Php MySql

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About me

Somnath PaulChoudhury (Author)
MSc(Information Technology)

Somnath PaulChoudhury 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 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) XXXXXXXXXXXXX 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

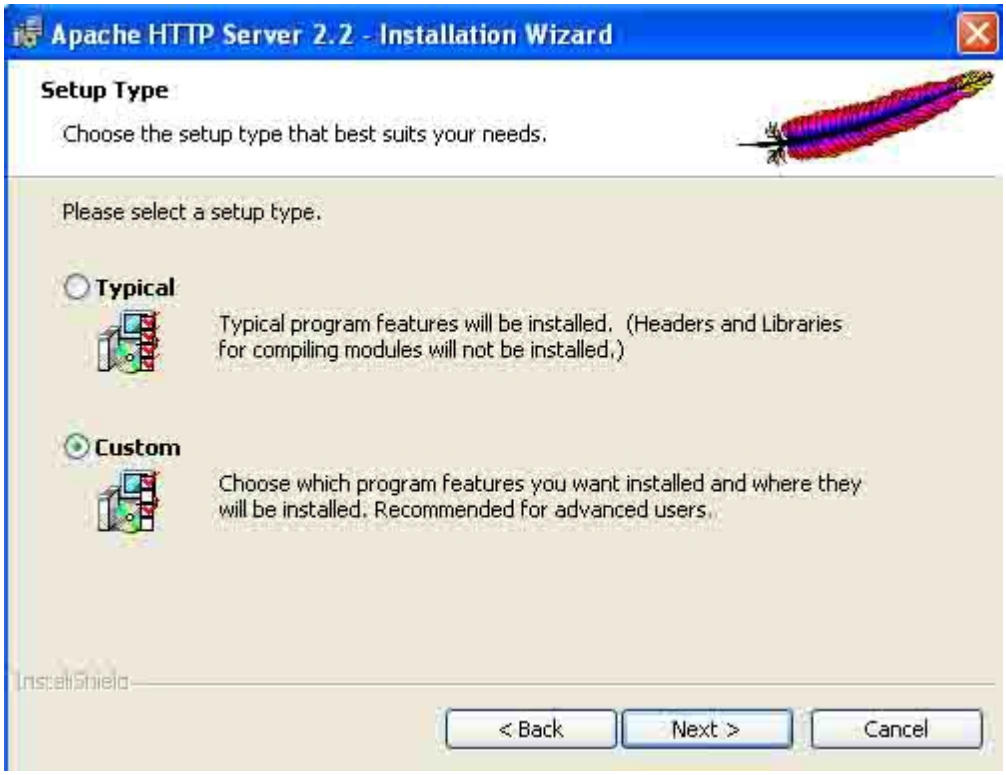
on.

Accept license agreement and click next

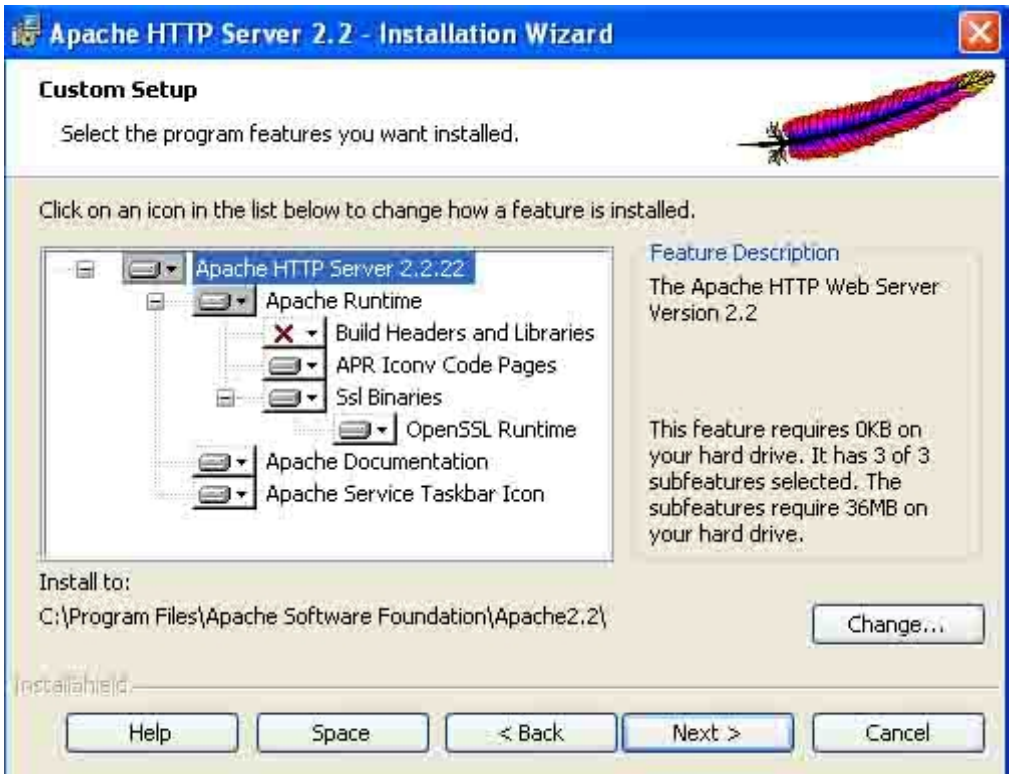
Type localhost for Network Domain, Server Name. Give any email address

Select Port 80 click next

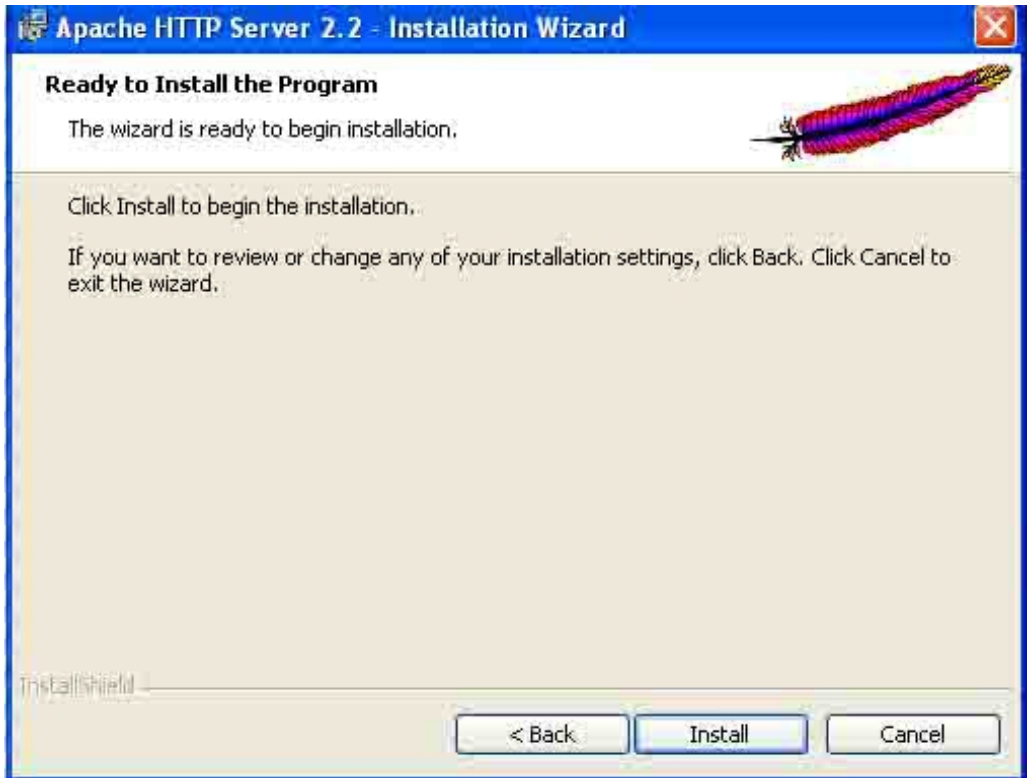
Select Custom and click next



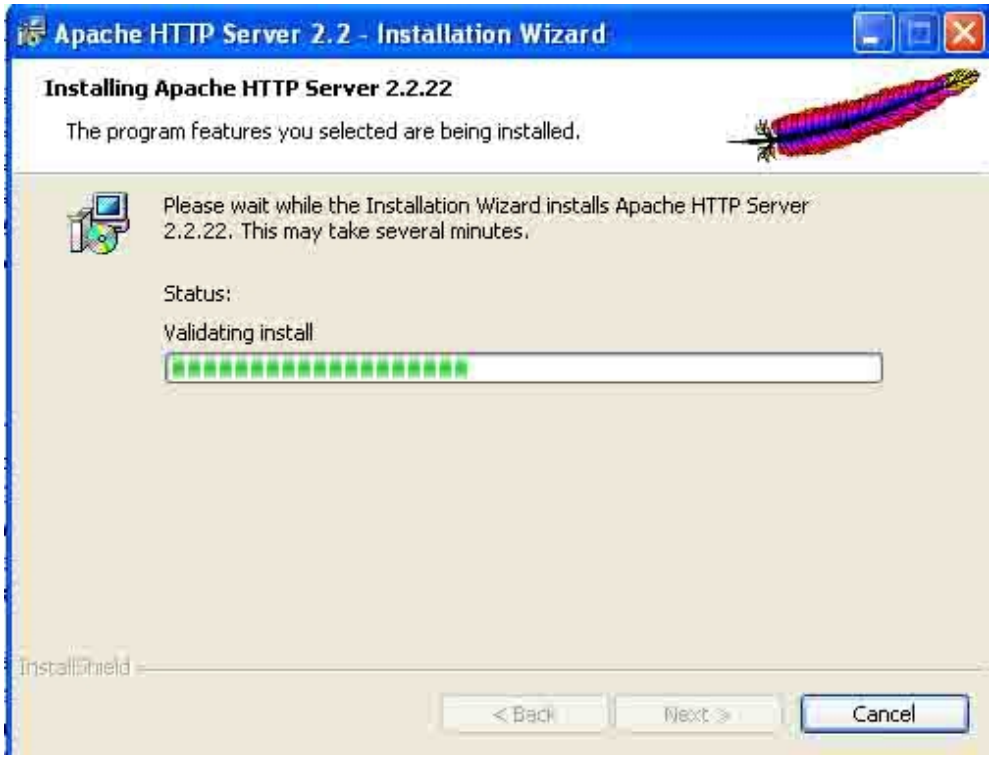
Click Change push button to select new location (E:\webserver\) to install



Click install to begin installation process

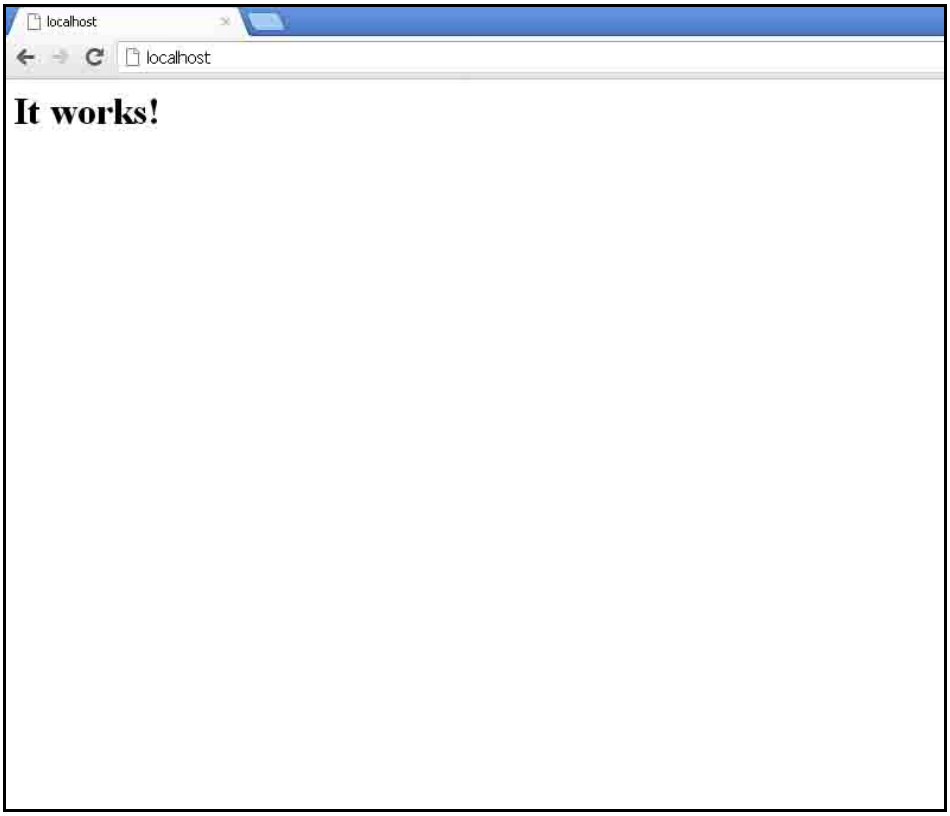


Installation in progress



Installation completed, click finish

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



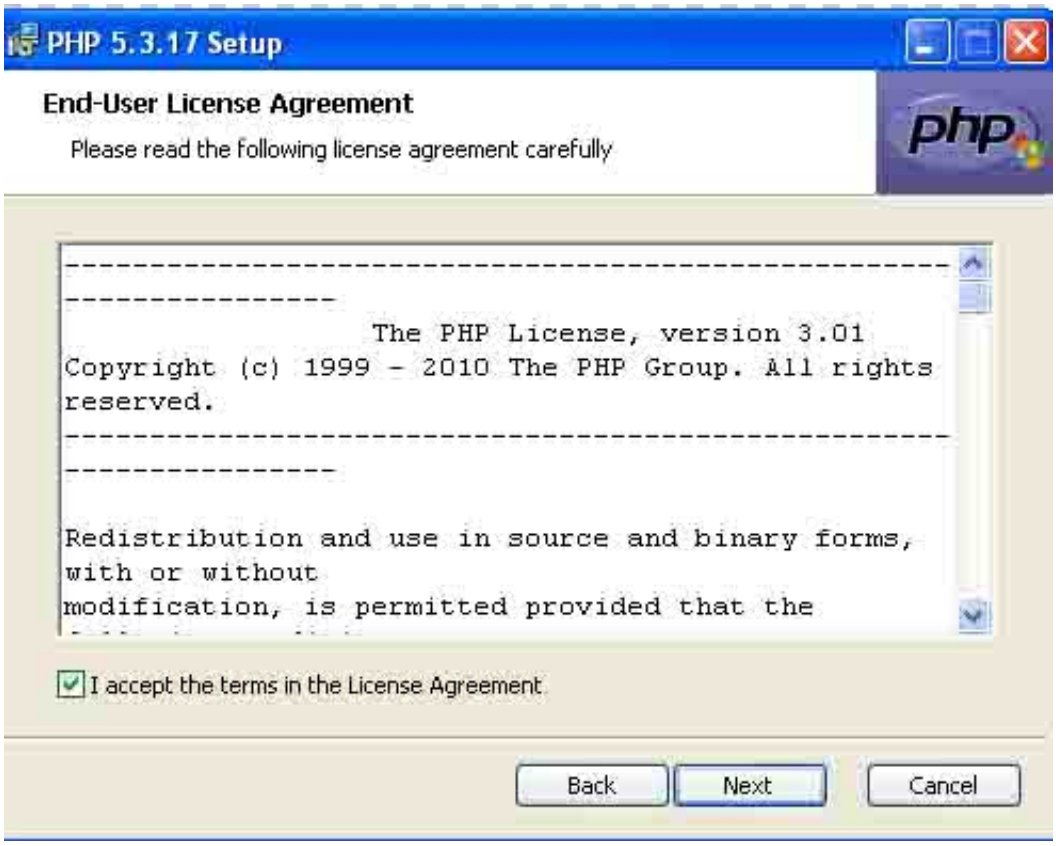
Installing PHP

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

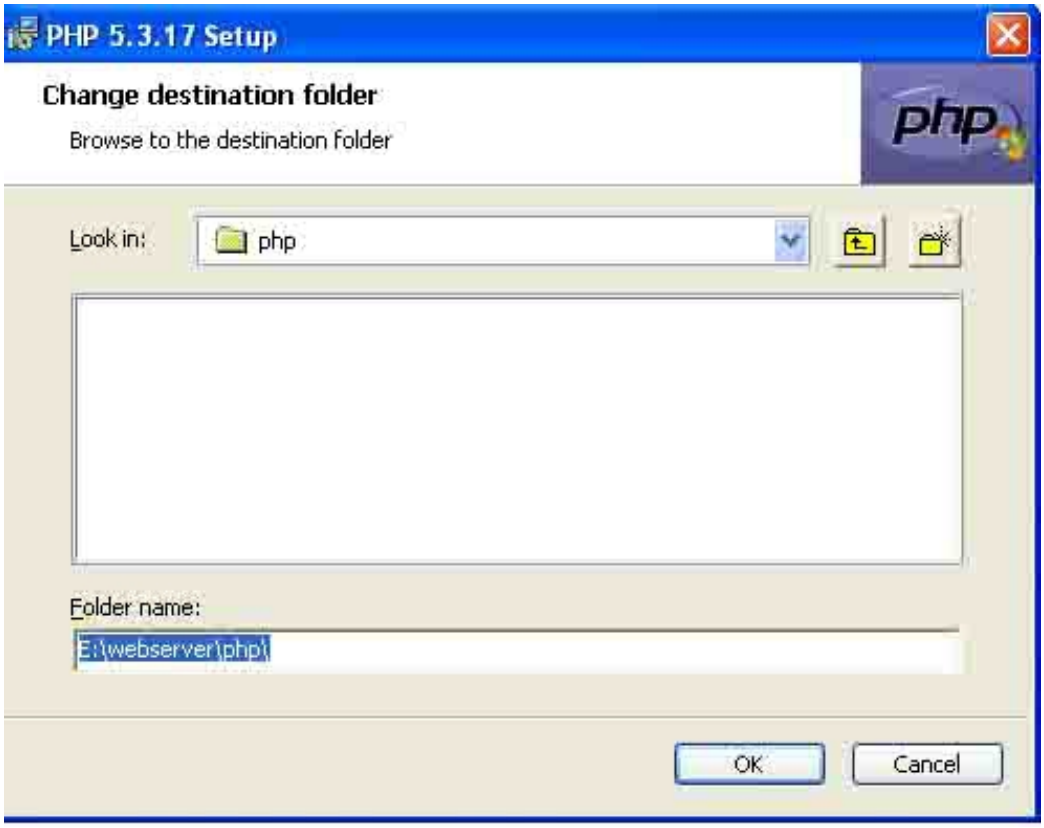
Follow the screen shots taken by me in succession as the installation goes on.

Disable any virus detection software during installation process.

Accept end user license agreement and click next

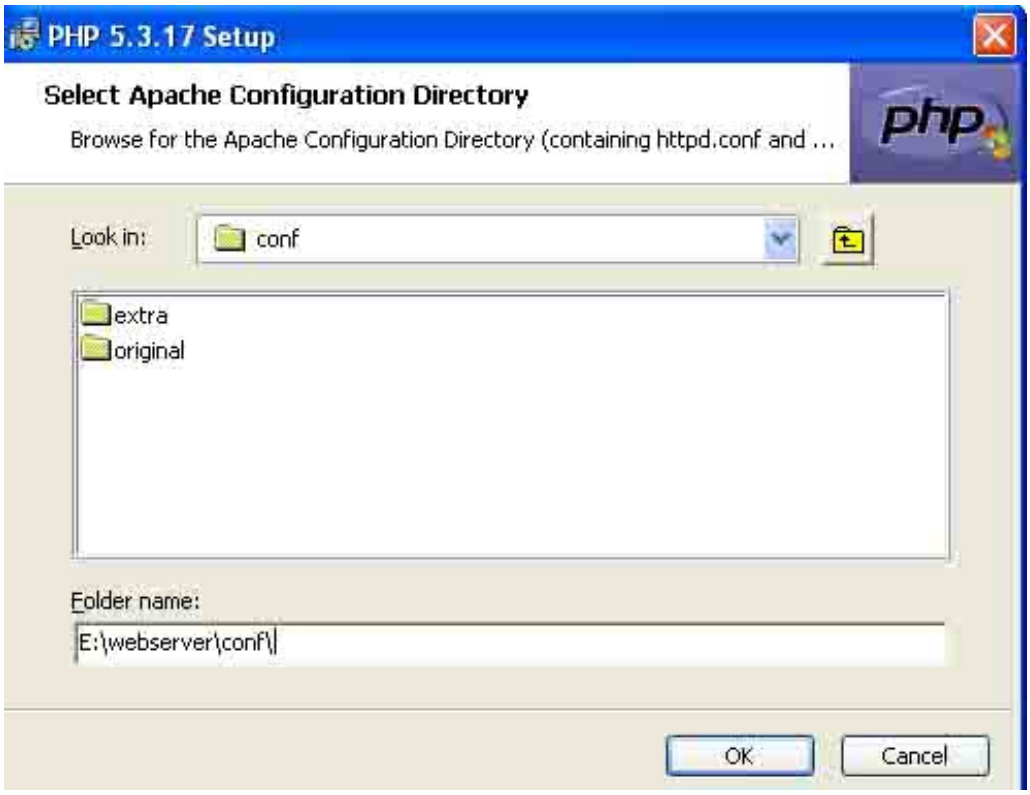


Click browse and select E:\webserver\php\ as destination folder to install

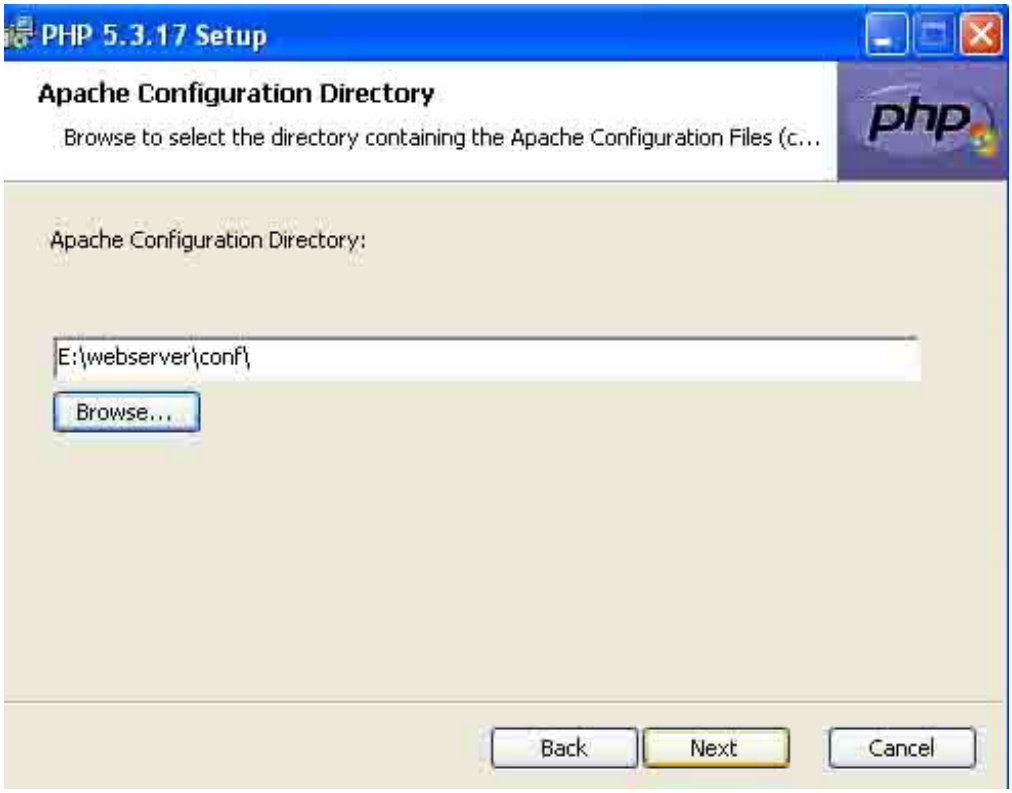


Click OK to proceed and select Apache 2.2.x Module and click next

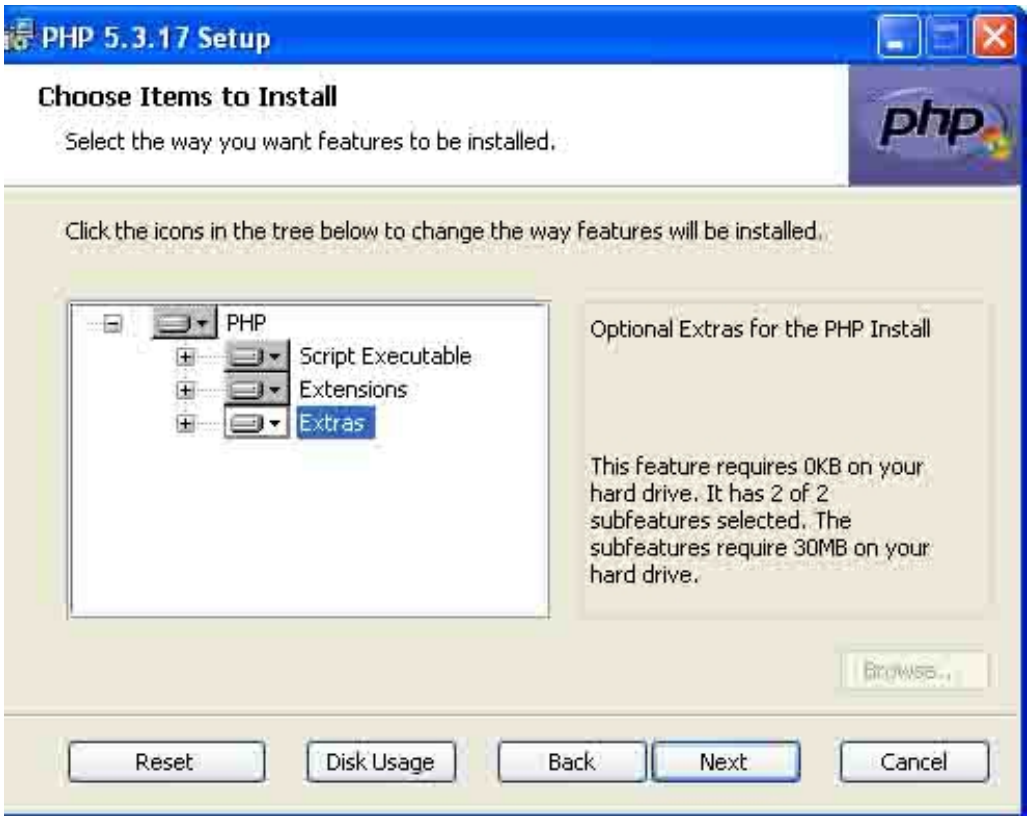
Select Apache configuration directory as shown below

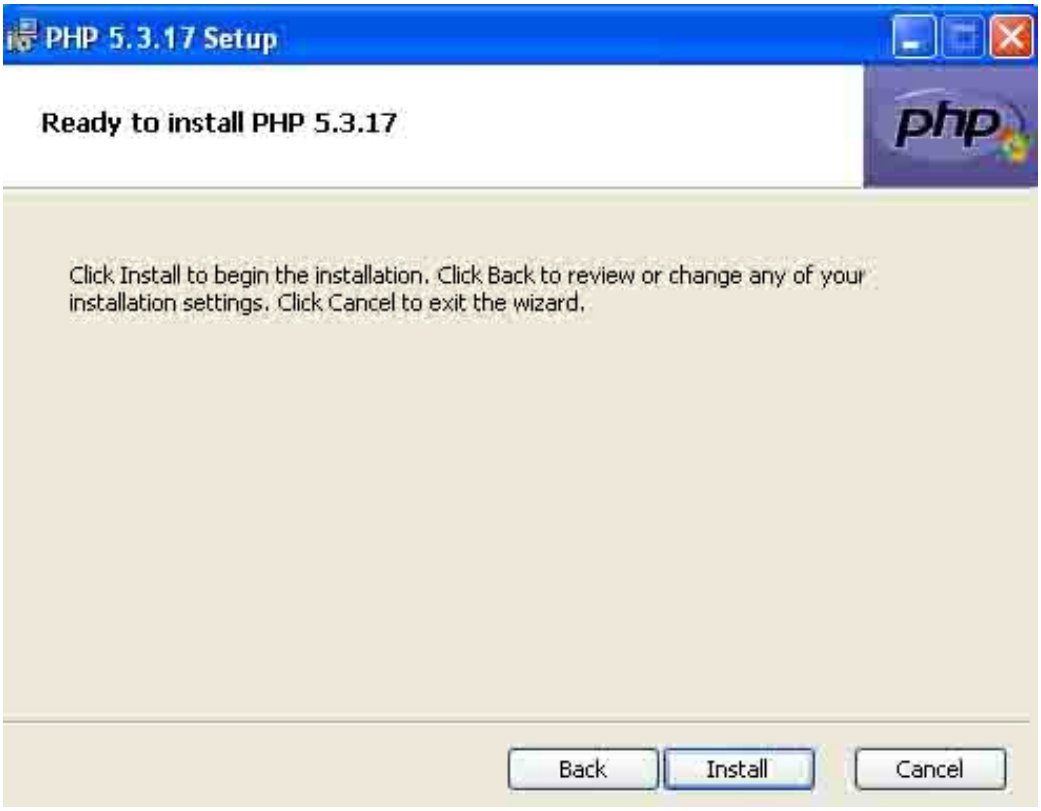


Click Next

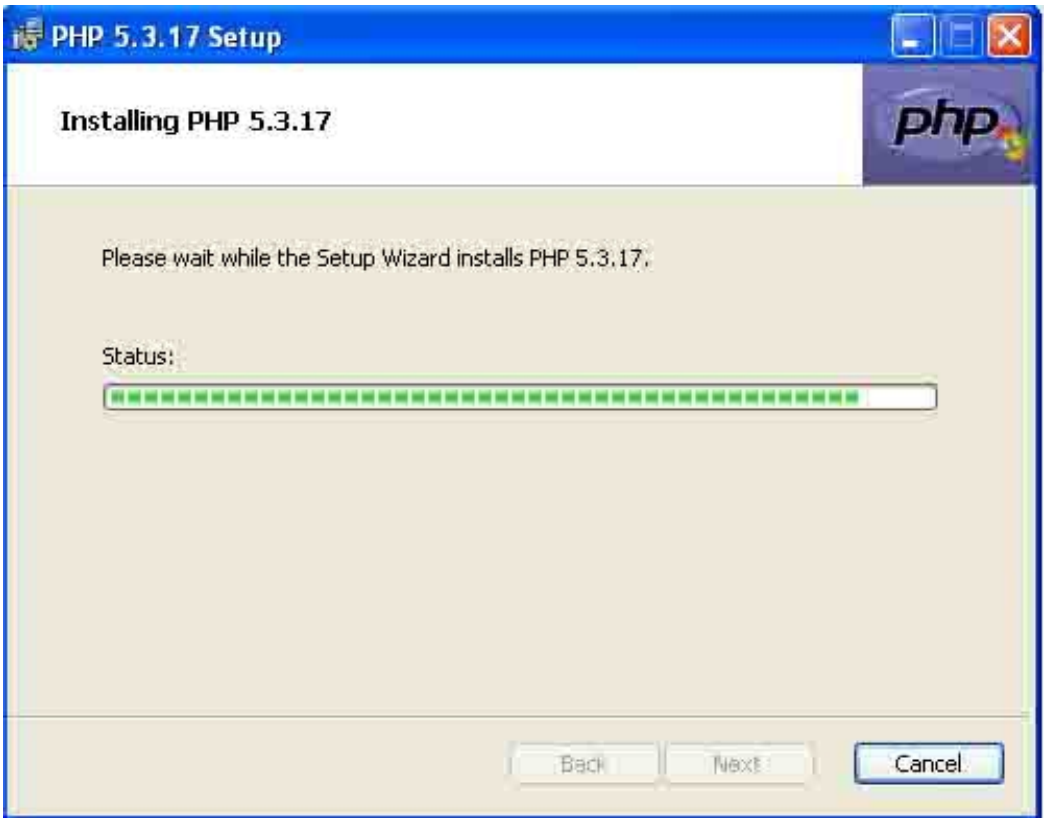


Choose items to install and click Next





Click Install



Installation in progress

Installation is complete

Open notepad and type the following code

<?php

phpinfo()

?>

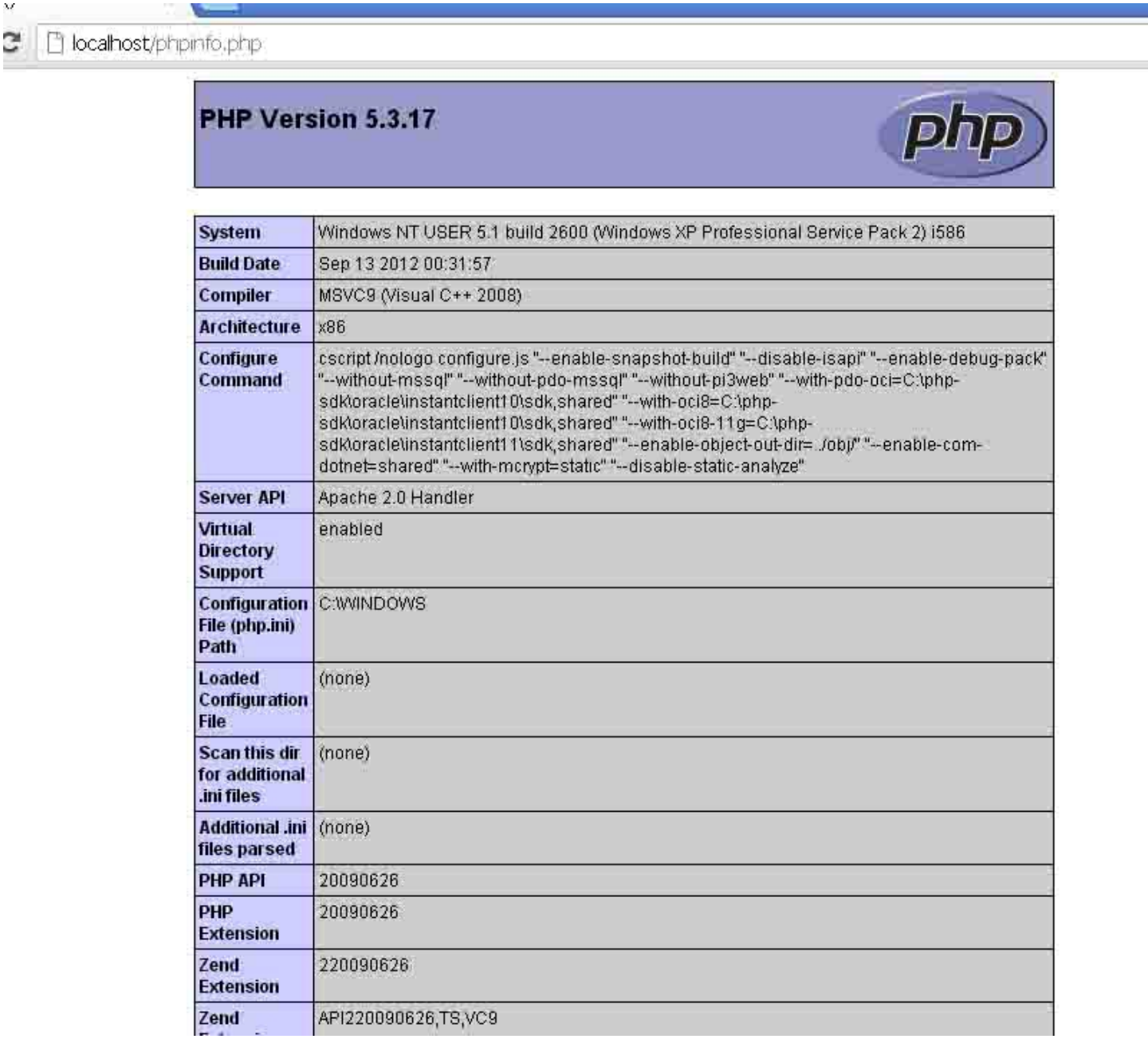
save the code as phpinfo.php in E:\webserver\htdocs

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



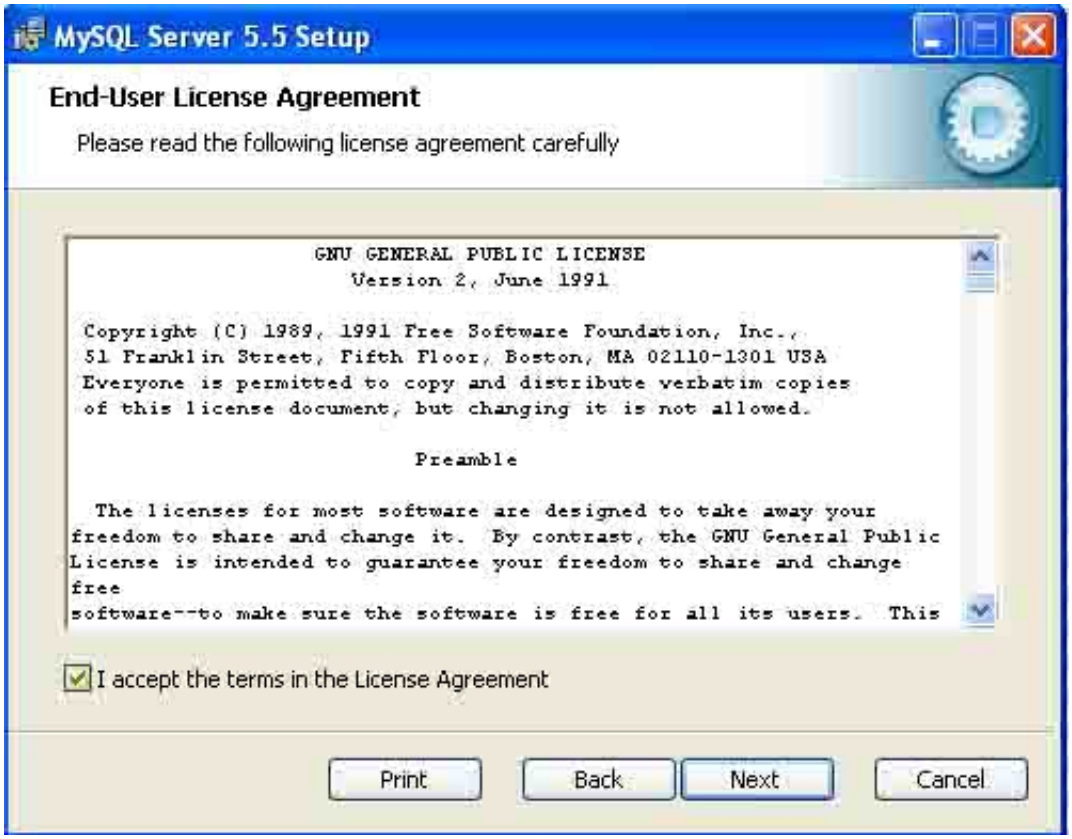
Installing MySQL

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

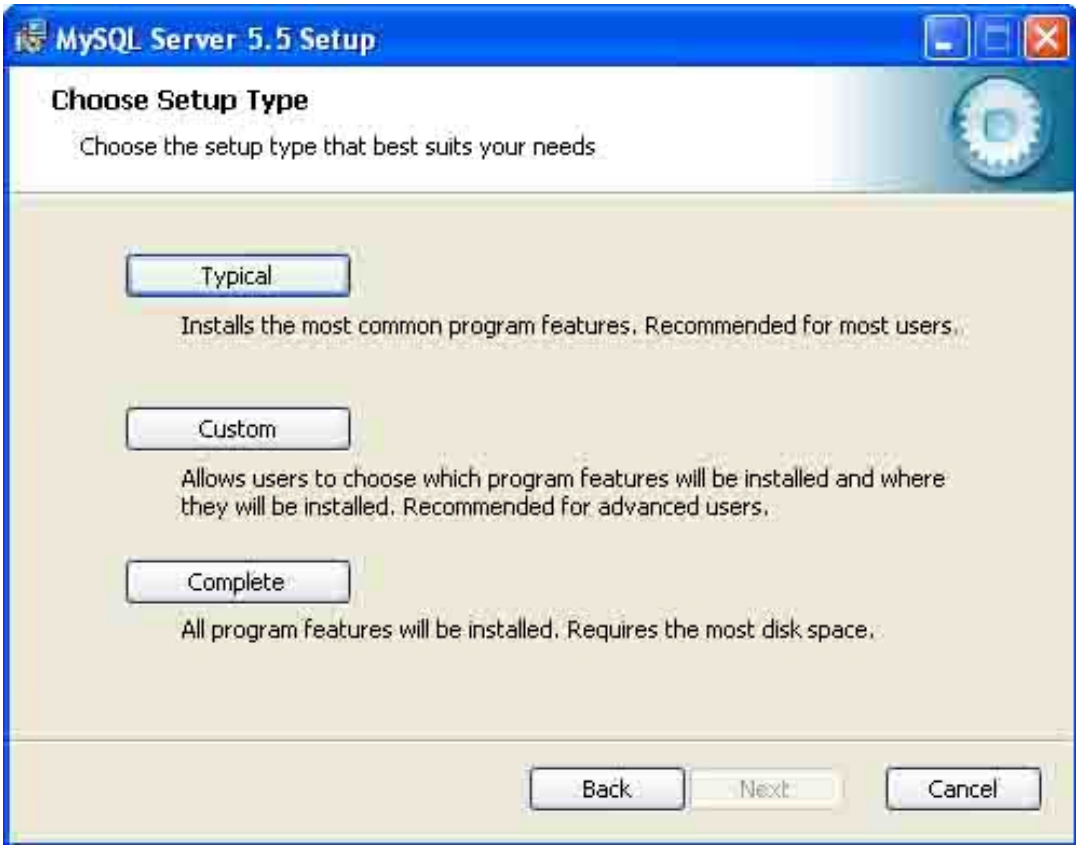
Follow the screen shots taken by me in succession as the installation goes on.

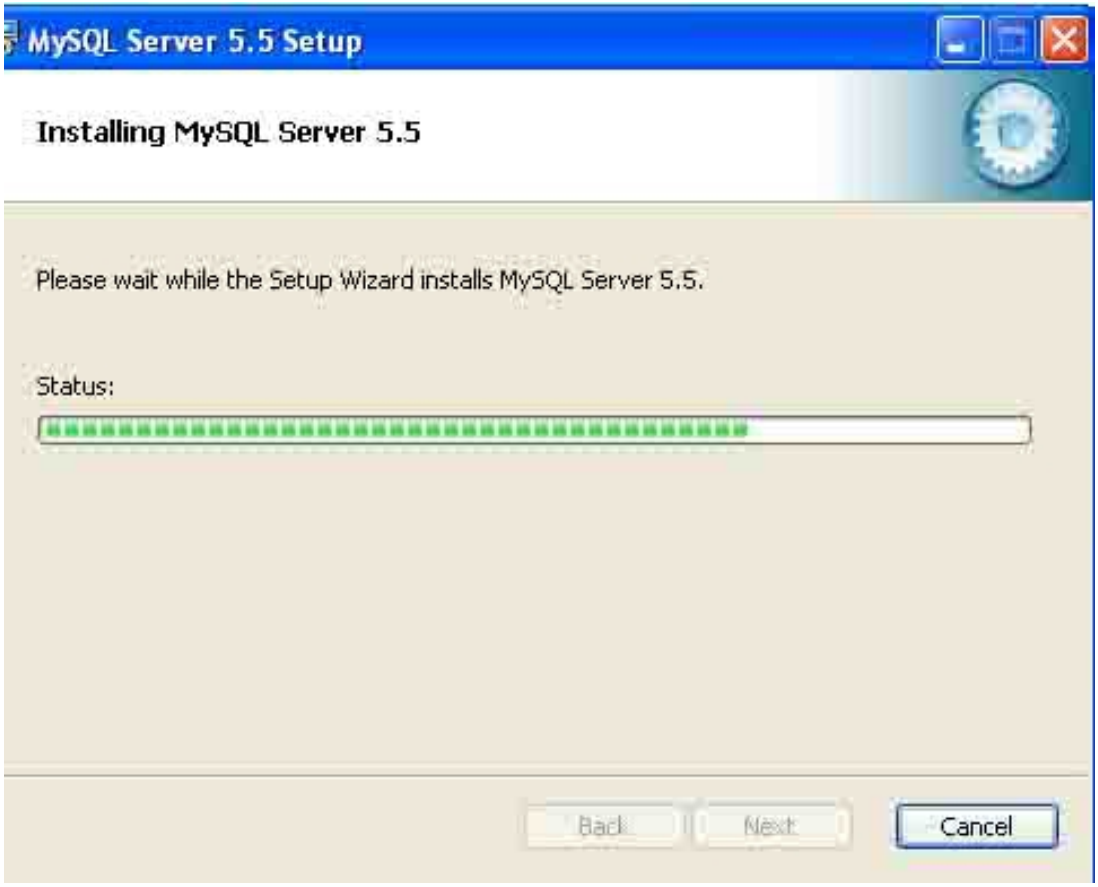
Click Run ✳ Click Next

Accept license agreement click Next



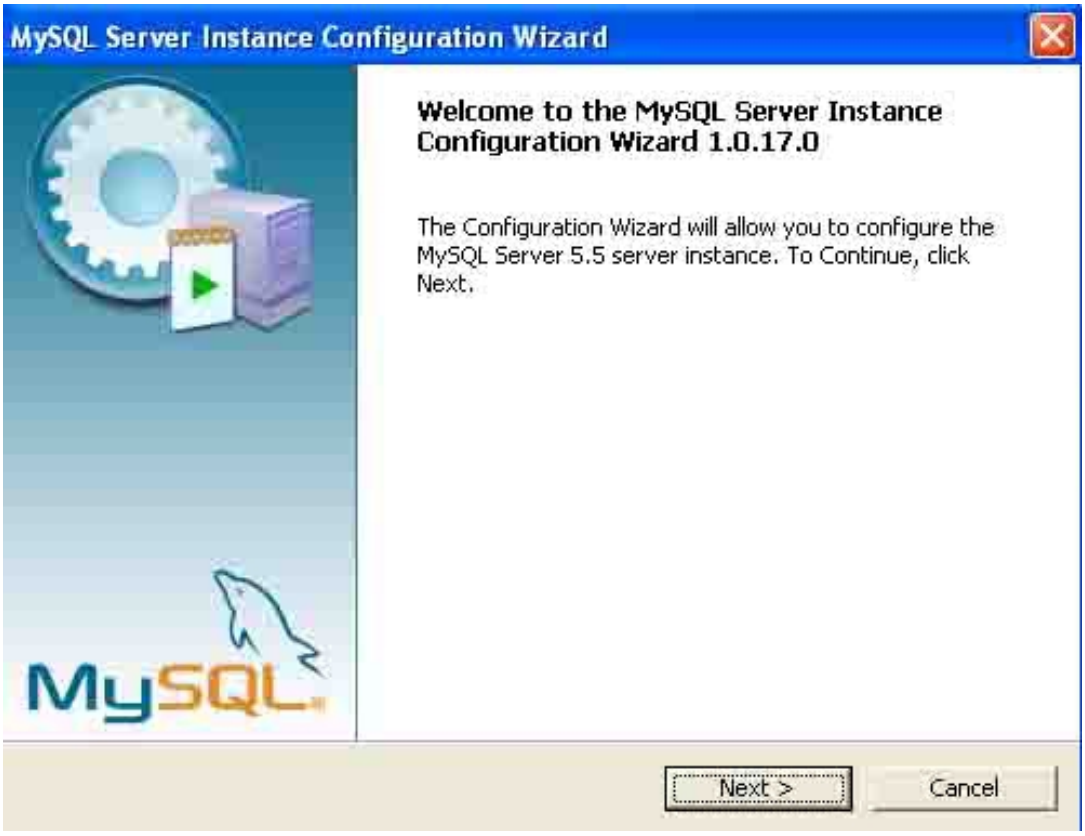
Select Typical click Install in next screen to start installation



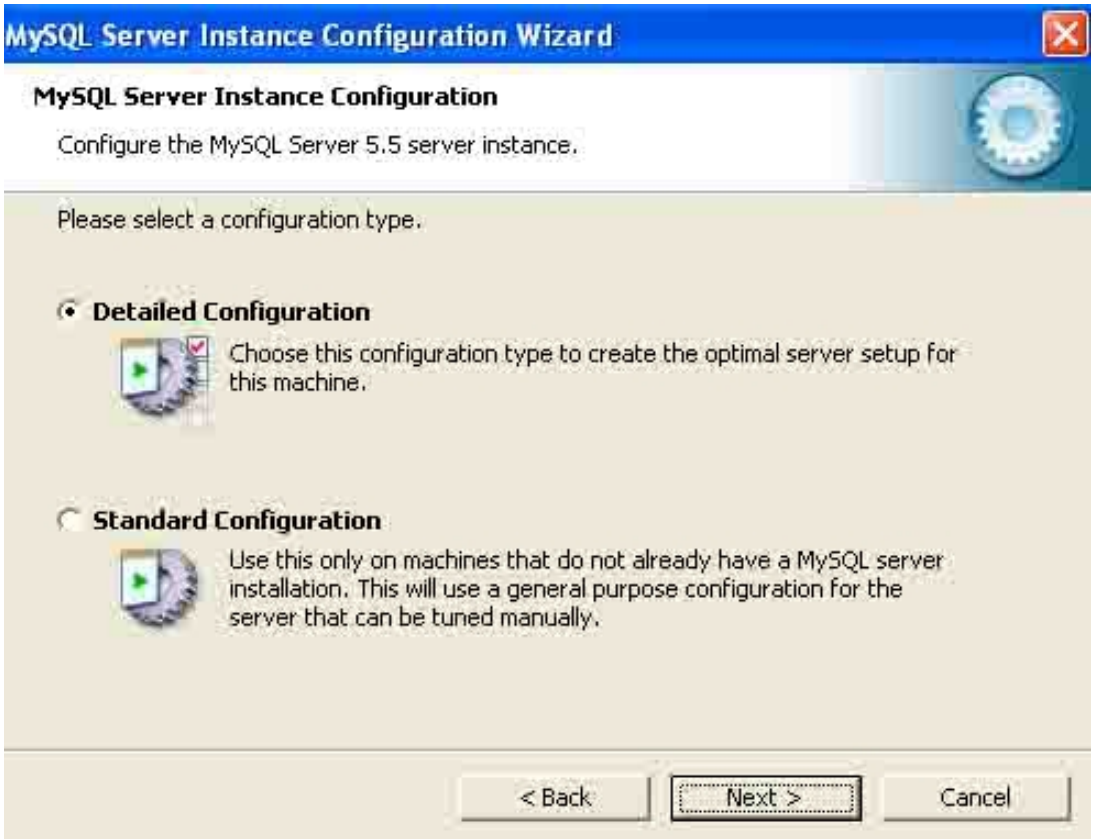


Click Next -> Next -> .. -> Finish

Click Next



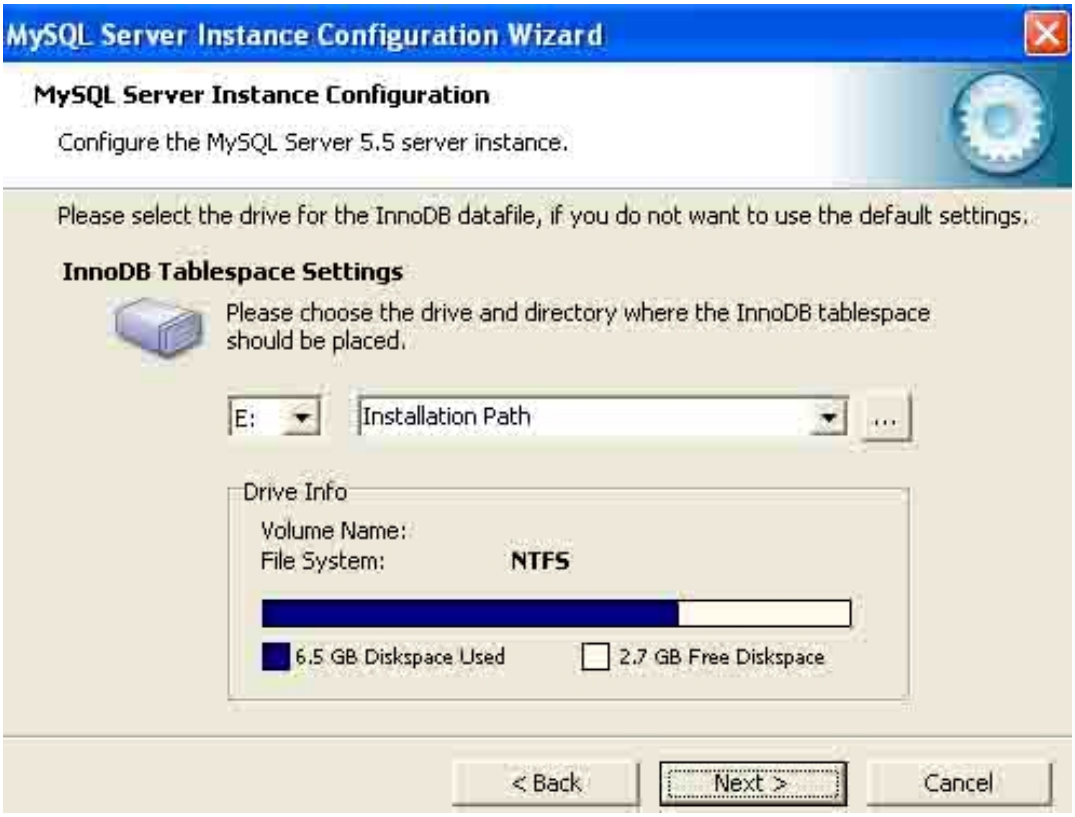
Select Detailed Configuration ->Next



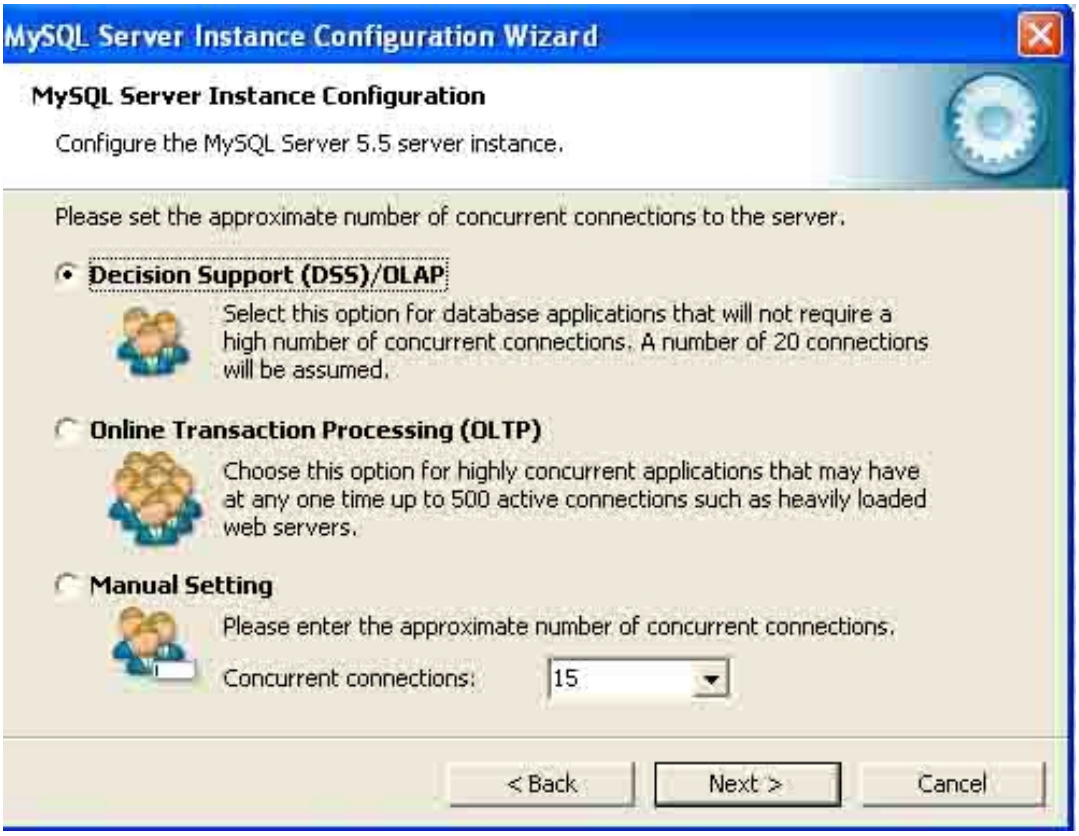
Developer Machine -> Next

Multifunctional Database -> Next

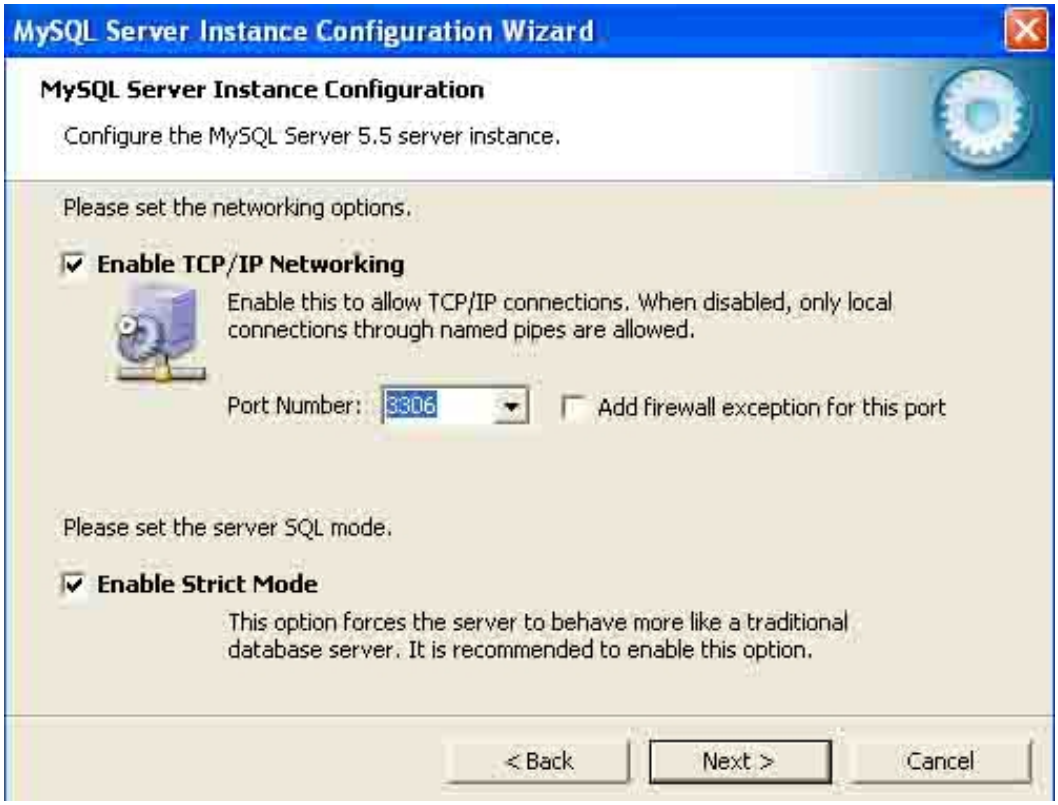
Click -> Next


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 Diskspace
< Back
Next >
Cancel

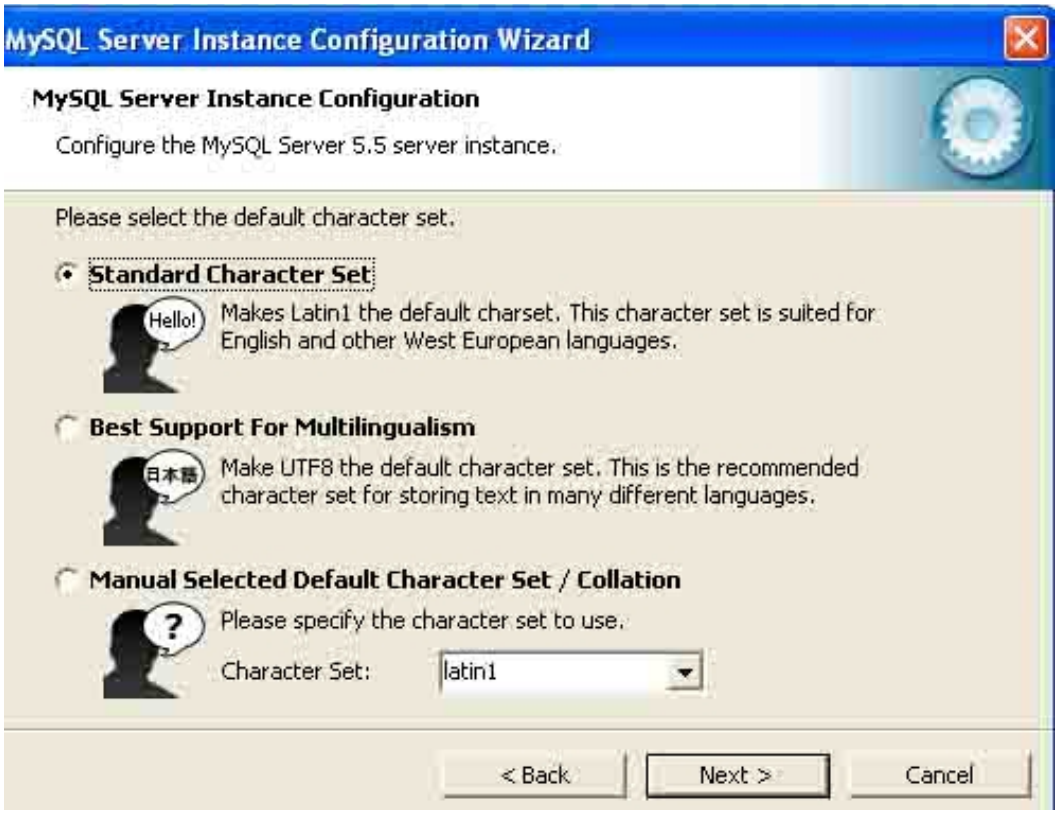
Click -> Next


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



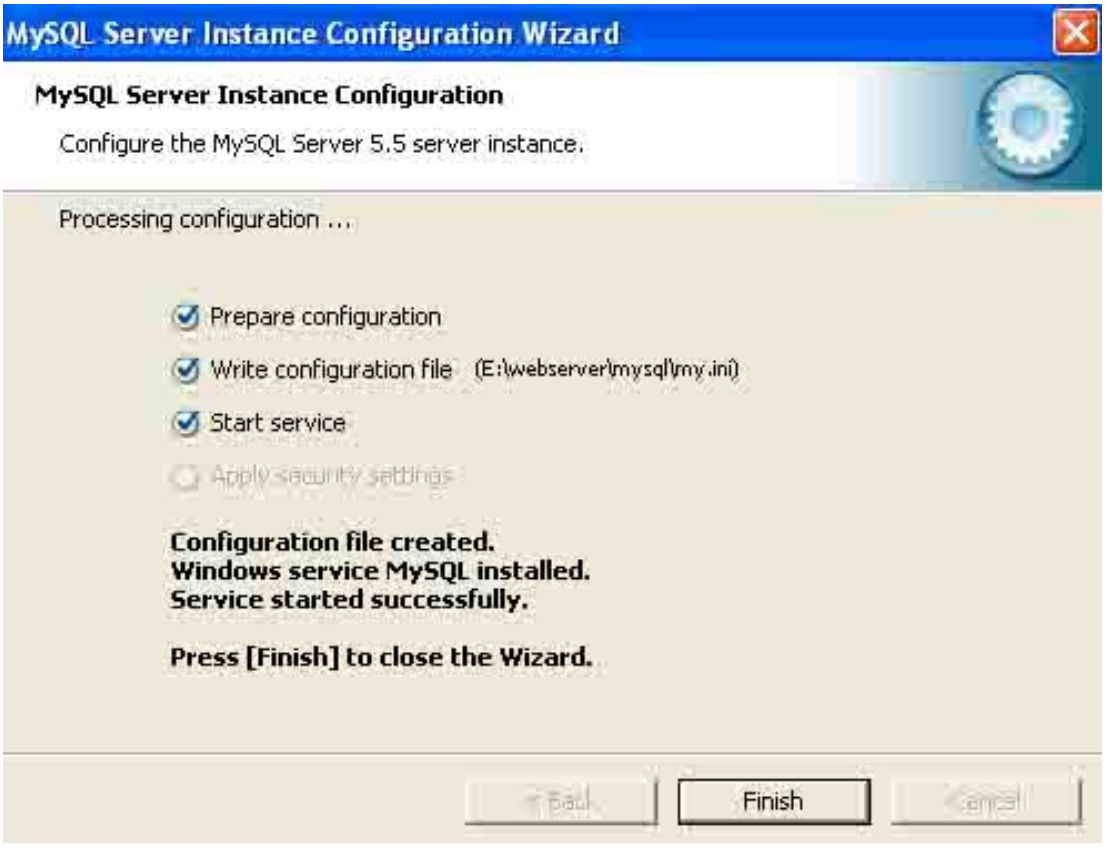
Click -> Next



Click -> Next

Click -> Next

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>
```

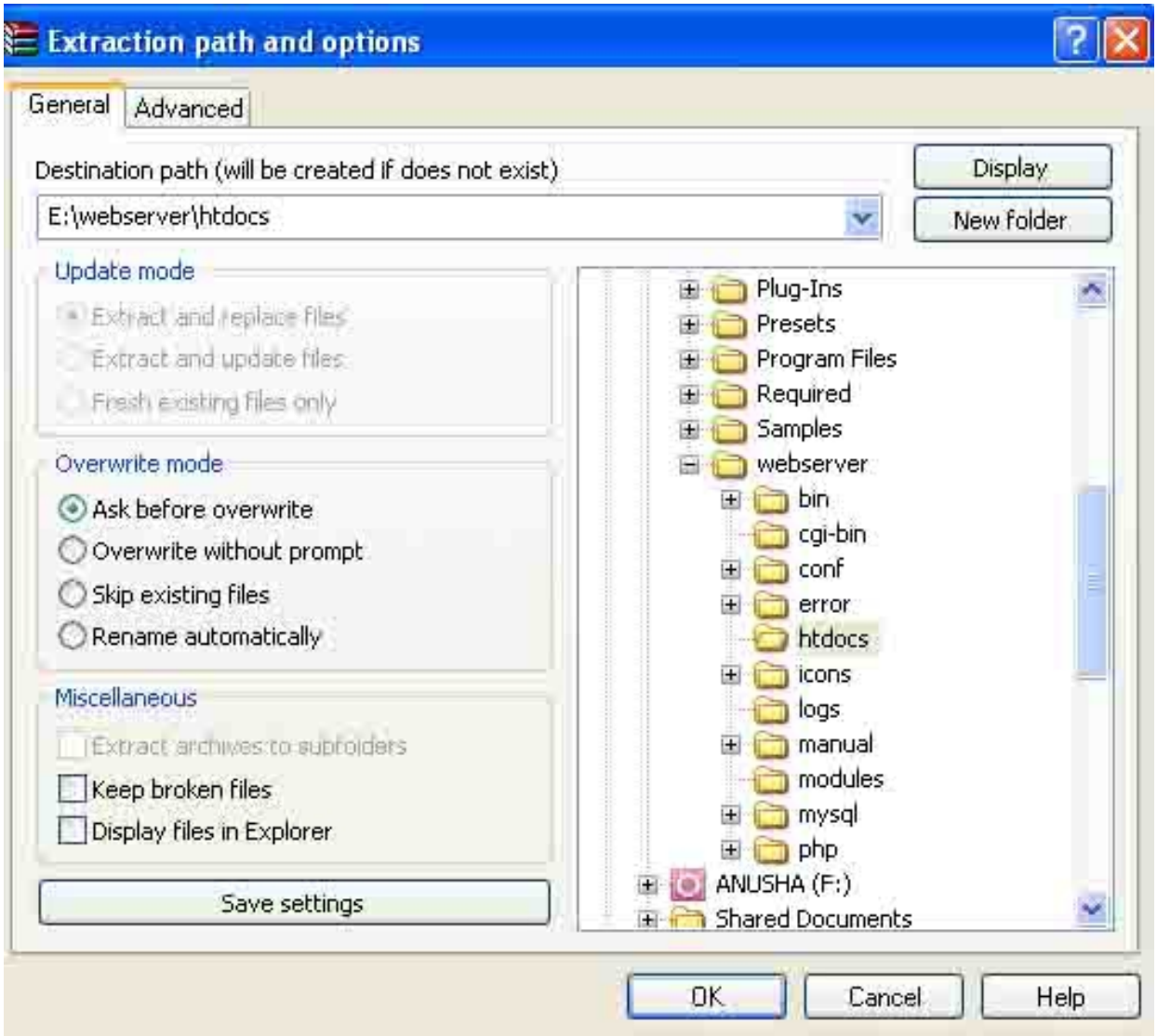
It’s working!!

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.

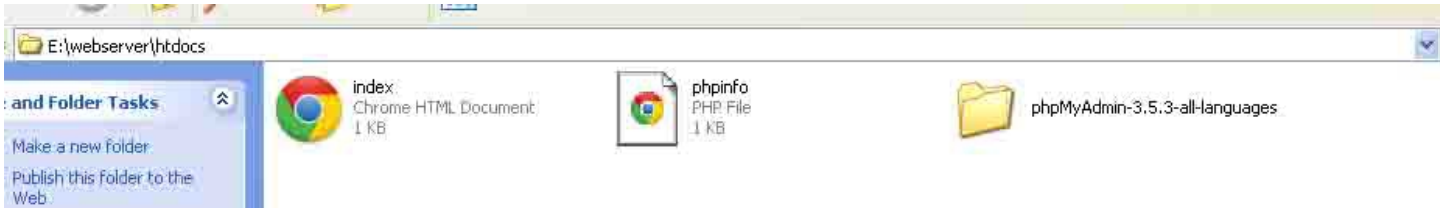
Find the file phpMyAdmin-3.5.3-all-languages from the site
http://www.phpmyadmin.net/home_page/downloads.php

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.

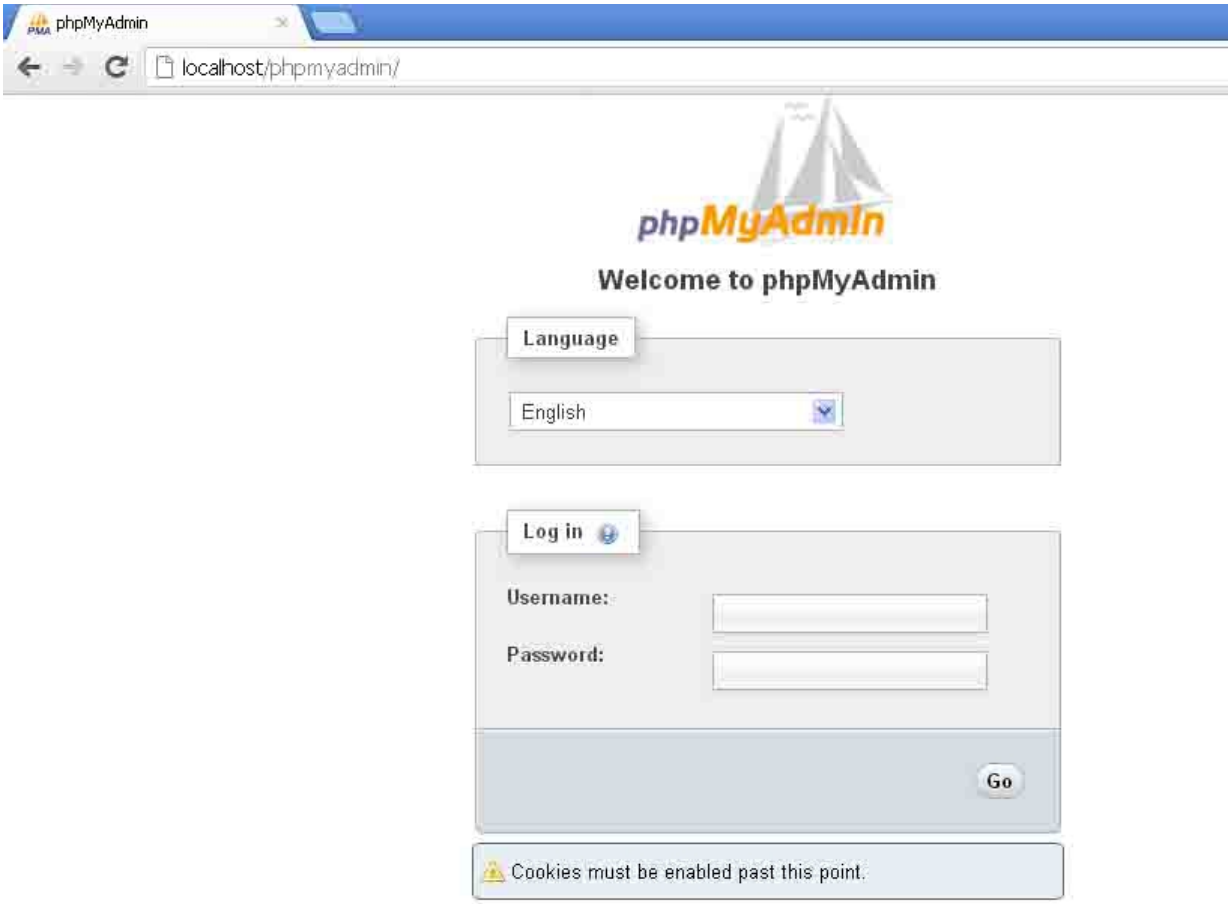
#
<IfModule dir_module>
DirectoryIndex index.html index.php
</IfModule>

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

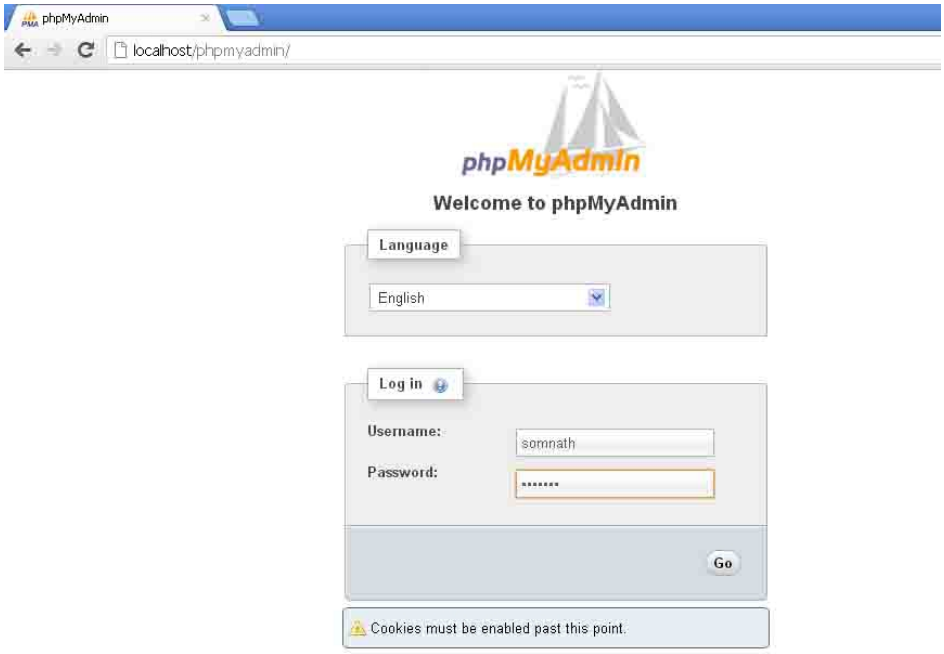
Restart apache 

open browser and type

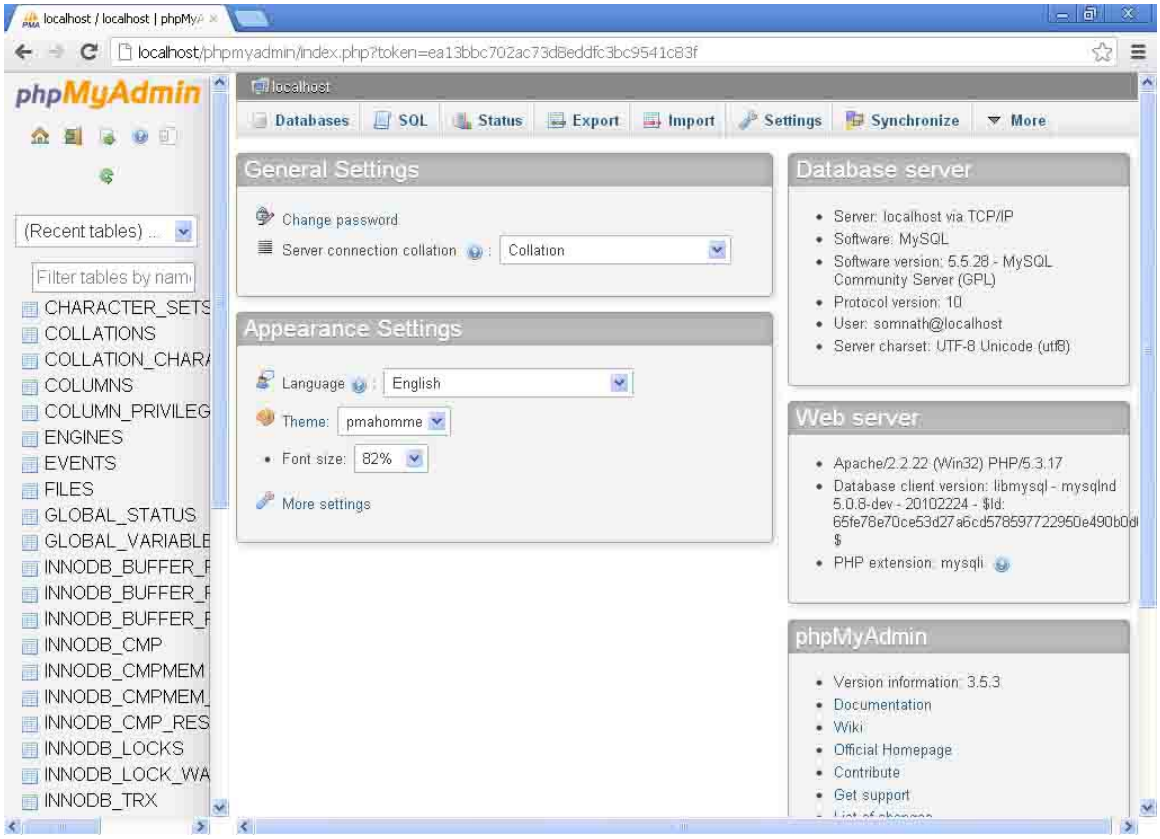
http://localhost/phpmyadmin the following screen appears



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)**

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

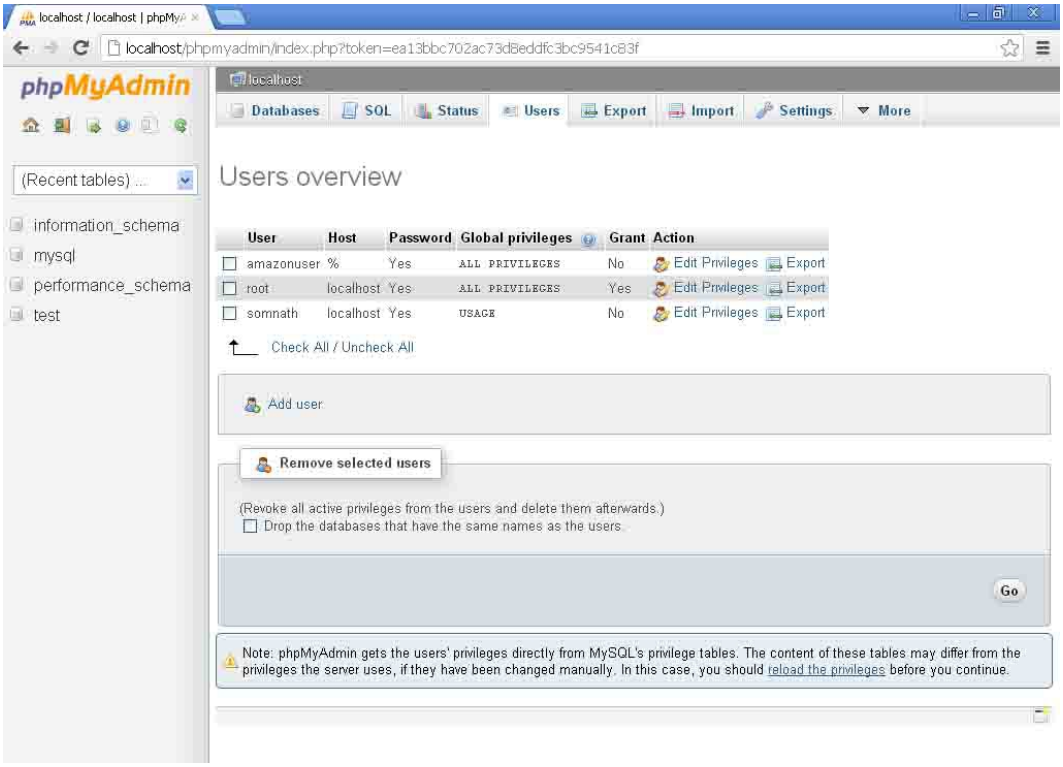
```
mysql> grant all on *.* to 'amazonuser' identified by 'zoneama123';
Query OK, 0 rows affected (0.08 sec)

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

……..

……..

?>

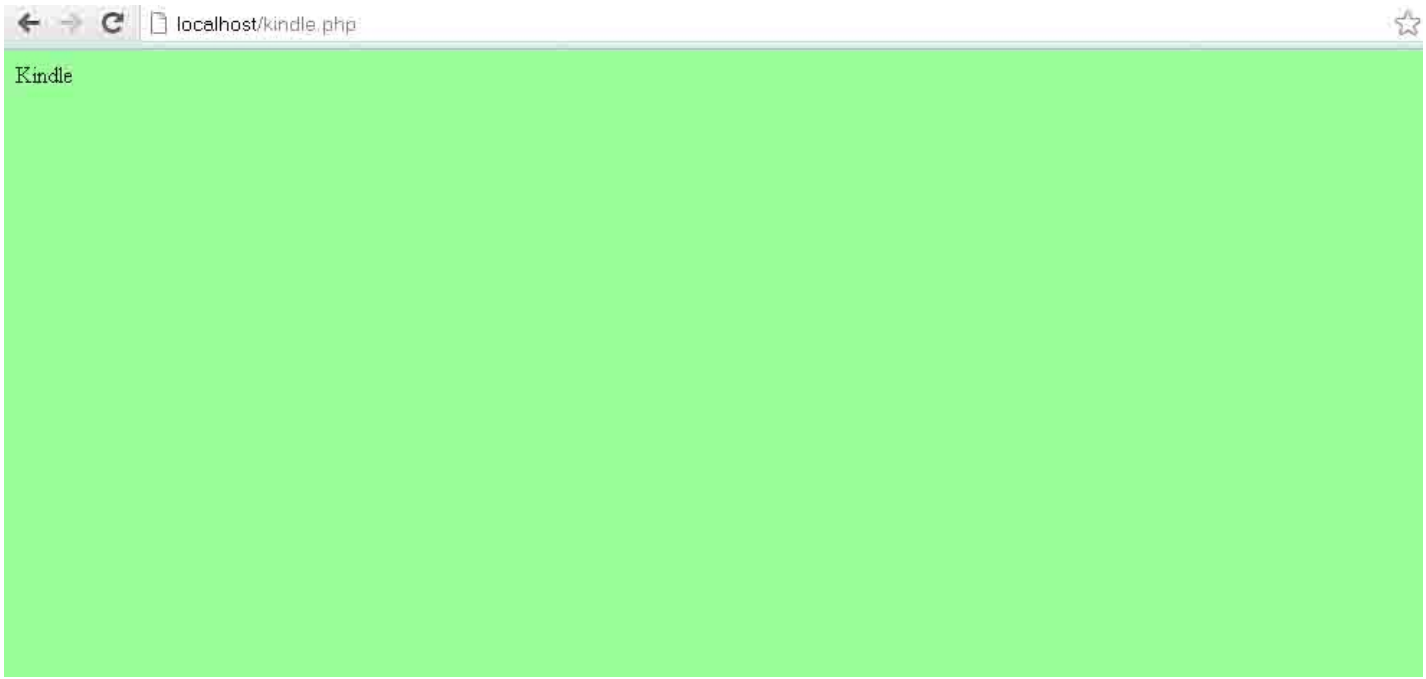
Let's do something wiser

```
<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


localhost/varmore.php
localhost/varmore.php
1000002
Fire HD
Mini
Latest one
12222.66

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 cariable 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