is an educator and teaches CS in High School. He always emphasizes in framing the right curriculum in CS for students that is relevant today. The world of computing is constantly evolving and thus it's always refreshing to be a part of it.**

## Scope

**The first book Your Own Database Driven Website using PHP MySQL – Connecting MySQL Database to Webpages, is intended mainly for anyone familiar with the topic, wants a good project idea if still a student, or simply wants to connect MySQL database in the backend with say PHP forms. This title is intended for anyone who wants to learn PHP-MySQL-Apache-phpMyAdmin seriously using Windows OS.**

**This publication is mainly intended for Amazon Kindle. You can contact me over email in my id [mousom@bsnl.in](mailto:mousom@bsnl.in) for any clarification and solutions.**

**Author**

**October 26, 2012**

## **What is it?**

**PHP: Hypertext Preprocessor**, is a server side scripting language. Scripts are

executed at the server side but these files are viewed as plain html at the client browser. PHP files are having an extension .php it can contain html tags.

**MySQL is a database server.**

Installing **Apache** will be helpful as all PHP scripts can be tested in the local

machine first before actual hosting or if you do not have at present an access

to a web server supporting PHP MySQL.

phpMyAdmin is a free software tool written in PHP intended to handle the administration of MySQL over the World Wide Web. phpMyAdmin supports a

wide range of operations with MySQL. The most frequently used operations

are supported by the user interface (managing databases, tables, fields, relations, indexes, users, permissions, etc), while you still have the ability to

directly execute any SQL statement.

Follow the instructions for setting up the environment and to install PHP, MySQL, Apache, phpMyAdmin.

## **System information**

### **Apache**

**The Apache is an open-source HTTP server for modern operating systems as**

**including UNIX and Windows NT.**

**Search for the file httpd-2.2.22-win32-x86-openssl-0.9.8t (size 6.06 MB) in the net or in the website <http://httpd.apache.org/> and download and save in a folder.**

### **MySQL**

**MySQL is the world's most popular open source database. MySQL Community**

**Edition is a freely downloadable version of the world's most popular open source database. It is supported by an active community of open source developers and enthusiasts.**

**Search for the Windows Installer file mysql-5.5.28-win32 file (size 31.1 MB) in the net or in the website**

**<http://www.mysql.com/downloads/mysql/> and download and save in the same folder.**

### **PHP**

**PHP is an open source software. PHP supports MySQL. PHP scripts are executed on the server. PHP is free for download and use.**

**Search for the Windows Installer file php-5.3.17-Win32-VC9-x86 (size 44.6**

**MB) in the net or in the website <http://windows.php.net/download/>**

**Apache, PHP, MySQL open source software versions are upgraded continually.**

**One may look for the latest version after few days!**

To begin with we need to find the drive in the PC with more space and create

a folder name say webserver. Let us select drive E: so we will get

E:\webserver This will be the folder where all of our apache, php and mysql

files will be kept. Inside of this folder create two more folders php and mysql.

```
E:\>cd webserver
```

```
E:\webserver>dir
```

Volume in drive E has no label.

Volume Serial Number is XXXX-XXXX

Directory of E:\webserver

```
10/01/2012 03:51 AM <DIR> .
10/01/2012 03:51 AM <DIR> ..
10/01/2012 03:52 AM <DIR> mysql
10/01/2012 03:52 AM <DIR> php
XX File(s) XXXXX bytes
XX Dir(s) XXXXXXXXXXXXXXX free
```

```
E:\webserver>
```

## Installing Apache first

Go to the previously created folder and double click httpd-2.2.22-win32-x86-openssl-0.9.8t. This will start installation of Apache web server.

Follow the screen shots taken by me in succession as the installation goes on.



**Accept license agreement and click next**





**Type localhost for Network Domain, Server Name. Give any email address**

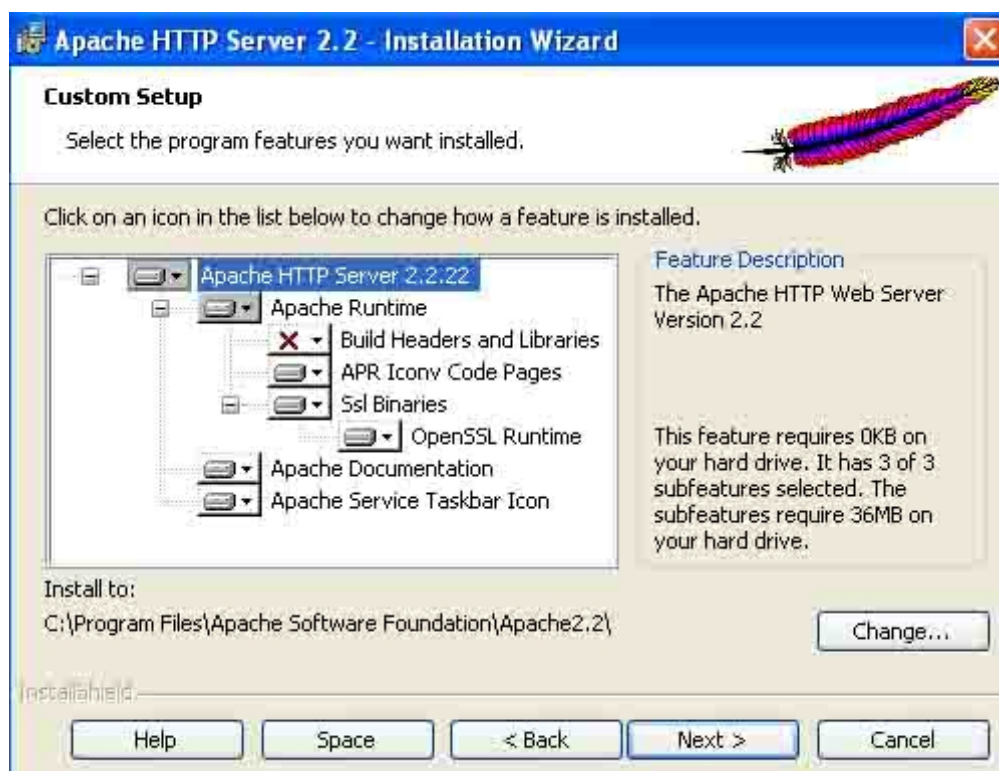


**Select Port 80 click next**

**Select Custom and click next**



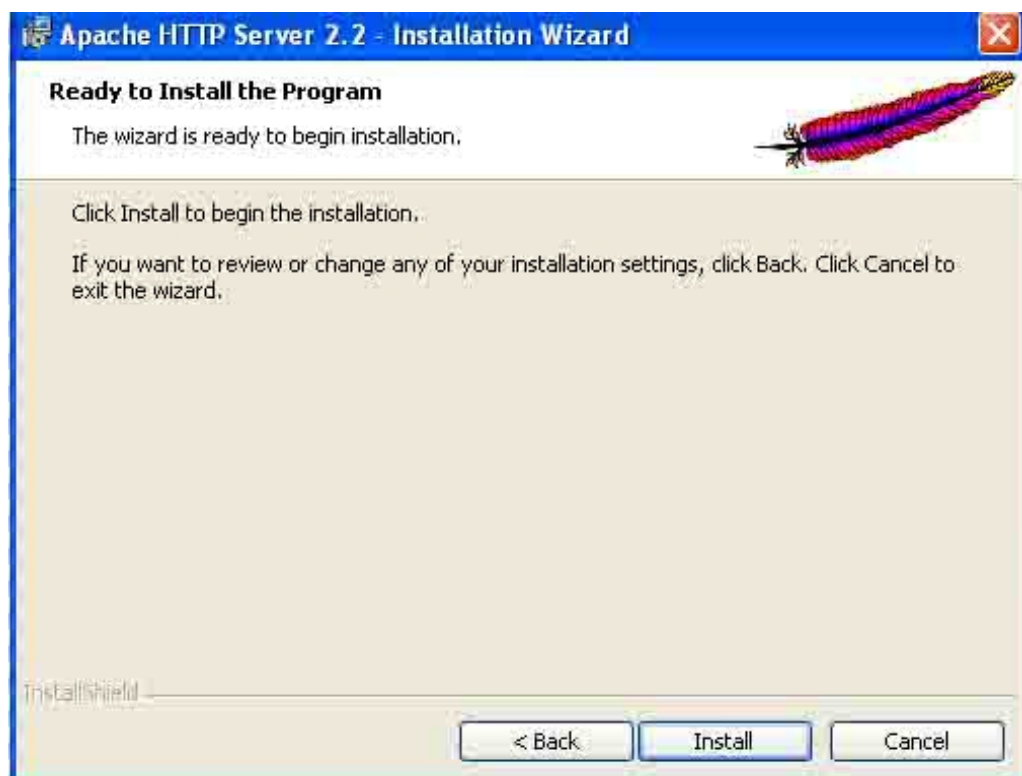
**Click Change push button to select new location (E:\webserver\) to install**



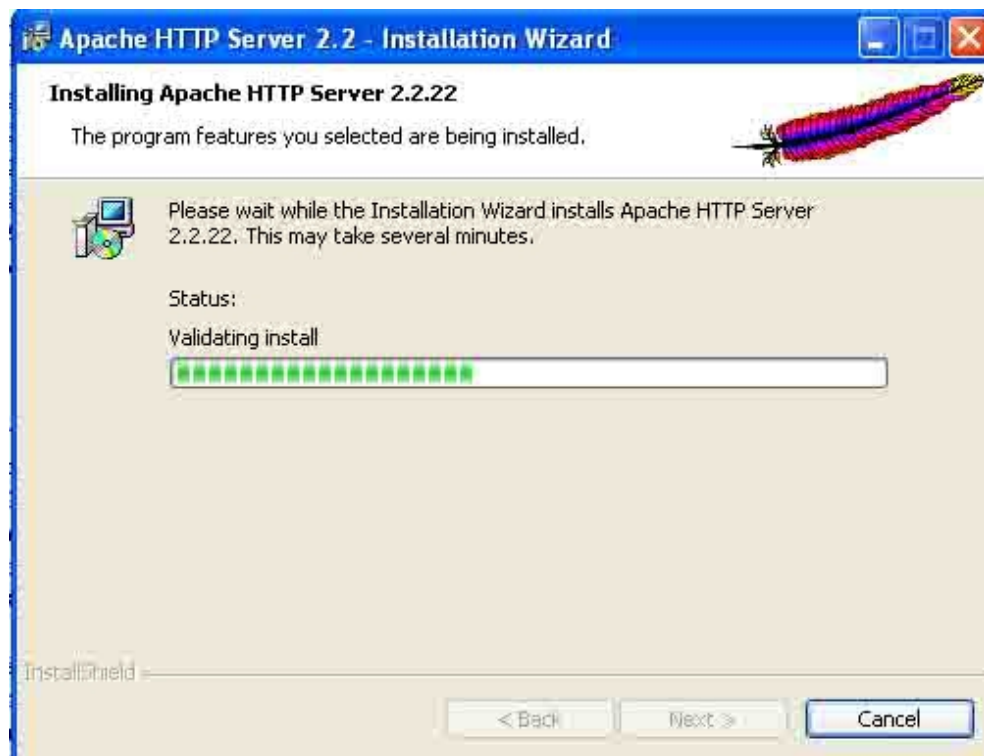




**Click install to begin installation process**



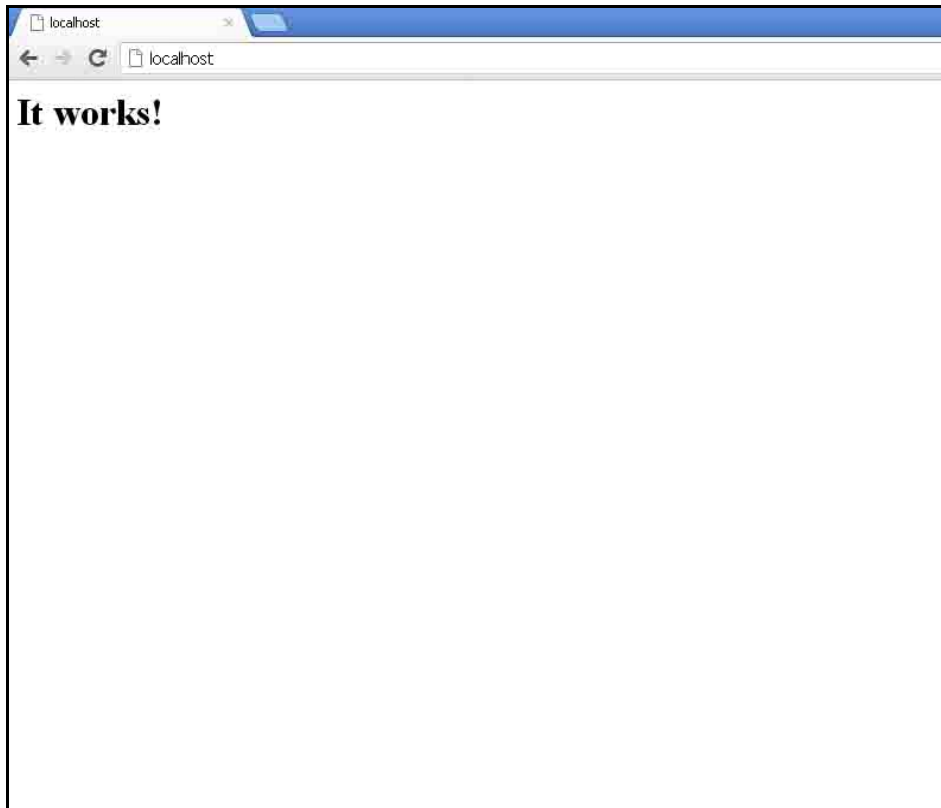
**Installation in progress**



**Installation completed, click finish**



**Open browser and type `http://localhost` the following message will be shown!**



## **Installing PHP**

**Find the Windows Installer file php-5.3.17-Win32-VC9-x86 double click to start the installation.**

**Follow the screen shots taken by me in succession as the installation goes on.**

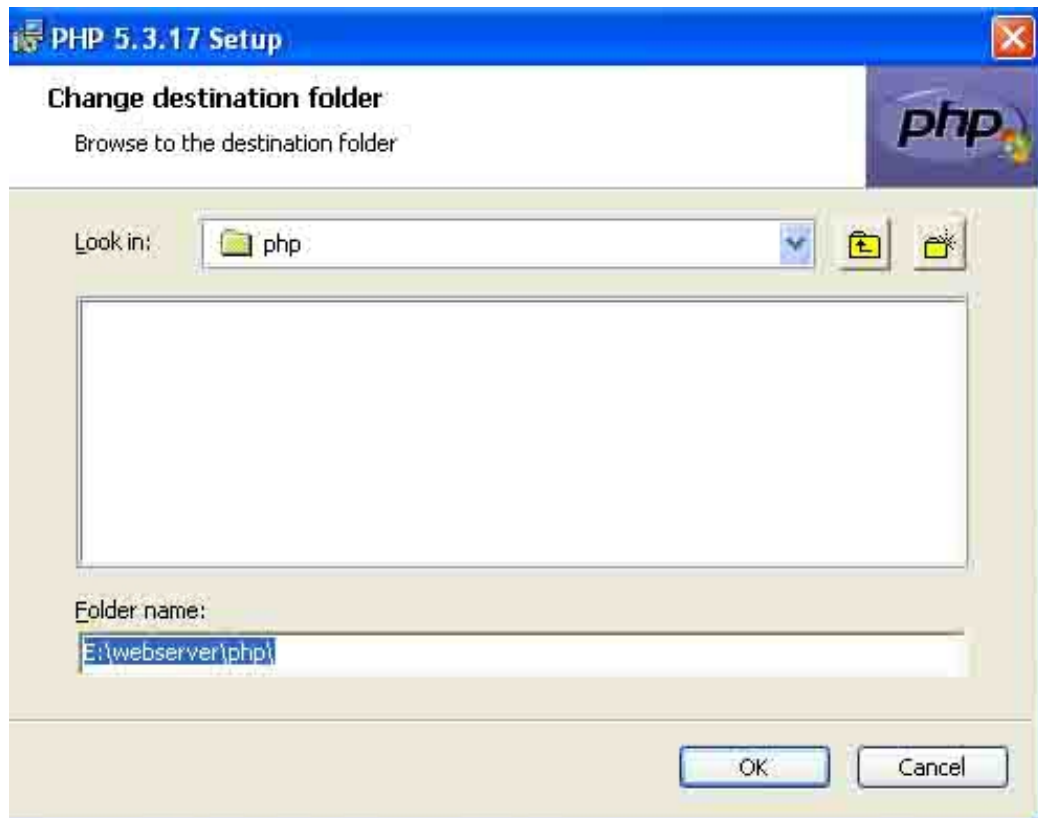
**Disable any virus detection software during installation process.**



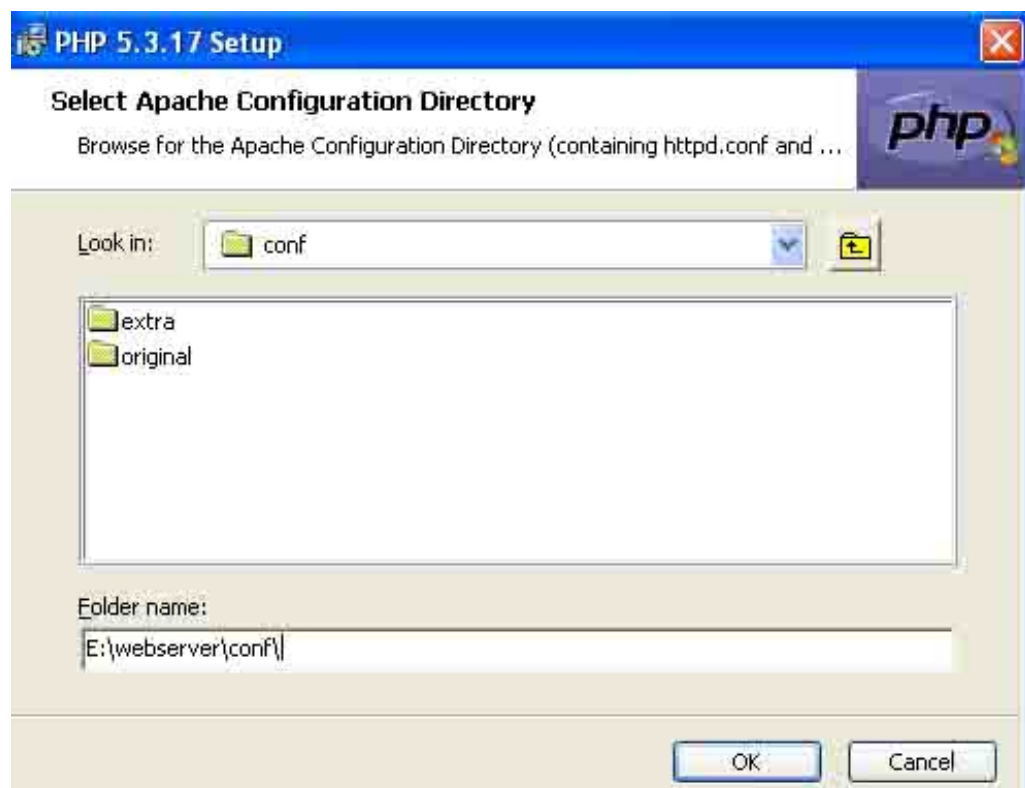
**Accept end user license agreement and click next**



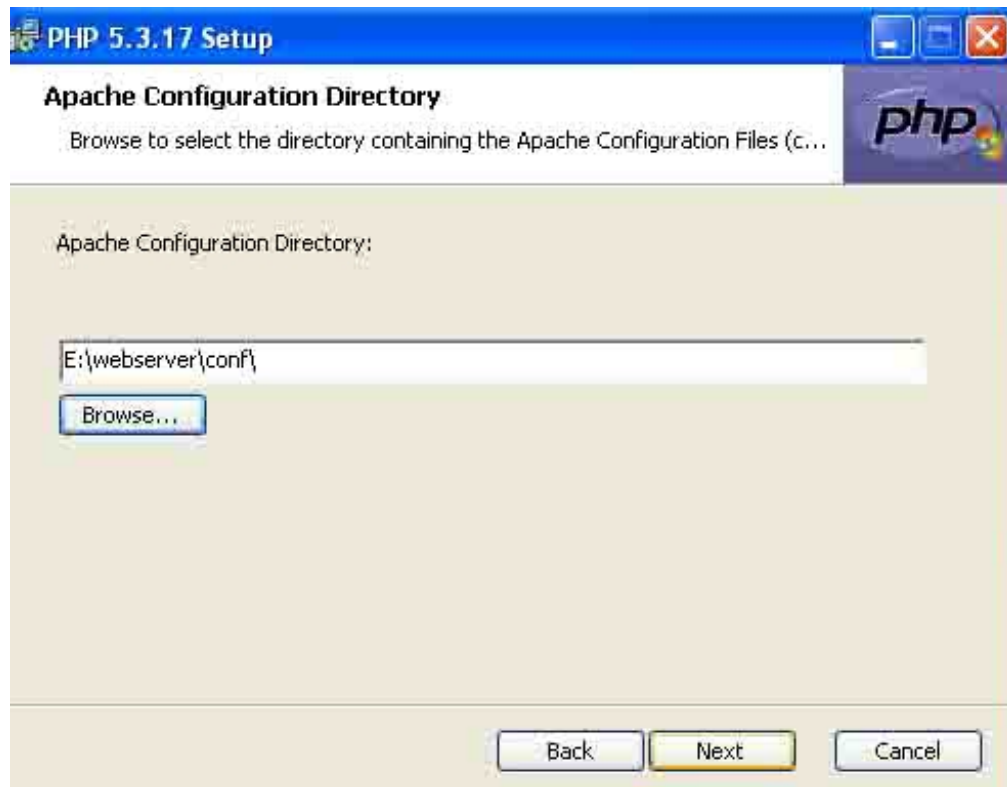
**Click browse and select E:\webserver\php\ as destination folder to install**



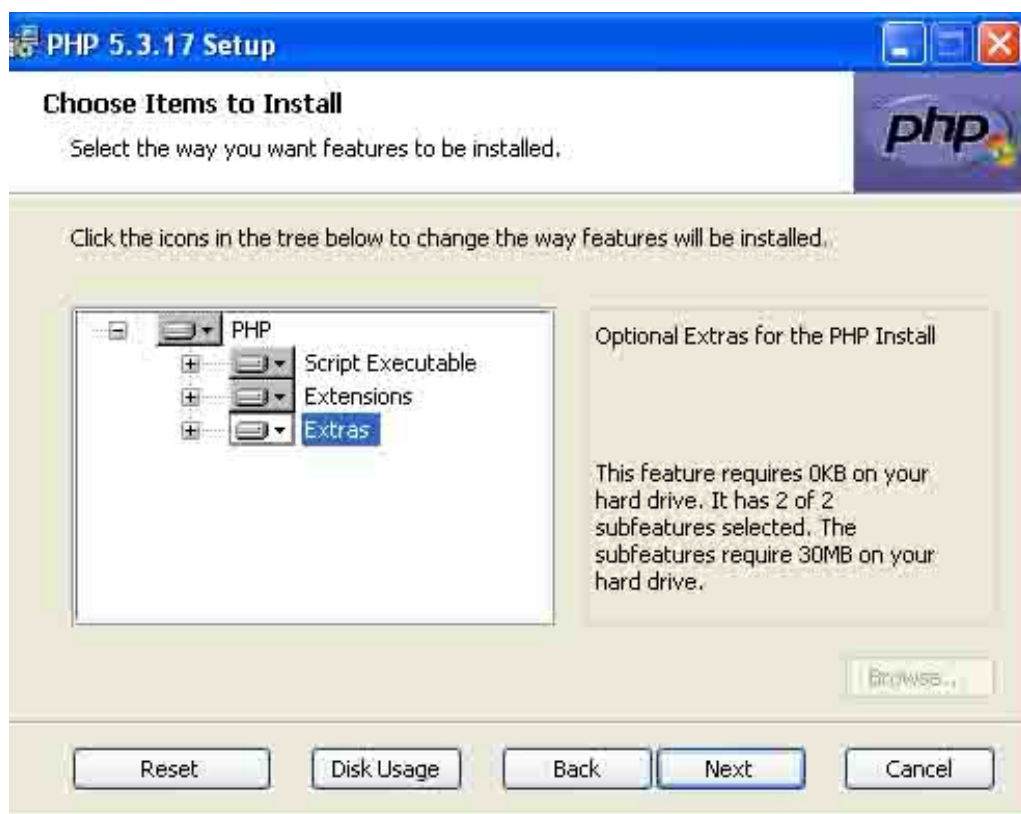
**Click OK to proceed and select Apache 2.2.x Module and click next**  
**Select Apache configuration directory as shown below**

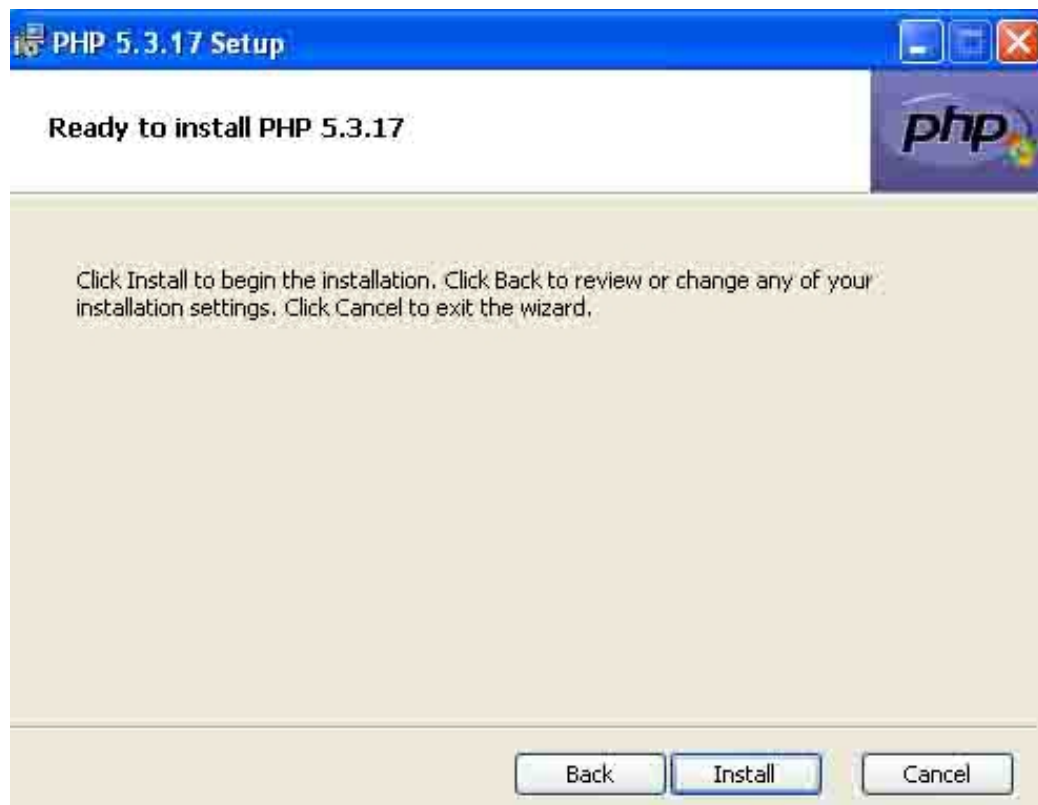


**Click Next**

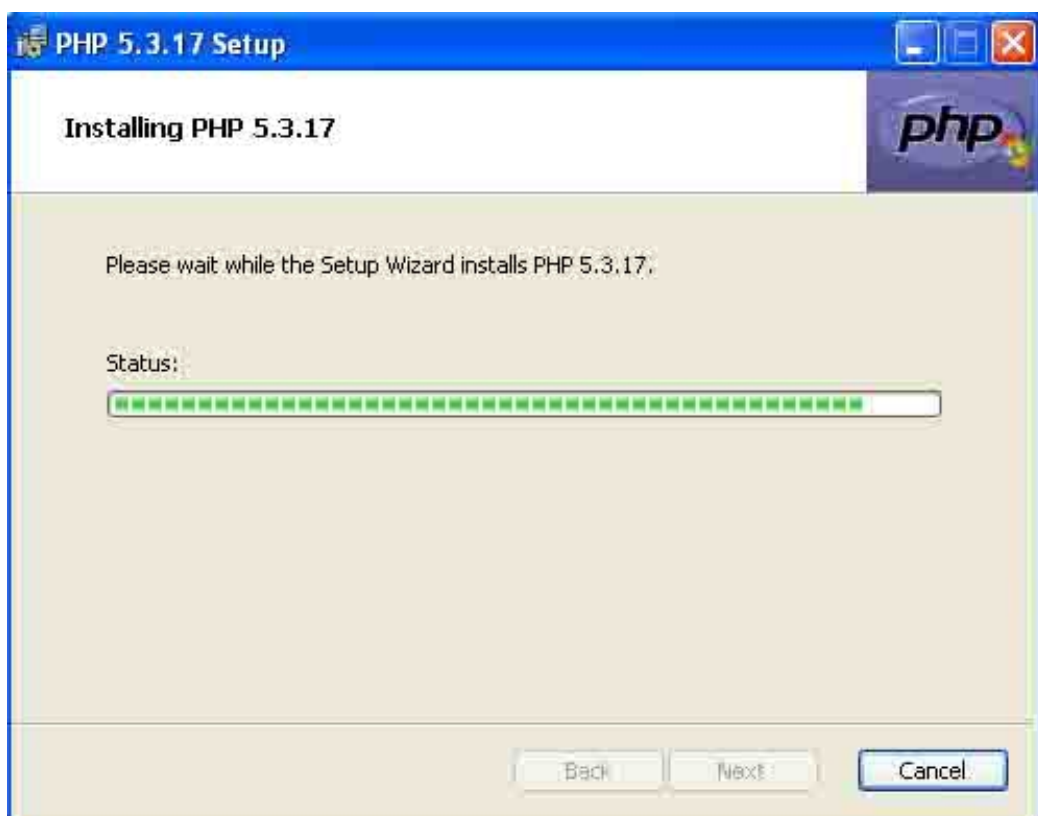


**Choose items to install and click Next**





**Click Install**



**Installation in progress**

**Installation is complete**



**Open notepad and type the following code**

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

**save the code as phpinfo.php in E:\webserver\htdocs**

**Stop Apache2.2 by clicking once on the Apache Service Monitor**



**and Restart again.**

**Open browser and type <http://localhost/phpinfo.php>**

**The following screen will be displayed**





## PHP Version 5.3.17



<b>System</b>	Windows NT USER 5.1 build 2600 (Windows XP Professional Service Pack 2) i586
<b>Build Date</b>	Sep 13 2012 00:31:57
<b>Compiler</b>	MSVC9 (Visual C++ 2008)
<b>Architecture</b>	x86
<b>Configure Command</b>	cscript /nologo configure.js "--enable-snapshot-build" "--disable-isapi" "--enable-debug-pack" "--without-mssql" "--without-pdo-mssql" "--without-pi3web" "--with-pdo-oci=C:\php-sdk\oracle\instantclient10\sdk,shared" "--with-oci8=C:\php-sdk\oracle\instantclient10\sdk,shared" "--with-oci8-11g=C:\php-sdk\oracle\instantclient11\sdk,shared" "--enable-object-out-dir=.obj" "--enable-com-dotnet=shared" "--with-mcrypt=static" "--disable-static-analyze"
<b>Server API</b>	Apache 2.0 Handler
<b>Virtual Directory Support</b>	enabled
<b>Configuration File (php.ini) Path</b>	C:\WINDOWS
<b>Loaded Configuration File</b>	(none)
<b>Scan this dir for additional .ini files</b>	(none)
<b>Additional .ini files parsed</b>	(none)
<b>PHP API</b>	20090626
<b>PHP Extension</b>	20090626
<b>Zend Extension</b>	220090626
<b>Zend</b>	API220090626,TS,VC9

# Installing MySQL

Double click Windows Installer file mysql-5.5.28-win32 to start installation.

Follow the screen shots taken by me in succession as the installation goes on.



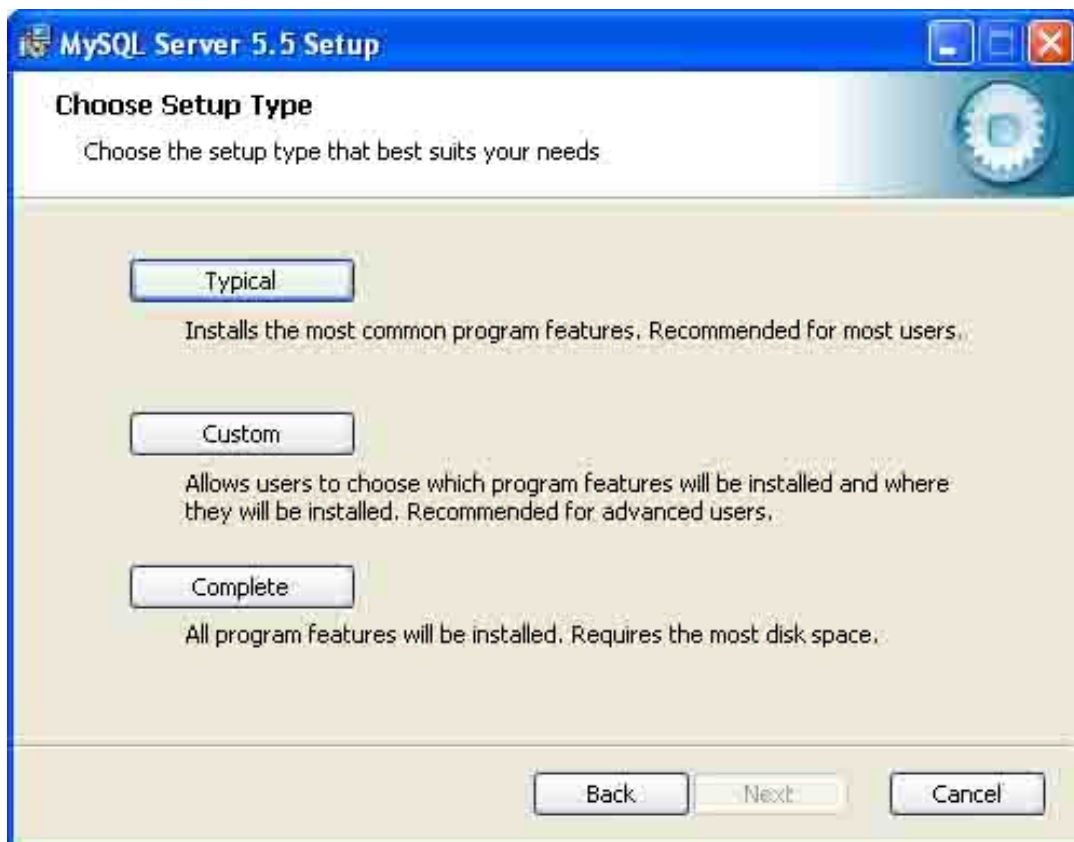
**Click Run \* Click Next**

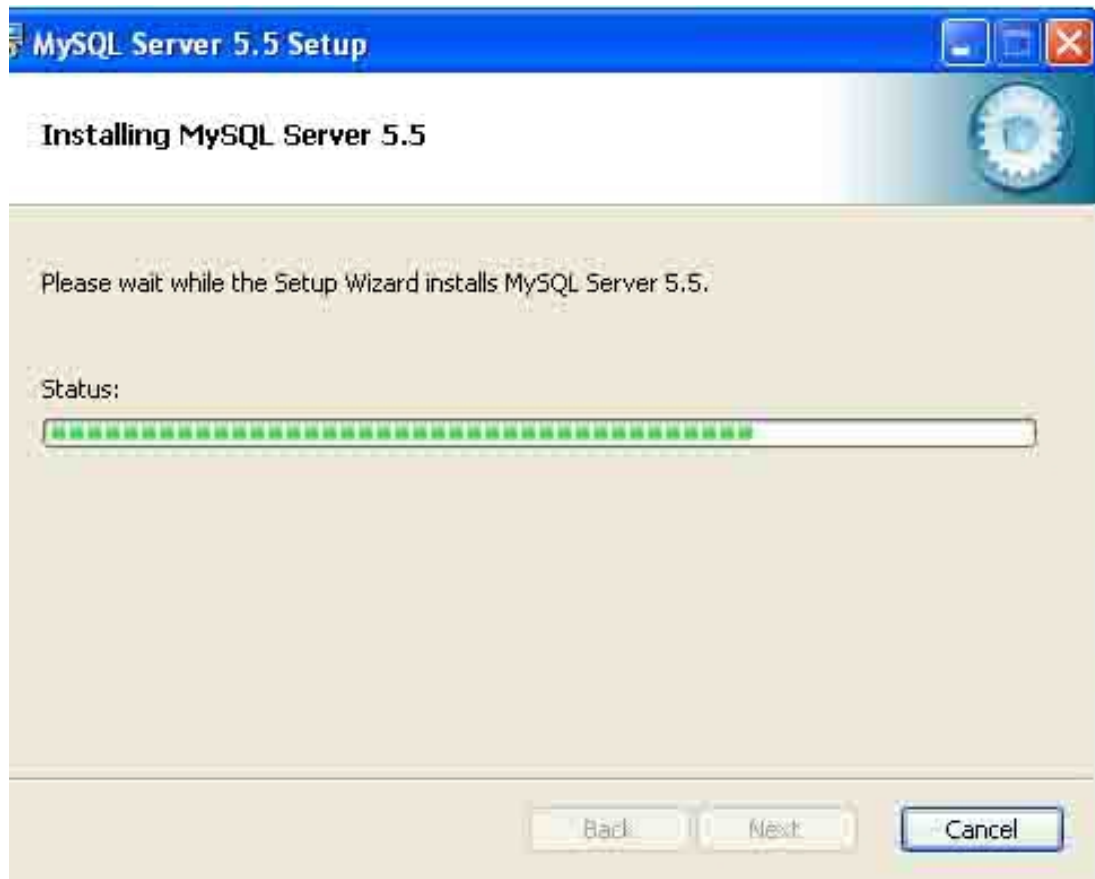


**Accept license agreement click Next**



**Select Typical click Install in next screen to start installation**





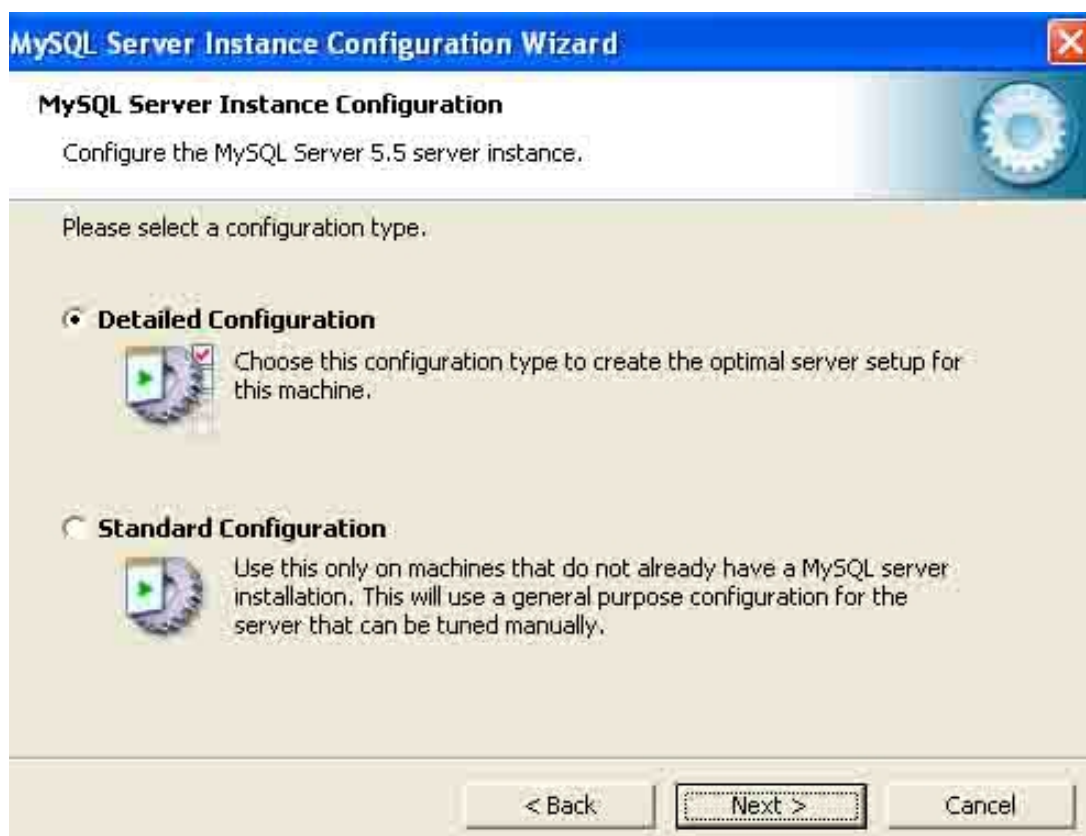
**Click Next -> Next -> .. -> Finish**



**Click Next**

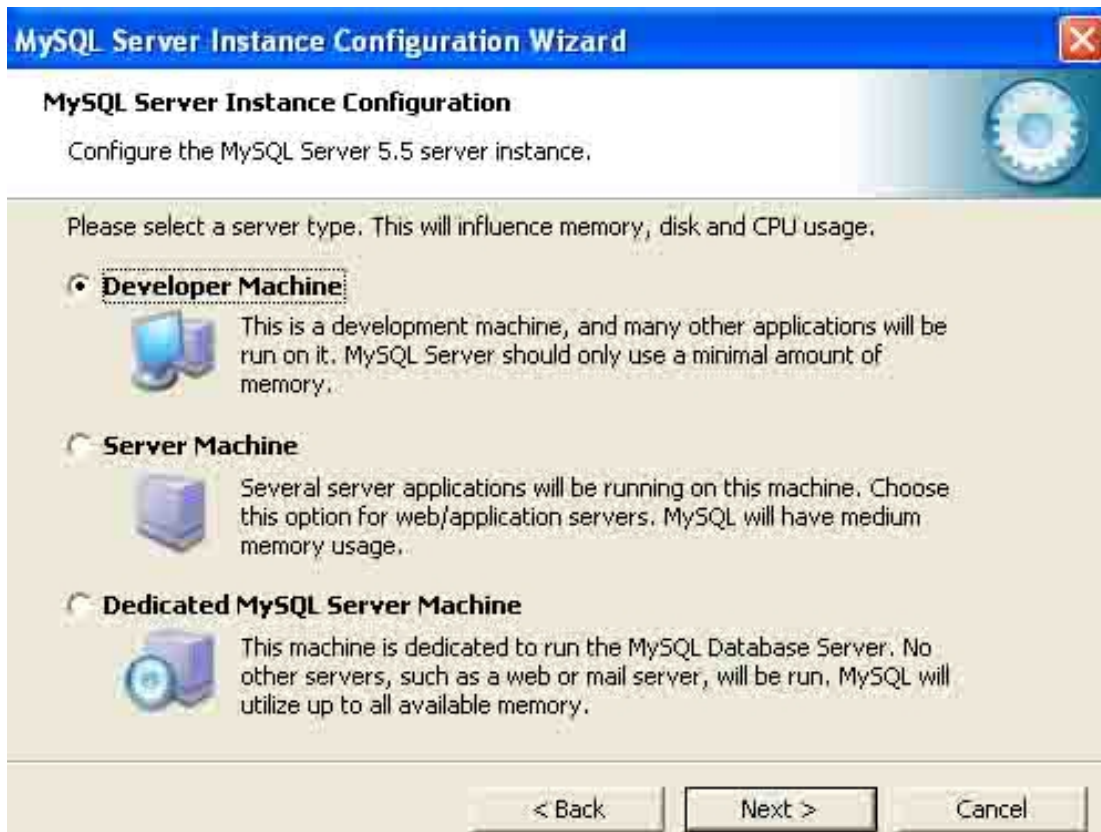


**Select Detailed Configuration ->Next**



**Developer Machine -> Next**





**Multifunctional Database -> Next**



**Click -> Next**

**MySQL Server Instance Configuration Wizard**

**MySQL Server Instance Configuration**

Configure the MySQL Server 5.5 server instance.

Please select the drive for the InnoDB datafile, if you do not want to use the default settings.

**InnoDB Tablespace Settings**

 Please choose the drive and directory where the InnoDB tablespace should be placed.

E: Installation Path ...

Drive Info

Volume Name:

File System: **NTFS**



 6.5 GB Diskspace Used ☐ 2.7 GB Free Diskpace

< Back Next > Cancel

Click -> Next


**MySQL Server Instance Configuration Wizard**

**MySQL Server Instance Configuration**


Configure the MySQL Server 5.5 server instance.

Please set the approximate number of concurrent connections to the server.


☒ **Decision Support (DSS)/OLAP**

 Select this option for database applications that will not require a high number of concurrent connections. A number of 20 connections will be assumed.

☐ **Online Transaction Processing (OLTP)**

 Choose this option for highly concurrent applications that may have at any one time up to 500 active connections such as heavily loaded web servers.

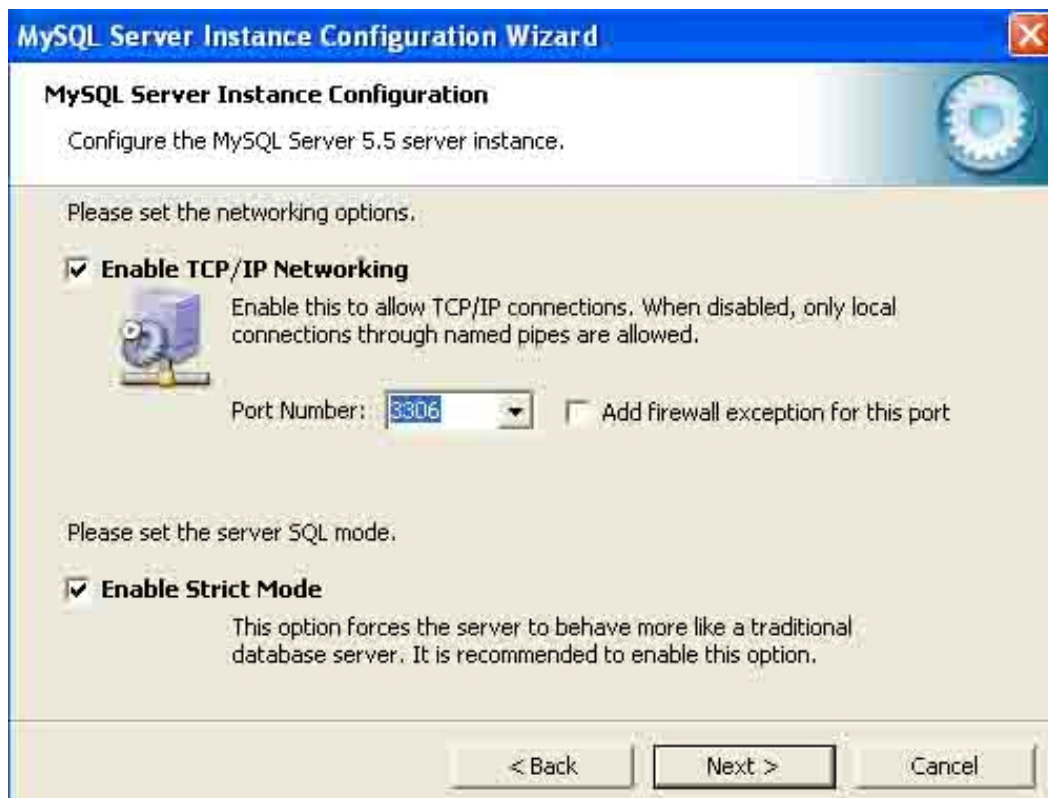
☐ **Manual Setting**

 Please enter the approximate number of concurrent connections.

Concurrent connections: 15

< Back Next > Cancel

Click -> Next



The screenshot shows the 'MySQL Server Instance Configuration Wizard' window. The title bar is blue with the text 'MySQL Server Instance Configuration Wizard' and a close button. The main window has a blue header with a gear icon and the text 'MySQL Server Instance Configuration' and 'Configure the MySQL Server 5.5 server instance.' Below this, it says 'Please set the networking options.' There are two checked options: 'Enable TCP/IP Networking' with a description and a port number dropdown set to '3306', and 'Add firewall exception for this port' which is unchecked. Below this, it says 'Please set the server SQL mode.' and 'Enable Strict Mode' is checked with a description. At the bottom are buttons for '< Back', 'Next >', and 'Cancel'.

**MySQL Server Instance Configuration Wizard**

**MySQL Server Instance Configuration**

Configure the MySQL Server 5.5 server instance.

Please set the networking options.

☒ **Enable TCP/IP Networking**

Enable this to allow TCP/IP connections. When disabled, only local connections through named pipes are allowed.

Port Number:  ☐ Add firewall exception for this port

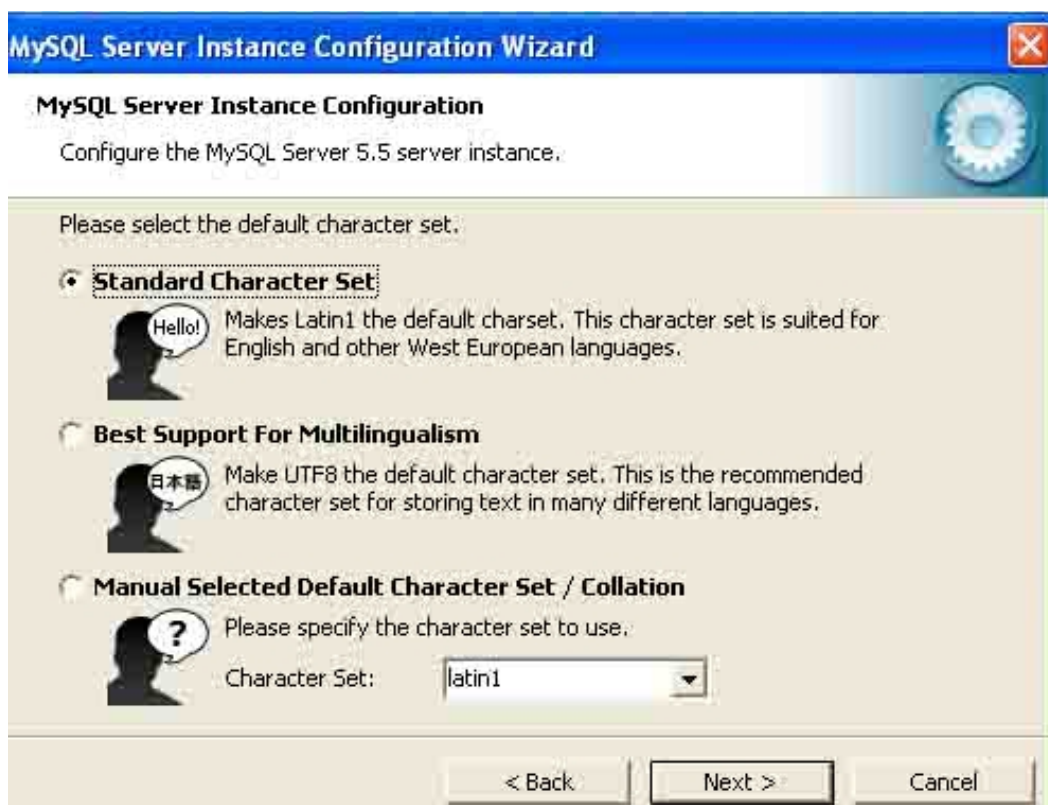
Please set the server SQL mode.

☒ **Enable Strict Mode**

This option forces the server to behave more like a traditional database server. It is recommended to enable this option.

< Back   Next >   Cancel

Click -> Next



The screenshot shows the 'MySQL Server Instance Configuration Wizard' window. The title bar is blue with the text 'MySQL Server Instance Configuration Wizard' and a close button. The main window has a blue header with a gear icon and the text 'MySQL Server Instance Configuration' and 'Configure the MySQL Server 5.5 server instance.' Below this, it says 'Please select the default character set.' There are three radio button options: 'Standard Character Set' (selected) with a description and a 'Hello!' speech bubble, 'Best Support For Multilingualism' with a description and a '日本語' speech bubble, and 'Manual Selected Default Character Set / Collation' with a description and a 'latin1' dropdown menu. At the bottom are buttons for '< Back', 'Next >', and 'Cancel'.

**MySQL Server Instance Configuration Wizard**

**MySQL Server Instance Configuration**

Configure the MySQL Server 5.5 server instance.

Please select the default character set.

☒ **Standard Character Set**

Hello! Makes Latin1 the default charset. This character set is suited for English and other West European languages.

☐ **Best Support For Multilingualism**

日本語 Make UTF8 the default character set. This is the recommended character set for storing text in many different languages.

☐ **Manual Selected Default Character Set / Collation**

? Please specify the character set to use.

Character Set:

< Back   Next >   Cancel

Click -> Next



**MySQL Server Instance Configuration Wizard**

**MySQL Server Instance Configuration**

Configure the MySQL Server 5.5 server instance.

Please set the Windows options.

☒ **Install As Windows Service**

 This is the recommended way to run the MySQL server on Windows.

Service Name:

☒ Launch the MySQL Server automatically

☒ **Include Bin Directory in Windows PATH**

 Check this option to include the directory containing the server / client executables in the Windows PATH variable so they can be called from the command line.

**Click -> Next**

**MySQL Server Instance Configuration Wizard**

**MySQL Server Instance Configuration**

Configure the MySQL Server 5.5 server instance.

Please set the security options.

☒ **Modify Security Settings**

 New root password:  Enter the root password.

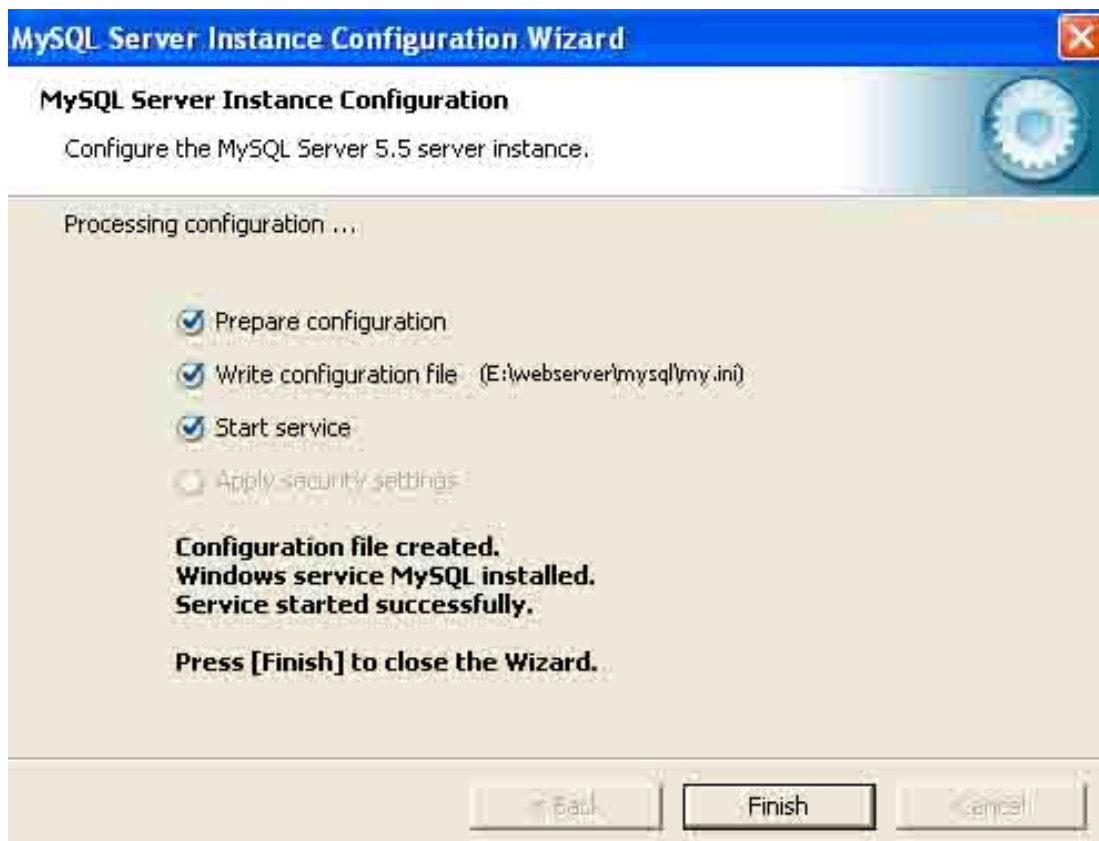
Confirm:  Retype the password.

☐ Enable root access from remote machines

☐ **Create An Anonymous Account**

 This option will create an anonymous account on this server. Please note that this can lead to an insecure system.

**Click -> Next to complete MySQL installation**



## Test MySQL

**Open MySql command line client**

**Type your password at the prompt and you will get like this**

**Enter password: \*\*\*\*\***

**Welcome to the MySQL monitor. Commands end with ; or \g.**

**Your MySQL connection id is 5**

**Server version: 5.5.28 MySQL Community Server (GPL)**

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**affiliates. Other names may be trademarks of their respective owners.**

**Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.**

**mysql> show databases;**

+-----+

| Database |

+-----+

| information\_schema |

| mysql |

| performance\_schema |

| test |

+-----+

4 rows in set (0.01 sec)

mysql> select user from mysql.user;

+-----+

| user |

+-----+

| root |

| somnath |

+-----+

2 rows in set (0.00 sec)

mysql>

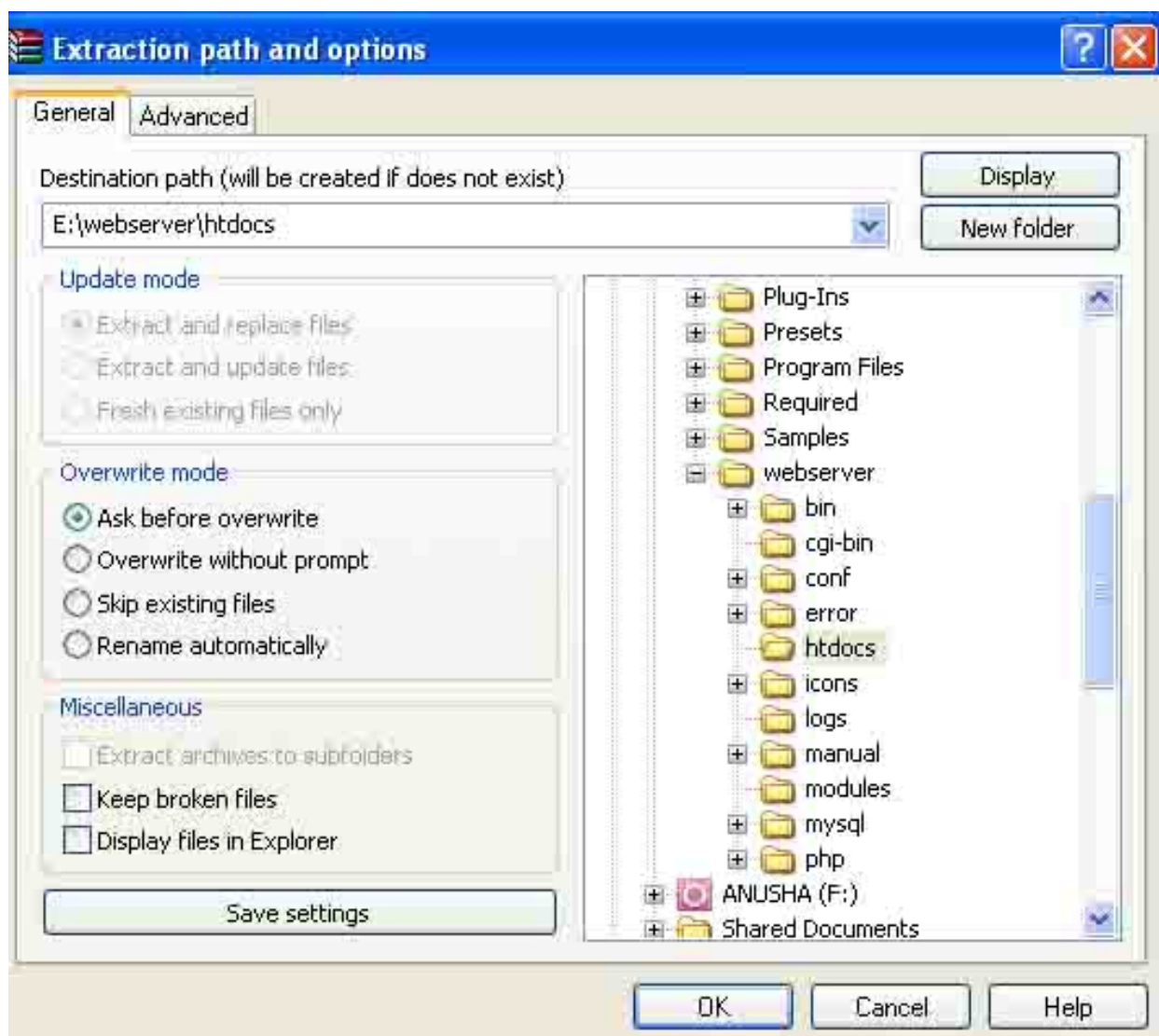
**It's working!!**

# Install phpMyadmin

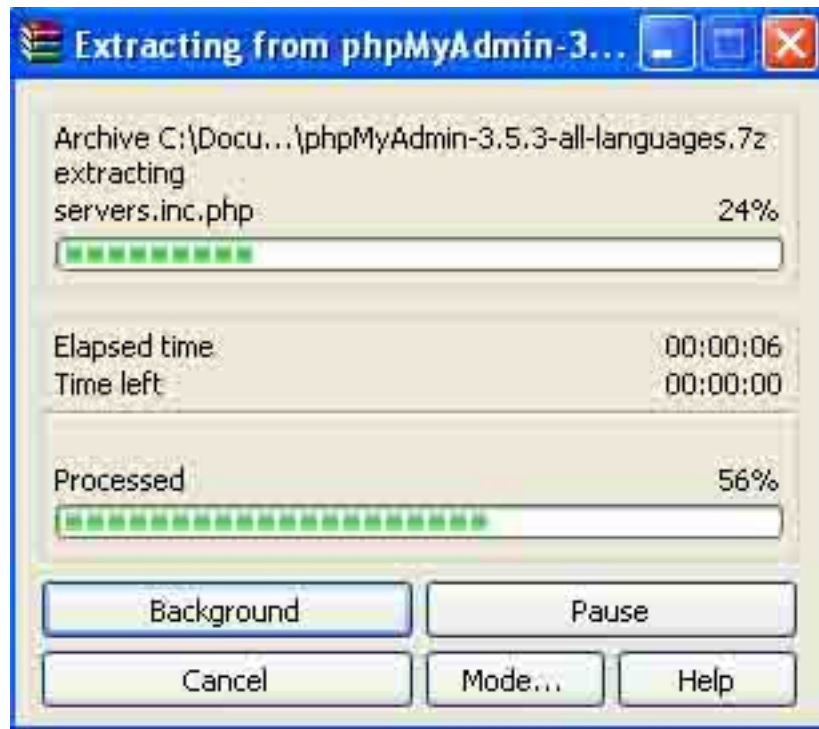
phpMyAdmin is a free software tool written in PHP intended to handle the administration of MySQL over the World Wide Web. phpMyAdmin supports a wide range of operations with MySQL. The most frequently used operations are supported by the user interface (managing databases, tables, fields, relations, indexes, users, permissions, etc), while you still have the ability to directly execute any SQL statement.

Find the file phpMyAdmin-3.5.3-all-languages from the site [http://www.phpmyadmin.net/home\\_page/downloads.php](http://www.phpmyadmin.net/home_page/downloads.php)

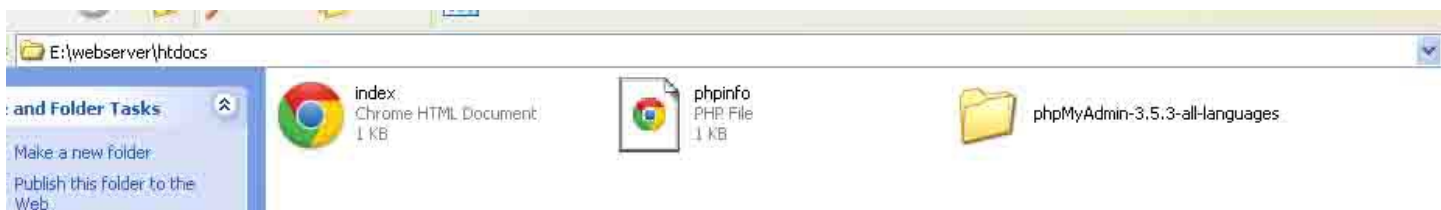
Extract it directly to E:\webserver\htdocs



Wait till extraction is over



**See E:\webserver\htdocs folder now**



**Rename the folder to phpMyAdmin**

**Go into E:\webserver\conf and open httpd.conf file and find these lines**

```
#  
# DirectoryIndex: sets the file that Apache will serve if a directory  
# is requested.  
#  
<IfModule dir_module>  
DirectoryIndex index.html  
</IfModule>  
  
#  
# The following lines prevent .htaccess and .htpasswd files from being  
# viewed by Web clients.
```

**Add index.php after the index.html and it looks like this**

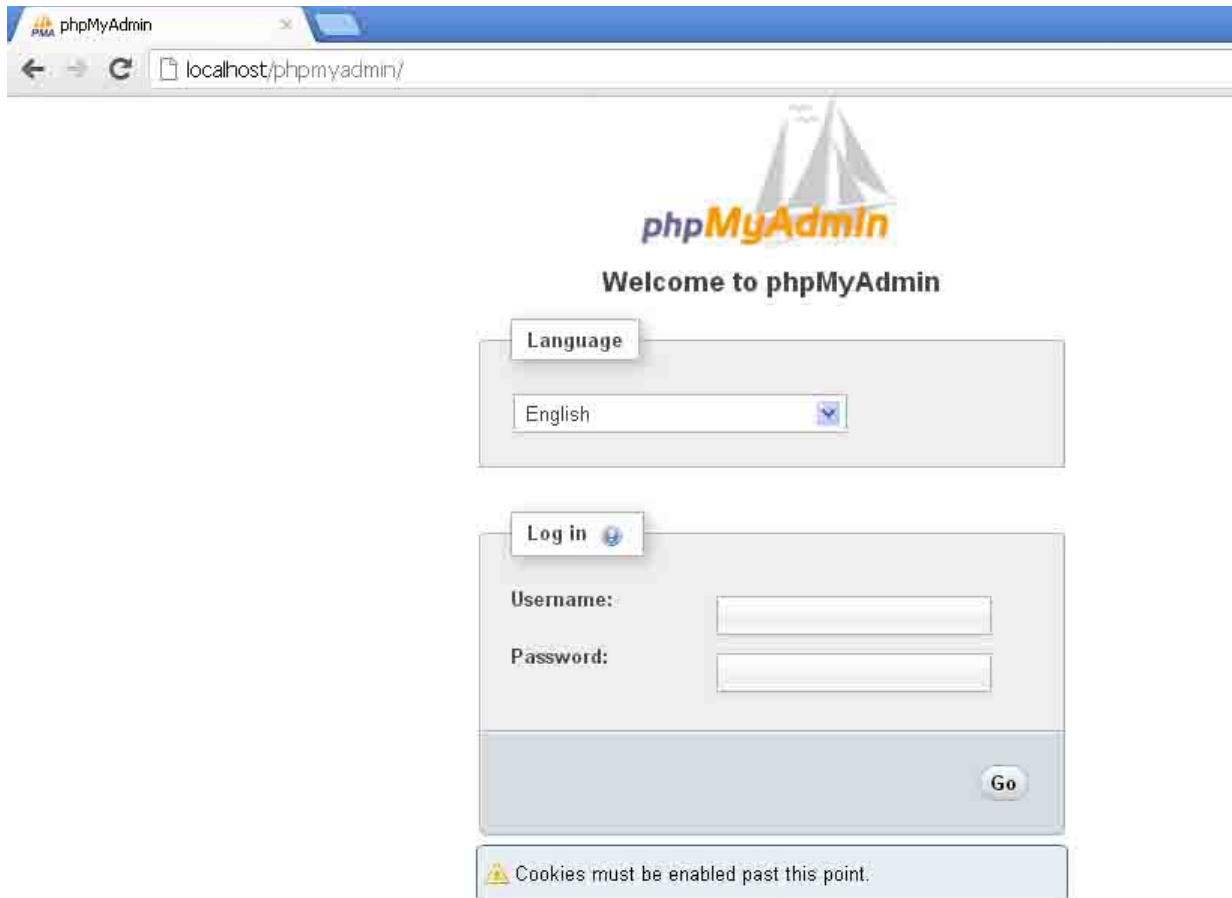
```
#  
# DirectoryIndex: sets the file that Apache will serve if a directory  
# is requested.
```

```
#  
<IfModule dir_module>  
DirectoryIndex index.html index.php  
</IfModule>
```

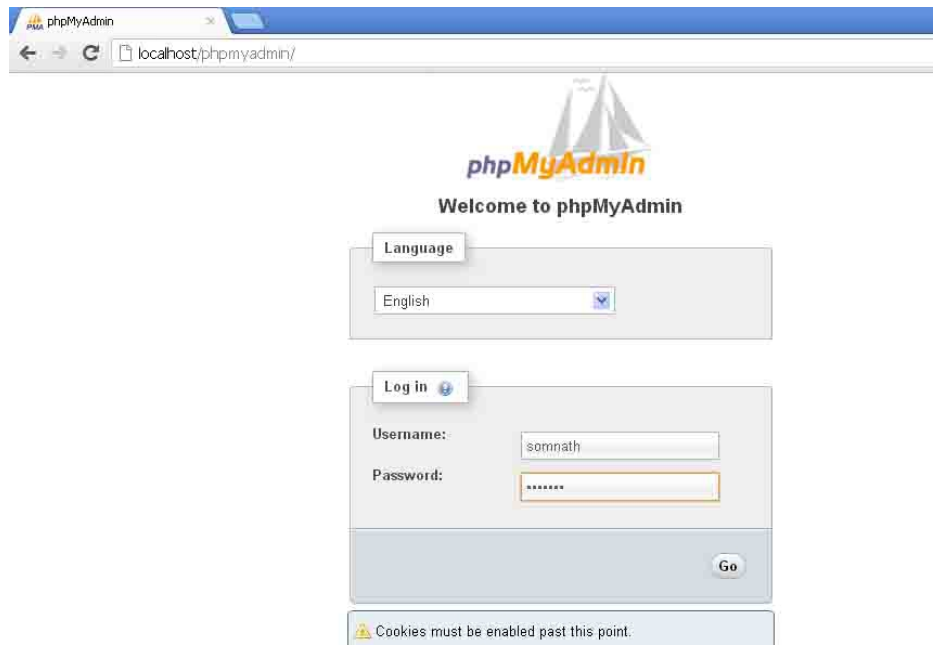
```
#  
# The following lines prevent .htaccess and .htpasswd files from being  
# viewed by Web clients.
```

Restart apache  open browser and type

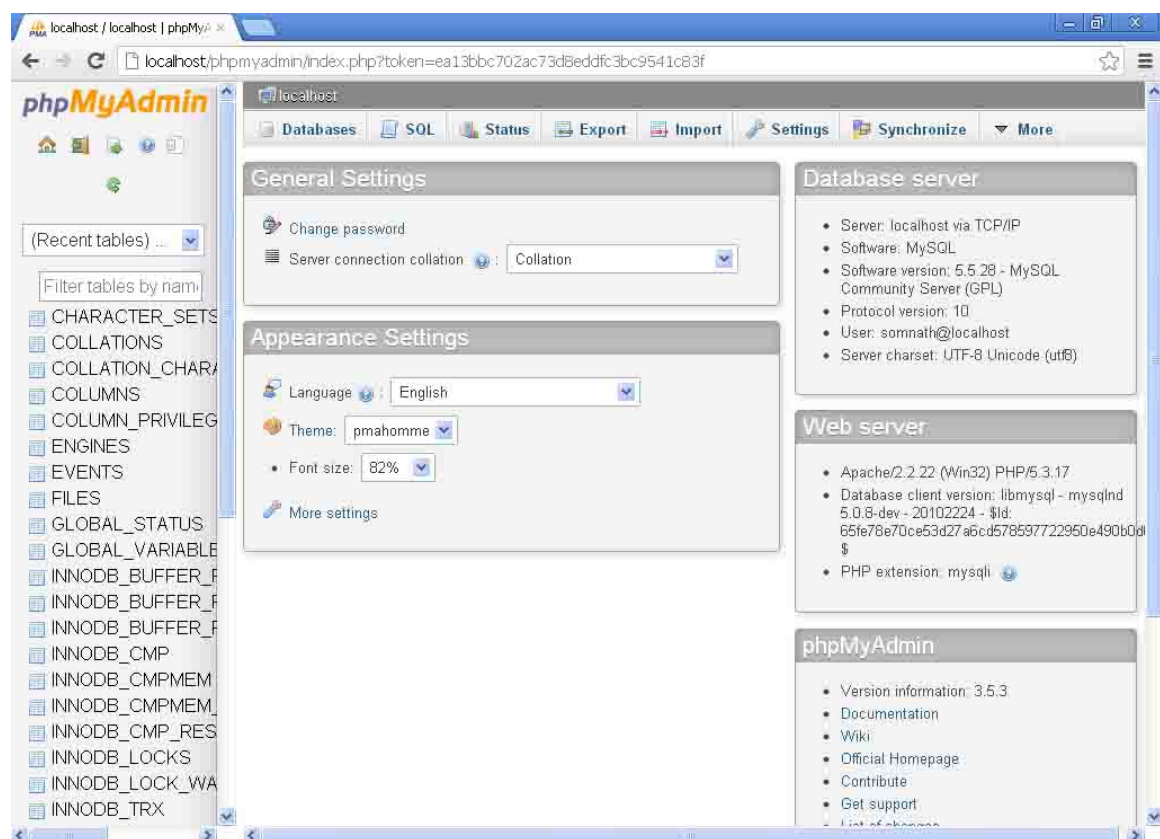
<http://localhost/phpmyadmin/> the following screen appears



Type a user name and password for MySQL and log in



**The following screen appears**



# How to create a MySQL user and password?



**Enter password: \*\*\*\*\***

**Welcome to the MySQL monitor. Commands end with ; or \g.**

**Your MySQL connection id is 12**

**Server version: 5.5.28 MySQL Community Server (GPL)**

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**Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.**

**mysql> grant all on \*.\* to 'amazonuser' identified by 'zoneama123';**

**Query OK, 0 rows affected (0.08 sec)**

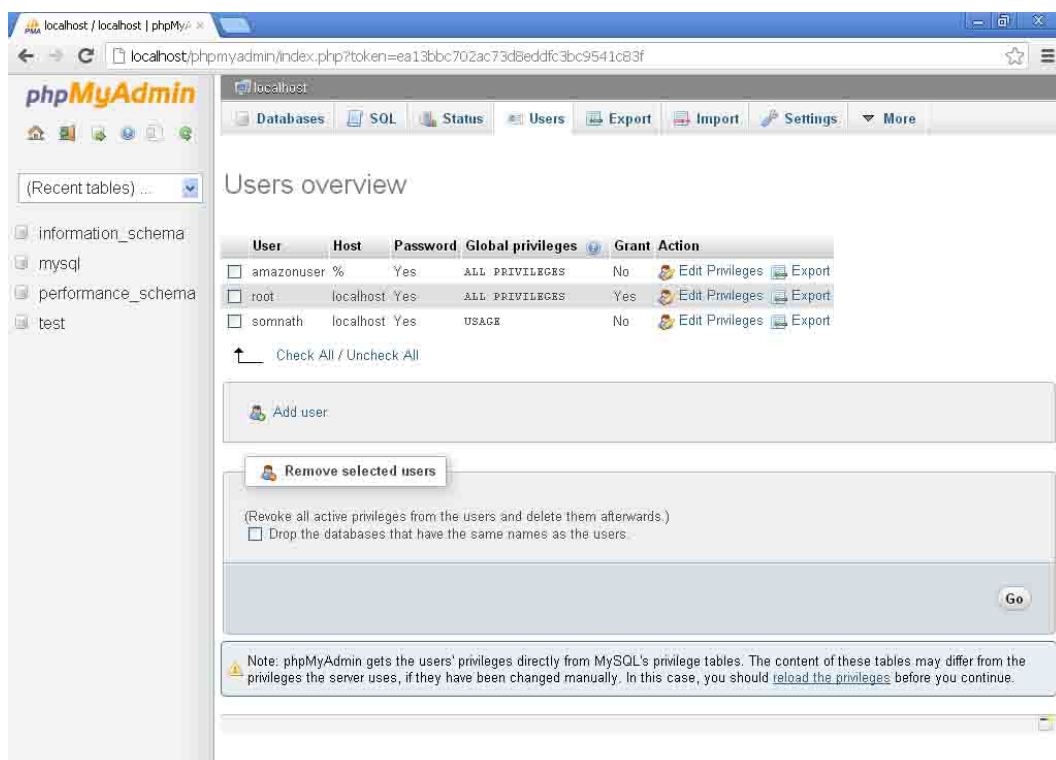
**mysql> flush privileges;**

**Query OK, 0 rows affected (0.03 sec)**

**mysql>**

**Here I have created a new user amazonuser with password zoneama123**

**Lets try the same in phpMyAdmin login screen**





## Simple PHP

### The PHP tag

`<?php`

.....

.....

`?>`

### Let's do something wiser

```
<html>

<body bgcolor="99ff99">

<?php
echo "Kindle";

?>

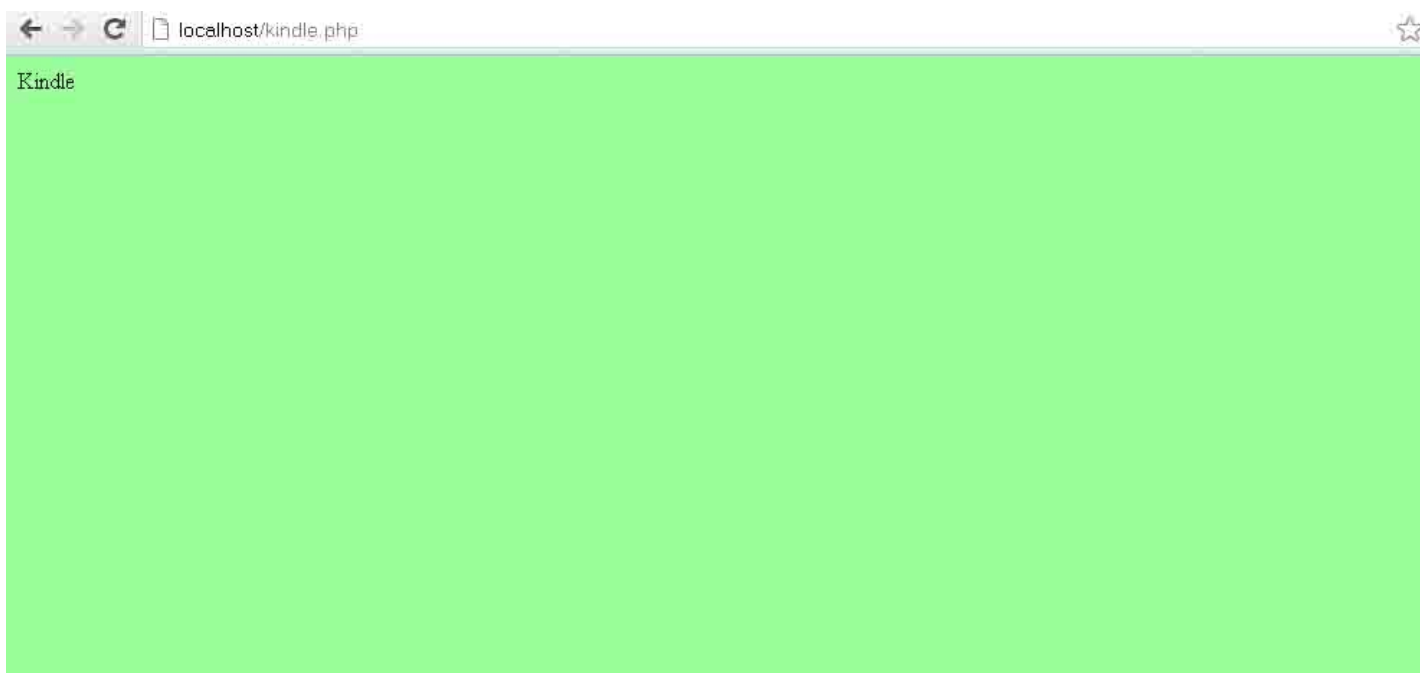
</body>

</html>
```

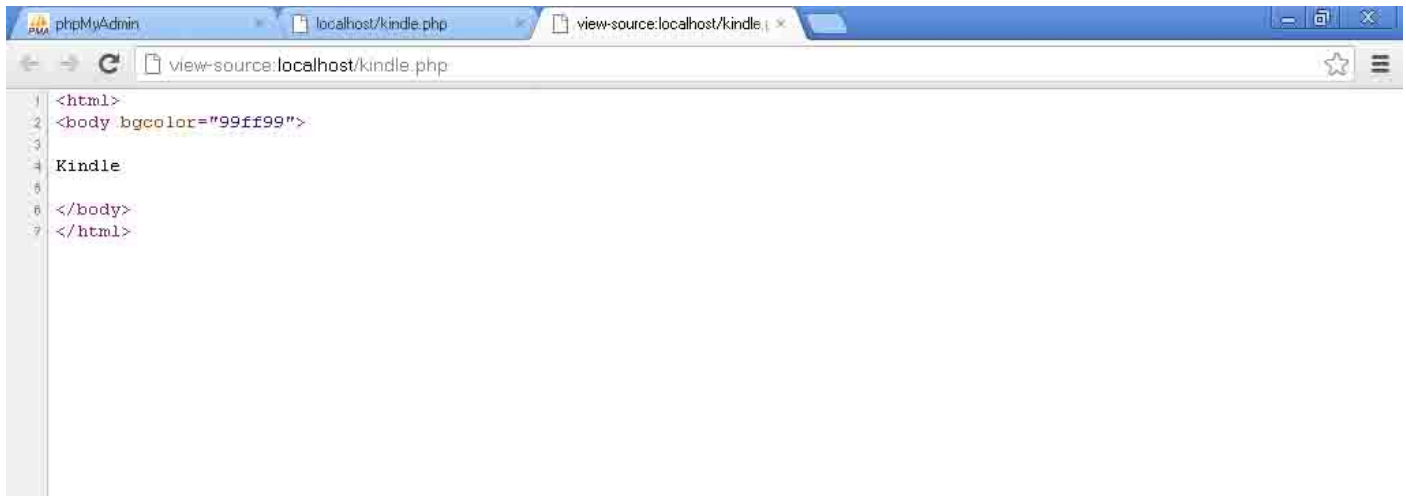
Save the above code in a file say `kindle.php`, the location being

`E:\webserver\htdocs`, open browser and type

`http://localhost/kindle.php` and the following screen should be displayed



**That was fairly simple! Now just right click on output of kindle.php, you will notice the following**



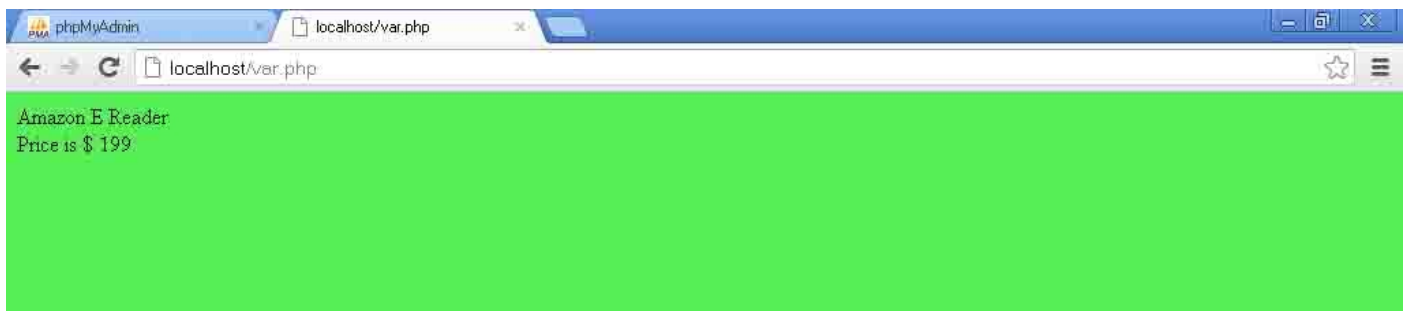
**PHP is a server side scripting language. Scripts are executed at the server side but these files are viewed as plain html at the client browser. Notice that the pair of php tags went missing.**

### **Working with variables in PHP**

**Type the following code in notepad and save as var.php in htdocs.**

```
<html>
<body bgcolor="55ee55">
<?php
$kindle="Amazon E Reader";
$price_in_US_Dollar=199;
echo $kindle;
echo "<br>";
echo "Price is $ ",$price_in_US_Dollar;
?>
</body>
</html>
```

**And the output is as below**



**It's discovery time now. Yes, a PHP variable starts with \$. A variable can store string (just place within quotes) or a number. We do not have to tell PHP separately whether it's a string or a number. PHP is rather a loosely typed language like Perl that does not require the type of the variable to be explicitly stated.**

**Other facts are common as, no spaces in variable names, start with an alphabet or an underscore and can subsequently can contain all alphabets and numbers. Variable names are case sensitive.**

**So following are all different but valid PHP variable names,  
\$KINDLE, \$\_KINDLE, \$kindle, \$KiNdLe, \$K123indle**

```
<html>
<body bgcolor="55ee55">
<?php
$KINDLE=1000002;
echo $KINDLE;
echo "<br>";
$_KINDLE="Fire HD";
echo $_KINDLE;
echo "<br>";
$kindle="Mini";
echo $kindle;
echo "<br>";
$KiNdLe="Latest one";
echo $KiNdLe;
echo "<br>";
$K123indle=12222.66;
echo $K123indle;
?>
</body>
</html>
```

**The code above (saved in htdocs as varmore.php) and it's output is below  
When opened in browser as <http://localhost/varmore.php>**



## Writing functions in PHP

### Consider the code

```
<html>
<body bgcolor="55ee55">
<?php

KindleFireHD();

function KindleFireHD()
{
$kindle="Amazon E Reader";
$price_in_US_Dollar=199;
echo $kindle;
echo "<br>";
echo "Price is $ ",$price_in_US_Dollar;
}
?>
</body>
</html>
```

### Output is as below



The variable `$kindle` declared within the function is a local variable. It will cease to exist as soon the function is completed. So the statement `echo $kindle;` if written outside the function will not give any output. If we want the same we would need to declare it as static from within the function or as global from outside the function. A global variable is accessed from within the PHP function with the keyword `global`.



Look at the above output and the following code

```
<html>
<body bgcolor="55ee55">
<?php
$Plain_White=119; // Global variable declaration
KindleFireHD(); // Function Call! before any prototype or definition!

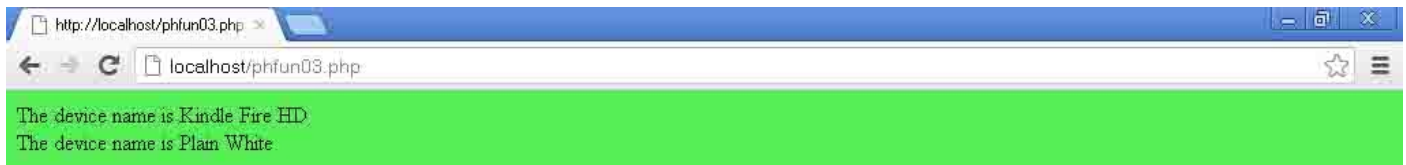
function KindleFireHD()
{
static $count=9; // static variable
$kindle="Amazon E Reader";
$price_in_US_Dollar=199;
echo $kindle;
global $Plain_White; // accessing a global variable from a function with keyword global
echo "<br>";
echo $Plain_White;
echo "<br>";
echo "Price is $ ",$price_in_US_Dollar;
echo "<br>";
echo "Count is ", $count;
$count++; // static variable value increased
}
echo "<br>";
KindleFireHD(); // again function call count is different as $count persists
echo "<br>";
echo $Plain_White; // it's a global var
?>
</body>
</html>
```

Notice that value of variable `$count` increases from 9 to 10 as variable `$count` being static is not destroyed between two function calls.

Consider the code and the subsequent output

```
<html>
<body bgcolor="55ee55">
<?php
function KindleDevice($name)
{
echo "The device name is ",$name;
echo "<br>";
}

KindleDevice("Kindle Fire HD");
KindleDevice("Plain White");
?>
</body>
</html>
```



**In the code above we have used a parameter or argument to a function. A parameter is like a variable that picks up values from function call statement while it is passed to the functions.**

**A function can have many parameters as shown below!**

```
<html>
<body bgcolor="55ee55">
<?php
function KindleDevice($name, $monthsold)
{
echo "The device name is ",$name;
echo "<br>";
echo "The device is ",$monthsold, " months old";
echo "<br>";
}

KindleDevice("Kindle Fire HD", 4);
KindleDevice("Plain White", 10);
?>
</body>
</html>
```

**The output is as below**

