PHP

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PHP Hypertext Preprocessor

PHP was conceived by Rasmus Lerdorf

- PHP is a widely-used general-purpose scripting language that is especially suited for Web development and can be embedded into HTML.
- PHP is the recursive acronym for “PHP: Hypertext Preprocessor”.
- It is a server side scripting language. The PHP code is ran on the webserver and then the output is returned to the user through a web browser.

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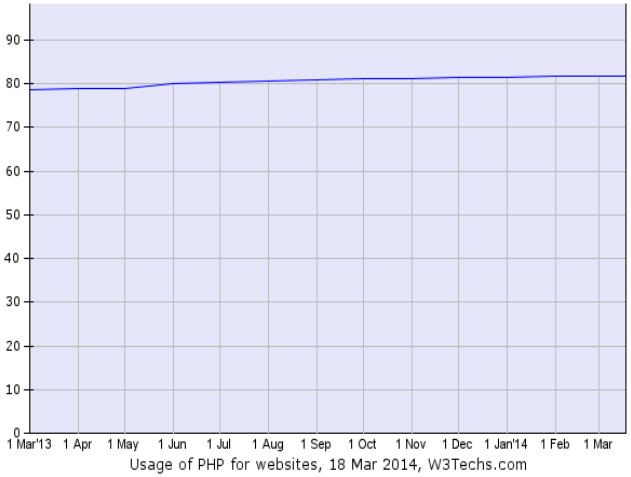
Usage statistics and market share of PHP for websites

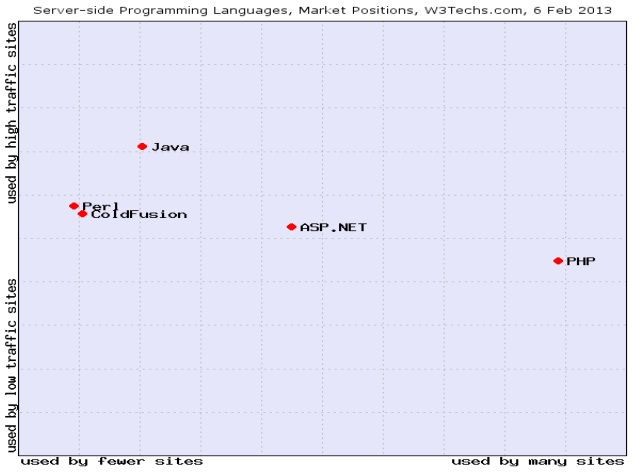
81.8% websites were developed using PHP

Popular sites using PHP

Facebook.com
Wikipedia.org
Qq.com
Taobao.com
Sina.com.cn
Wordpress.com
Vk.com
Weibo.com
Babylon.com
Mail.ru



Usage of PHP for websites, 18 Mar 2014, W3Techs.com



PHP

PHP use has increased dramatically over the last 5 years.

The main reasons for its popularity are:

- It is open-source and free!
- Easy to use. It has a very simple syntax unlike other languages such as Perl or C. Rather than writing lots of code to create a webpage, we create HTML documents and embed simple PHP codes into them.
- It has multi-platform support. It supports all major operating systems. Moreover, the syntax is consistent among different platforms. We can create PHP codes in Windows and easily switch to Unix.
- PHP supports many new technologies. In particular, it supports MySQL.

What is a PHP File?

- PHP files can contain text, HTML, CSS, JavaScript, and PHP code
- PHP code are executed on the server, and the result is returned to the browser as plain HTML
- PHP files have extension ".php"

What Can PHP Do?

- PHP can generate dynamic page content
- PHP can create, open, read, write, delete, and close files on the server
- PHP can collect form data
- PHP can send and receive cookies
- PHP can add, delete, modify data in our database
- PHP can restrict users to access some pages on your website
- PHP can encrypt data

Why PHP?

- PHP runs on various platforms (Windows, Linux, Unix, etc.)
- PHP is compatible with almost all servers used today (Apache, IIS, etc.)
- PHP supports a wide range of databases
- PHP is free. Download it from the official PHP resource: www.php.net
- PHP is easy to learn and runs efficiently on the server side

Creating a Simple PHP file

All PHP commands are enclosed within special start and end tags:

```
<?php
…PHP code…
?>
```

SIMPLE PHP PROGRAM

```
<!DOCTYPE html>
 <html>
 <body>

<?php
 echo "My first PHP script!";
 ?>

 </body>
 </html>
```

WampServer

WampServer is a Windows web development environment. It allows you to create web applications with PHP and a MySQL database. Alongside, PhpMyAdmin allows us to manage easily our databases.

We can download it from the site

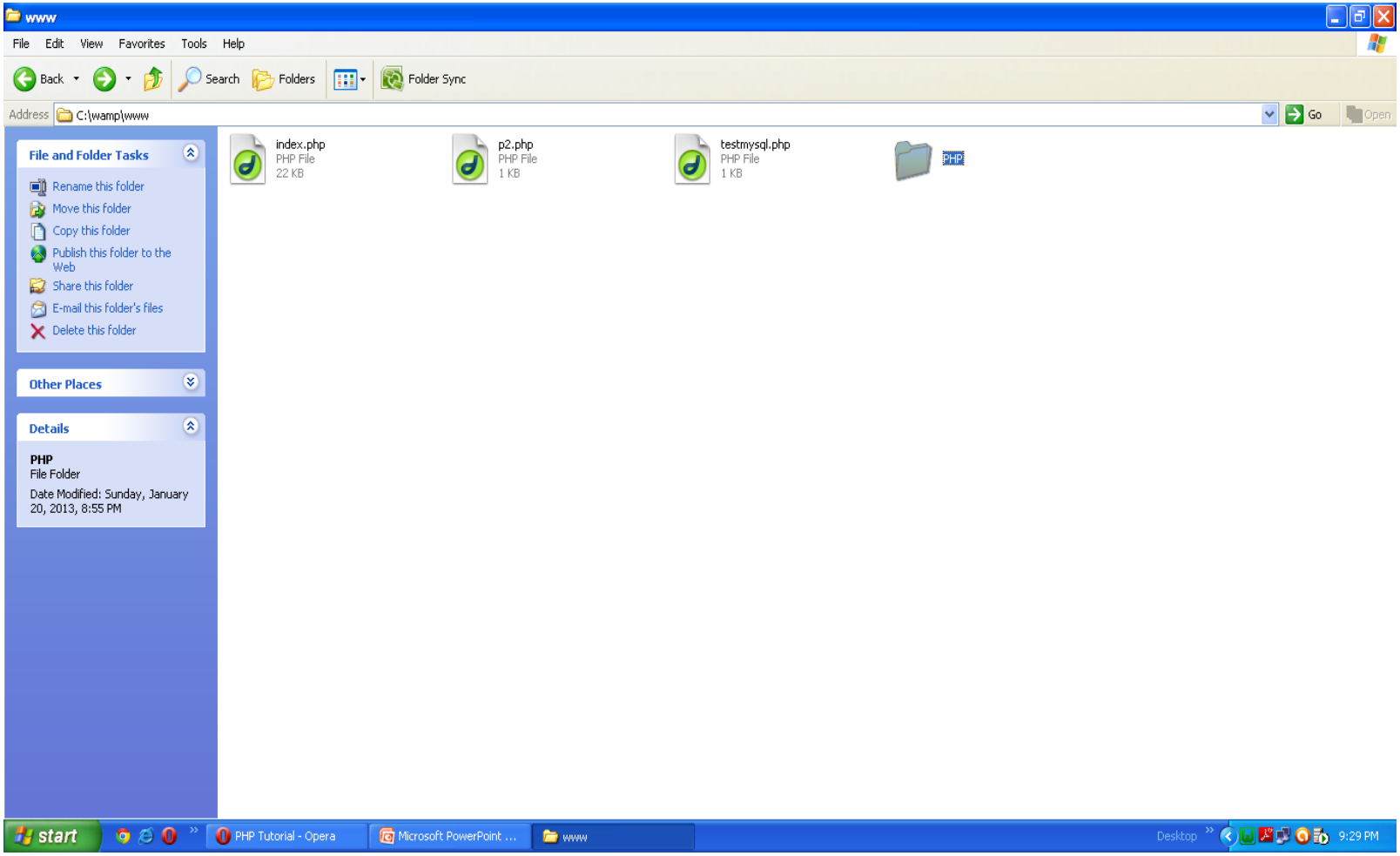
http://www.wampserver.com/en/

Installing WampServer

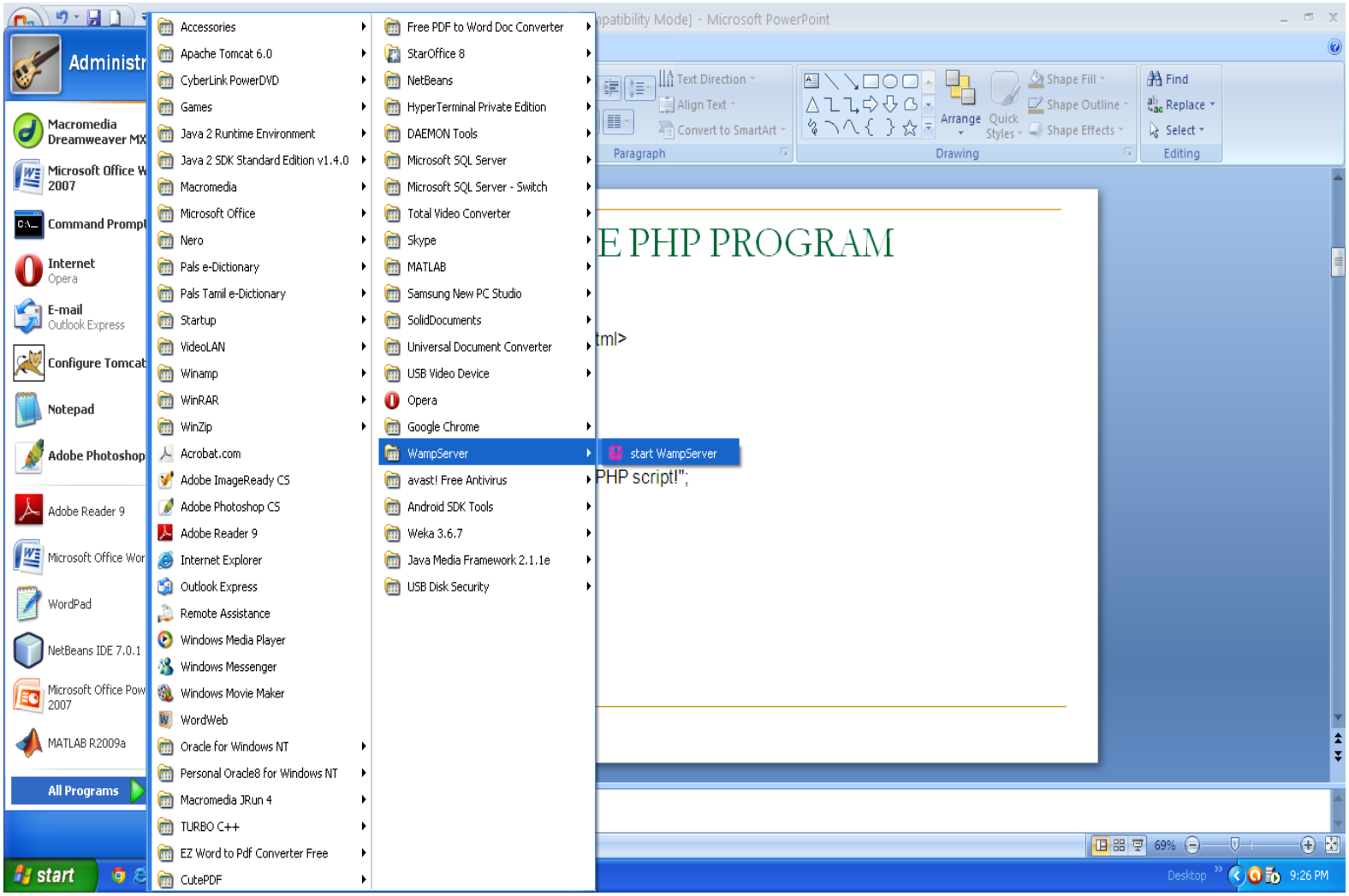
- Double click on the downloaded file and just follow the instructions. Everything is automatic. The WampServer package is delivered with the latest releases of Apache, MySQL and PHP.

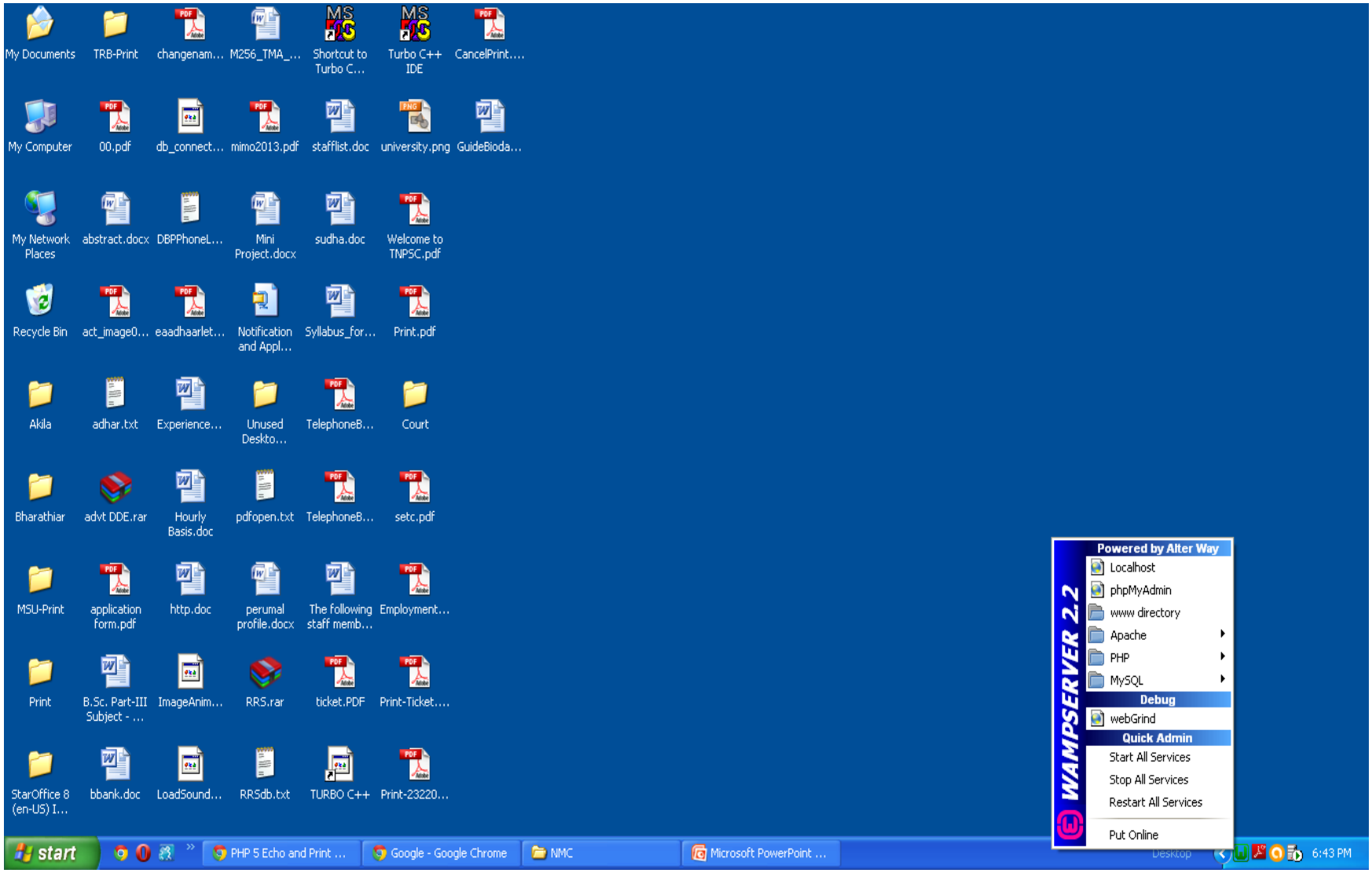
- The “www” directory will be automatically created (usually c:\wamp\www)
- Create a subdirectory in “www” and put your PHP files inside.
- Click on the “localhost” link in the WampSever menu or open your internet browser and go to the URL : http://localhost

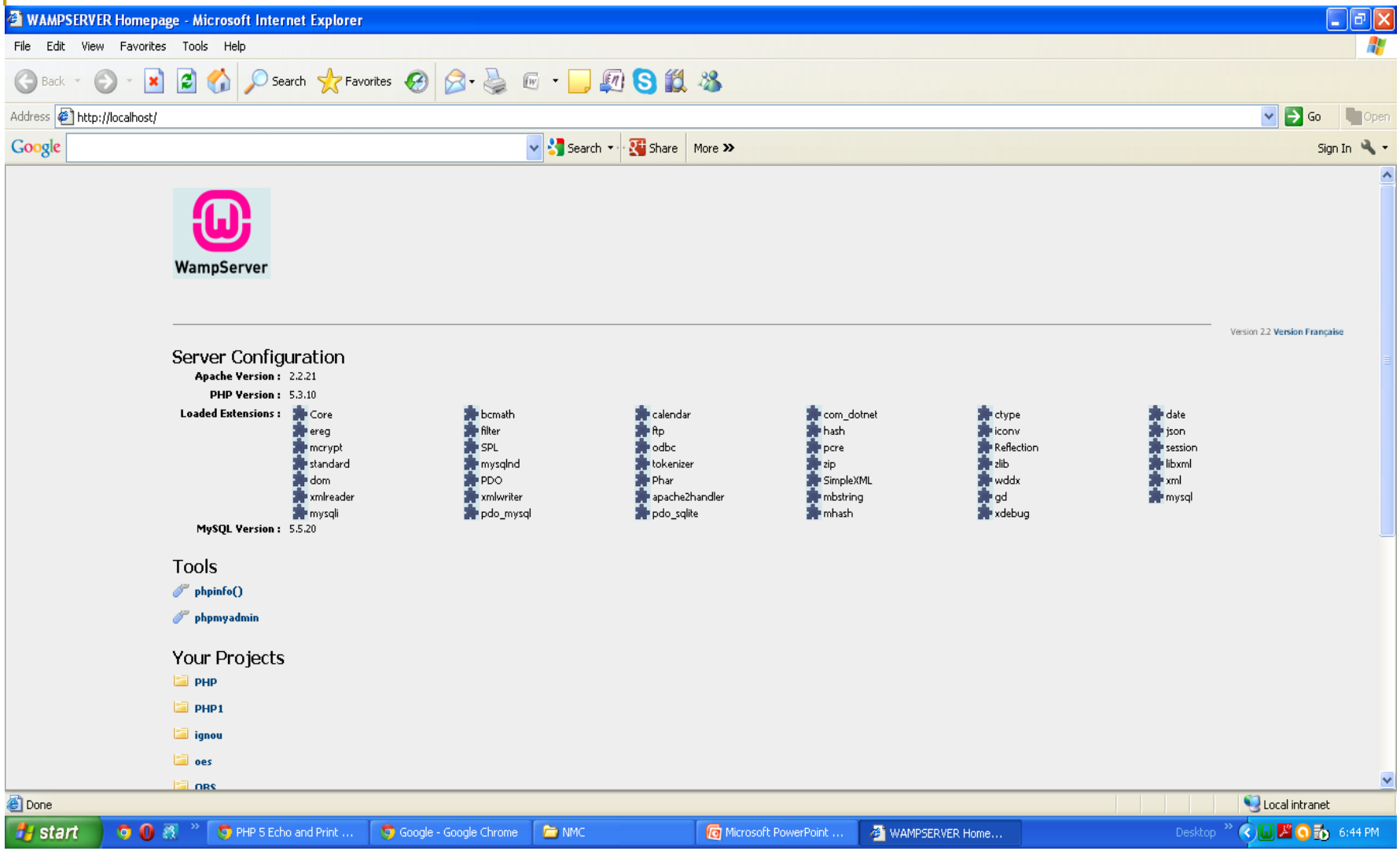
Create a folder in WWW



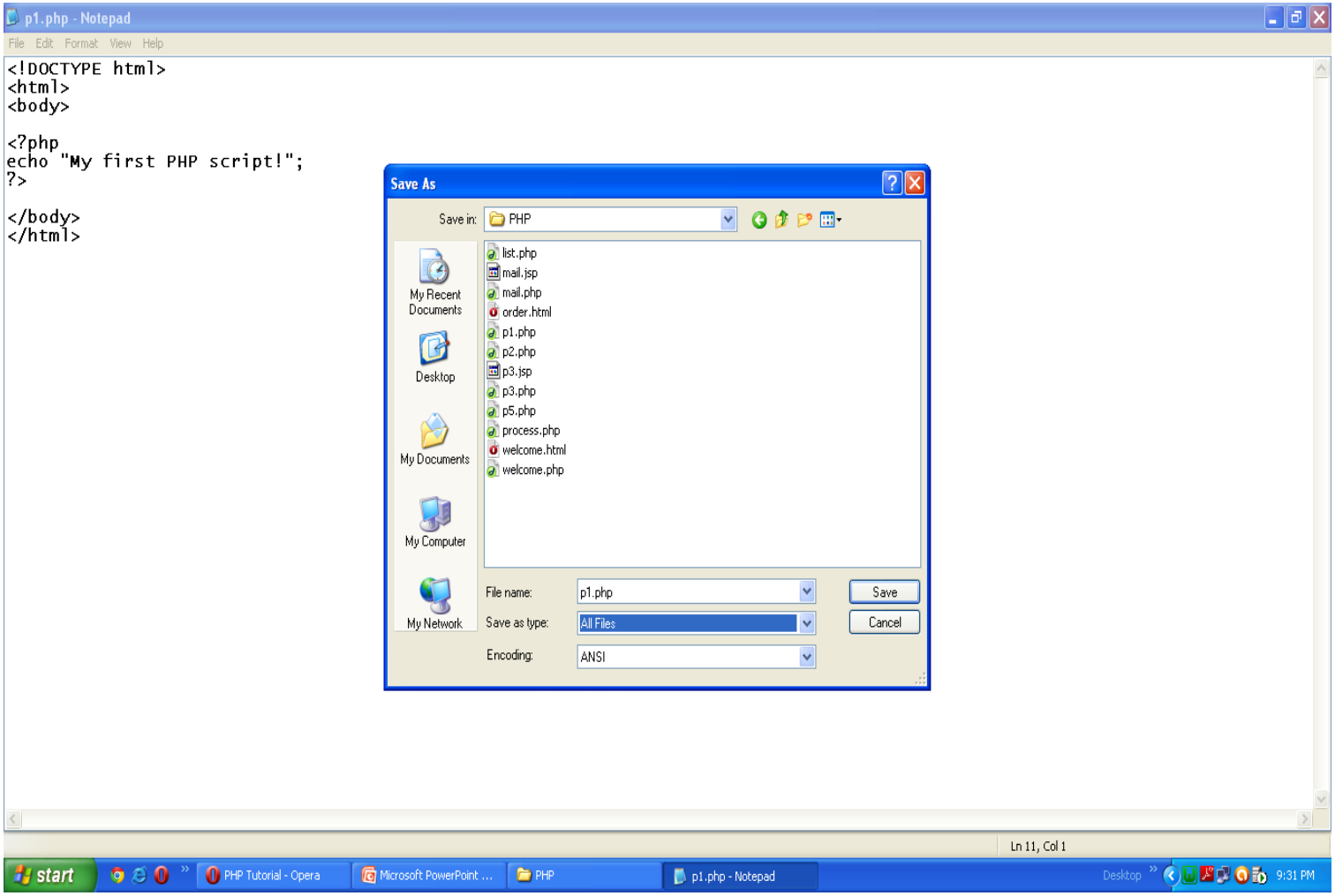
Starting Wamp Server



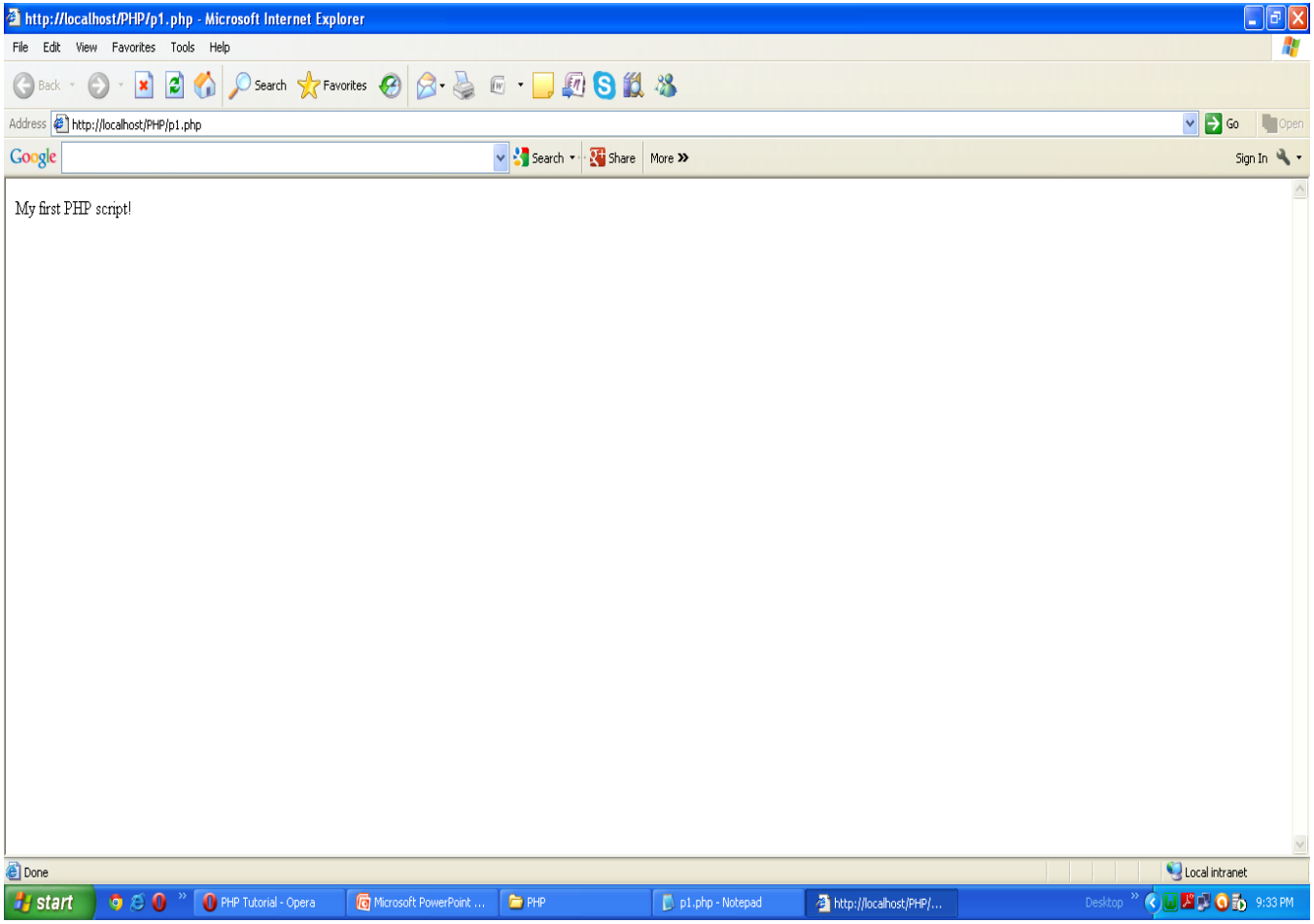

My Documents
TRB-Print
changenam...
M256_TMA_...
Shortcut to Turbo C...
Turbo C++ IDE
CancelPrint....
My Computer
00.pdf
db_connect...
mimo2013.pdf
stafflist.doc
university.png
GuideBioda...
My Network Places
abstract.docx
DBPPhoneL...
Mini Project.docx
sudha.doc
Welcome to TNPSC.pdf
Recycle Bin
act_image0...
eaadhaarlet...
Notification and Appl...
Syllabus_for...
Print.pdf
Akila
adhar.txt
Experience...
Unused Deskto...
TelephoneB...
Court
Bharathiar
advt DDE.rar
Hourly Basis.doc
pdfopen.txt
TelephoneB...
setc.pdf
MSU-Print
application form.pdf
http.doc
perumal profile.docx
The following staff memb...
Employment...
Print
B.Sc. Part-III Subject - ...
ImageAnim...
RRS.rar
ticket.PDF
Print-Ticket....
StarOffice 8 (en-US) I...
bbank.doc
LoadSound...
RRSdb.txt
TURBO C++
Print-23220...
Powered by Alter Way
WAMPSERVER 2.2
Localhost
phpMyAdmin
www directory
Apache
PHP
MySQL
Debug
webGrind
Quick Admin
Start All Services
Stop All Services
Restart All Services
Put Online
start
PHP 5 Echo and Print ...
Google - Google Chrome
NMC
Microsoft PowerPoint ...
Desktop
6:43 PM


WAMPSERVER Homepage - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites
Address http://localhost/
Go
Google Search Share More
Sign In
WampServer
Version 2.2 Version Française
Server Configuration
Apache Version : 2.2.21
PHP Version : 5.3.10
Loaded Extensions : Core, ereg, mcrypt, standard, dom, xmlreader, mysqli, bcmath, filter, SPL, mysqlnd, PDO, xmlwriter, pdo_mysql, calendar, ftp, odbc, tokenizer, Phar, apache2handler, pdo_sqlite, com_dotnet, hash, pcre, zip, SimpleXML, mbstring, mhash, ctype, iconv, Reflection, zlib, wddx, gd, xdebug, date, json, session, libxml, xml, mysql
MySQL Version : 5.5.20
Tools
phpinfo()
phpmyadmin
Your Projects
PHP
PHP1
ignou
oes
OBS
Done
Local intranet
start
PHP 5 Echo and Print ...
Google - Google Chrome
NMC
Microsoft PowerPoint ...
WAMPSERVER Home...
Desktop
6:44 PM

P1.php


p1.php - Notepad
File Edit Format View Help
<!DOCTYPE html>
<html>
<body>
<?php
echo "My first PHP script!";
?>
</body>
</html>
Save As
Save in: PHP
My Recent Documents
Desktop
My Documents
My Computer
My Network
list.php
mail.jsp
mail.php
order.html
p1.php
p2.php
p3.jsp
p3.php
p5.php
process.php
welcome.html
welcome.php
File name: p1.php
Save as type: All Files
Encoding: ANSI
Save
Cancel
Ln 11, Col 1
start
PHP Tutorial - Opera
Microsoft PowerPoint ...
PHP
p1.php - Notepad
Desktop
9:31 PM

Open IE


http://localhost/PHP/p1.php - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites
Address http://localhost/PHP/p1.php
Go
Google
Search Share More
Sign In
My first PHP script!
Done
Local intranet
start
PHP Tutorial - Opera
Microsoft PowerPoint ...
PHP
p1.php - Notepad
http://localhost/PHP/...
Desktop
9:33 PM

Variable

A variable in PHP can be used to store both numeric and nonnumeric data.

→ Every variable has a name, which is preceded by a dollar ($) symbol.

→ Variable names are case sensitive and they must begin with a letter or underscore character.

We can replace the PHP code above with:

```
<?php
//define variable
$answer = 'A: Chameleon';
//print output
Echo "<h2><i>$answer</i></h2>";
?>
```

This will produce the same result as before.

→ To assign a value to a variable, use the equality (=) symbol (ex: $answer = ‘A: Chameleon’;).

→ To use a variable value in our script, call the variable by its name. PHP will substitute its value when the code is executed (ex: Echo “<h2>$answer</h2>”;).

Data Types

There are four basic data types in PHP. PHP can automatically determine the variable type by the context in which it is being used.

Data Type	Description	Example
Boolean	Specifies a true or false value.	$auth = true;
Integer	Integers like -98, 2000.	$age = 28;
Floating-point	Fractional numbers such as 12.8 or 3.149391	$temp = 76;
String	Sequence of characters. May be enclosed in either double quotes or single quotes.	$name = 'Ismail';

Operators

There are over 15 operators in PHP

Operator	What It Does
=	Assignment
+	Addition
-	Subtraction
*	Multiplication
/	Division, returns quotient
%	Division, returns modulus
.	String concatenation
= =	Equal to
= = =	Equal to and of the same type
! = =	Not equal to or not of the same type
<>	Not equal to
<, <=, >, >=	Less than, Less than or equal to etc.
&&	Logical AND
||	Logical OR
xor	Logical XOR
!	Logical NOT

Conditional Statement

```
<?php
if (conditional test)
{
    do this;
}

if (conditional test)
{
    do this;
}
else
{
    do this;
}
?>
```

Example

```
<?php
if ($temp >= 100)
{
echo 'Very hot!';
}
else
{
echo 'Within tolerable limits';
}
?>
```

Switch Statement

```
switch (n)
 {
 case label1:
   code to be executed if n=label1;
   break;
 case label2:
   code to be executed if n=label2;
   break;
 default:
   code to be executed if n is different from both label1 and
    label2;
 }
```

Example

```
<?php
 $favcolor="red";
 switch ($favcolor)
 {
 case "red":
   echo "Your favorite color is red!";
   break;
 case "blue":
   echo "Your favorite color is blue!";
   break;
 case "green":
   echo "Your favorite color is green!";
   break;
 default:
   echo "Your favorite color is neither red, blue, or green!";
 }
 ?>
```

Looping Statements-while

```
<?php
// define number and limits for multiplication tables
$num = 11;
$upperLimit = 10;
$lowerLimit = 1;

// loop and multiply to create table
while ($lowerLimit <= $upperLimit)
{
echo "$num x $lowerLimit =" . ($num*$lowerLimit);
$lowerLimit++;
}
?>
```

Looping Statements-do while

```
<?php
// define number and limits for multiplication tables
$num = 11;
$upperLimit = 10;
$lowerLimit = 12;

// loop and multiply to create table
do
{
  echo "$num x $lowerLimit =" . ($num*$lowerLimit);
  $lowerLimit++;
} while ($lowerLimit <= $upperLimit)
?>
```

Looping Statements-for

```
<?php
for ($x = 2; $x <=100; $x++)
{
  echo "$x";
}
?>
```

Arrays

An array is a data structure that stores one or more similar type of values in a single value. For example if we want to store 100 numbers then instead of defining 100 variables its easy to define an array of 100 length.

There are three different kind of arrays and each array value is accessed using an ID which is called array index.

Numeric array - An array with a numeric index. Values are stored and accessed in linear fashion

Associative array - An array with strings as index. This stores element values in association with key values rather than in a strict linear index order.

Multidimensional array - An array containing one or more arrays and values are accessed using multiple indices

Numeric Array

- These arrays can store numbers, strings and any object but their index will be represented by numbers. By default array index starts from zero.

```
<html>
<body>
<?php
/* First method to create array. */
$numbers = array( 1, 2, 3, 4, 5);
foreach( $numbers as $value )
{
  echo "Value is $value <br />";
}
/* Second method to create array. */
$numbers[0] = "one";
$numbers[1] = "two";
$numbers[2] = "three";
$numbers[3] = "four";
$numbers[4] = "five";

foreach( $numbers as $value )
{
  echo "Value is $value <br />";
}
?>
</body>
</html>
```

The foreach loop is used to loop through arrays

Associative Array

The associative arrays are very similar to numeric arrays in term of functionality but they are different in terms of their index. Associative array will have their index as string so that we can establish a strong association between key and values.

To store the salaries of employees in an array, a numerically indexed array would not be the best choice. Instead, we could use the employees names as the keys in our associative array, and the value would be their respective salary.

Example

```
<html>
<body>
<?php
/* First method to associate create array. */
$salaries = array(
                    "mohammad" => 2000,
                    "qadir" => 1000,
                    "zara" => 500
                   );

echo "Salary of mohammad is ". $salaries['mohammad'] . "<br />";
echo "Salary of qadir is ".  $salaries['qadir']. "<br />";
echo "Salary of zara is ".  $salaries['zara']. "<br />";

/* Second method to create array. */
$salaries['mohammad'] = "high";
$salaries['qadir'] = "medium";
$salaries['zara'] = "low";

echo "Salary of mohammad is ". $salaries['mohammad'] . "<br />";
echo "Salary of qadir is ".  $salaries['qadir']. "<br />";
echo "Salary of zara is ".  $salaries['zara']. "<br />";
?>
</body>
</html>
```

Multidimensional Array

A multi-dimensional array each element in the main array can also be an array. And each element in the sub-array can be an array, and so on. Values in the multi-dimensional array are accessed using multiple index.

```
<html>
<body>
<?php
  $marks = array(
                    "mohammad" => array
                    (
                    "physics" => 35,
                    "maths" => 30,
                    "chemistry" => 39
                    ),
                    "qadir" => array
            (
            "physics" => 30,
            "maths" => 32,
            "chemistry" => 29
            ),
           );
  /* Accessing multi-dimensional array values */
  echo "Marks for mohammad in physics : " ;
  echo $marks['mohammad']['physics'] . "<br />";
  echo "Marks for qadir in maths : ";
  echo $marks['qadir']['maths'] . "<br />";
?>
</body>
</html>
```

Strings

They are sequences of characters, like "PHP supports string operations".

```
$string_1 = "This is a string in double quotes";
$string_2 = "This is a somewhat longer, singly quoted string";
$string_39 = "This string has thirty-nine characters";
$string_0 = ""; // a string with zero characters
<?
$variable = "name";
$literally = 'My $variable will not print!\\n';
print($literally);
$literally = "My $variable will print!\\n";
print($literally);
?>
```

This will produce following result:

```
My $variable will not print!\n
My name will print
```

Functions:strlen,strrev,strtolower,strtoupper,strncmp,substr,

Web Concepts

Identifying Browser & Platform

PHP creates some useful environment variables that can be seen in the phpinfo.php page that was used to setup the PHP environment.

One of the environemnt variables set by PHP is HTTP_USER_AGENT which identifies the user's browser and operating system.

PHP provides a function getenv() to access the value of all the environment variables. The information contained in the HTTP_USER_AGENT environment variable can be used to create dynamic content appropriate to the borwser.

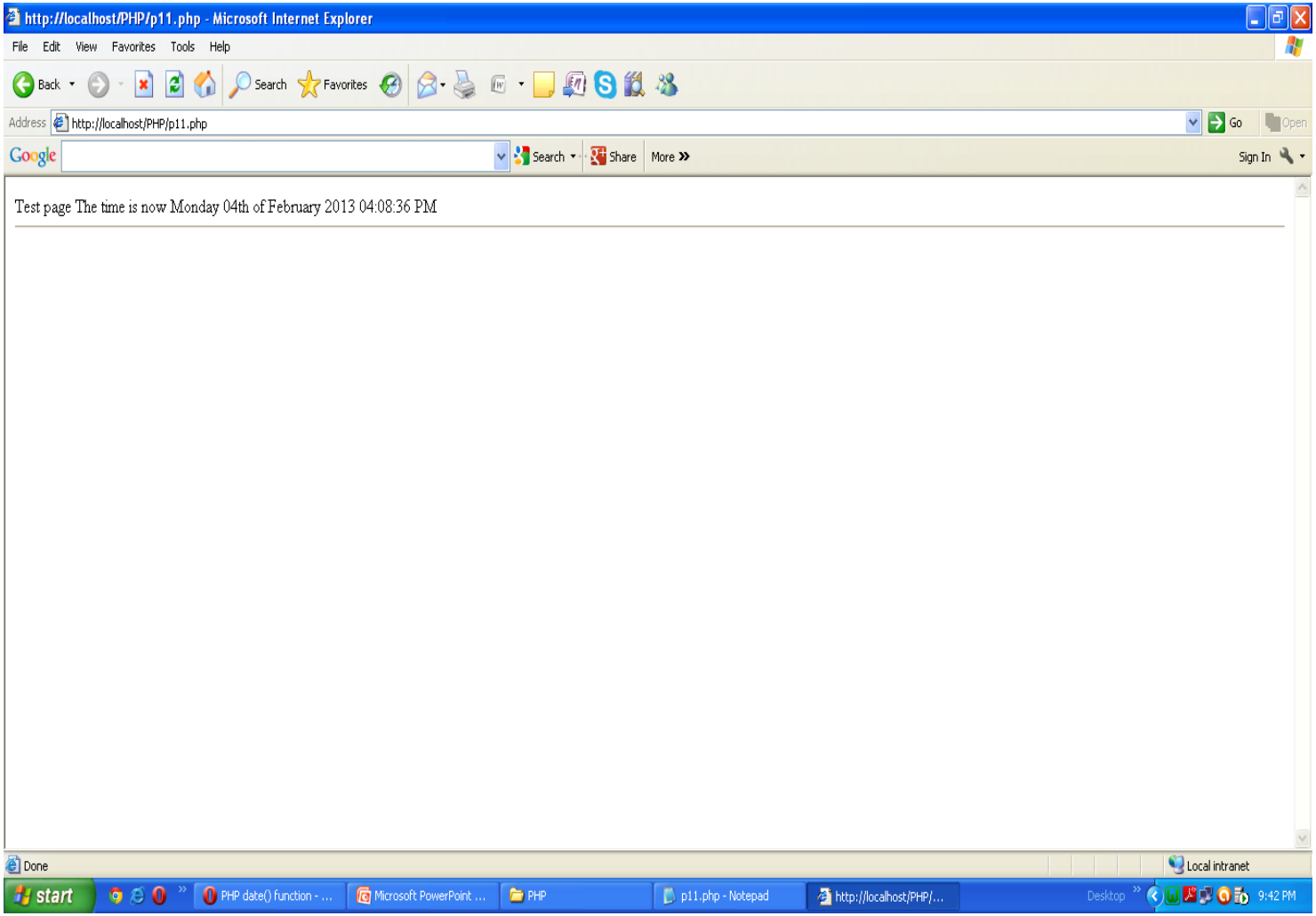
Example

```
<html>
<body>
<?php
  $viewer = getenv( "HTTP_USER_AGENT" );
  $browser = "An unidentified browser";
  if( preg_match( "/MSIE/i", "$viewer" ) )
  {
    $browser = "Internet Explorer";
  }
  else if(  preg_match( "/Netscape/i", "$viewer" ) )
  {
    $browser = "Netscape";
  }
  else if(  preg_match( "/Mozilla/i", "$viewer" ) )
  {
    $browser = "Mozilla";
  }
  $platform = "An unidentified OS!";
  if( preg_match( "/Windows/i", "$viewer" ) )
  {
    $platform = "Windows!";
  }
  else if ( preg_match( "/Linux/i", "$viewer" ) )
  {
    $platform = "Linux!";
  }
  echo("You are using $browser on $platform");
?>
</body>
</html>
```

Another example

```
<html>
   <head>Test page</head>
   <body>
   The time is now
    <?php
         echo(date("l dS \of F Y h:i:s A") . "<br />");
     ?>
     <hr>
   </body>
   </html>
```

Output:


http://localhost/PHP/p11.php - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites
Address http://localhost/PHP/p11.php
Go
Google
Search Share More
Sign In
Test page The time is now Monday 04th of February 2013 04:08:36 PM
Done
Local intranet
start
PHP date() function - ...
Microsoft PowerPoint ...
PHP
p11.php - Notepad
http://localhost/PHP/...
Desktop
9:42 PM

Using HTML Forms

The most important thing to notice when dealing with HTML forms and PHP is that any form element in an HTML page will automatically be available to our PHP scripts.

```
<?php
  if( $_POST["name"] || $_POST["age"] )
  {
     echo "Welcome ". $_POST['name']. "<br />";
     echo "You are ". $_POST['age']. " years old.";
     exit();
  }
?>
<html>
<body>
  <form action="<?php $_PHP_SELF ?>" method="POST">
  Name: <input type="text" name="name" />
  Age: <input type="text" name="age" />
  <input type="submit" />
  </form>
</body>
</html>
```

The PHP default variable $_PHP_SELF is used for the PHP script name and when you click "submit" button then same PHP script will be called

Processing HTML Forms-welcome.html

```
<html>
 <body>
 <form action="welcome.php" method="post">
 Name: <input type="text" name="name">
 Age: <input type="text" name="age">
 <input type="submit">
 </form>
 </body>
 </html>
```

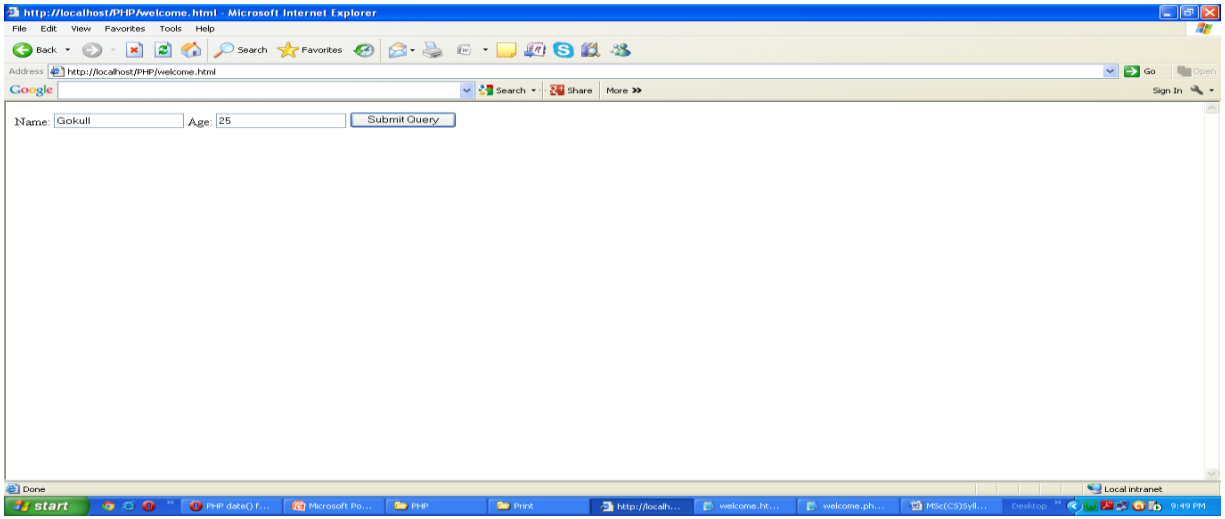
Welcome.php

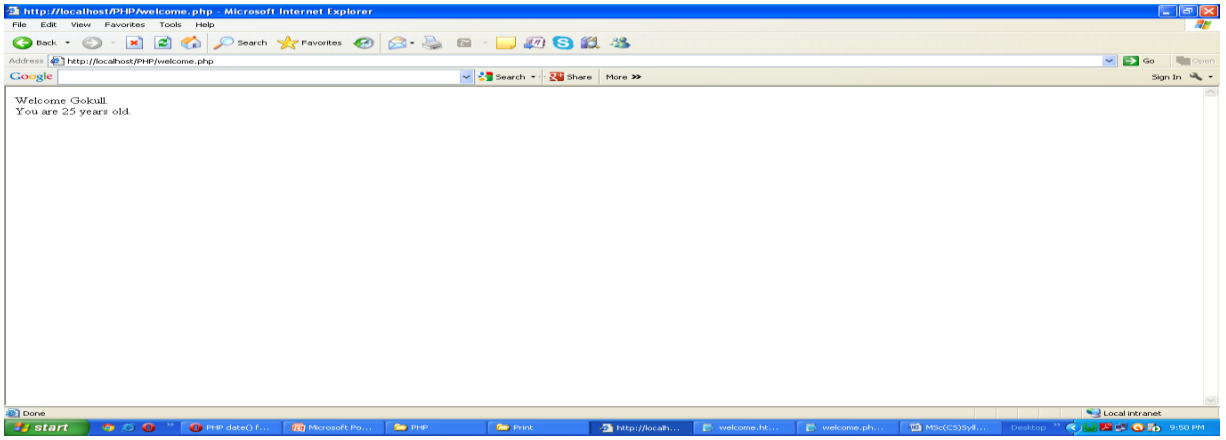
```
<html>
 <body>

 Welcome <?php echo $_POST["name"]; ?>.<br>
 You are <?php echo $_POST["age"]; ?> years old.

 </body>
 </html>
```

Output


http://localhost/PHP/welcome.html - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites
Address http://localhost/PHP/welcome.html
Go
Google Search Share More
Sign In
Name: Gokull Age: 25 Submit Query
Done
Local intranet
start


http://localhost/PHP/welcome.php - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites
Address http://localhost/PHP/welcome.php
Go
Google Search Share More
Sign In
Welcome Gokull.
You are 25 years old.
Done
Local intranet
start

Get & Post Method

There are two ways the browser client can send information to the web server.

The GET Method

The POST Method

Before the browser sends the information, it encodes it using a scheme called URL encoding. In this scheme, name/value pairs are joined with equal signs and different pairs are separated by the ampersand.

name1=value1&name2=value2&name3=value3

Spaces are removed and replaced with the + character and any other nonalphanumeric characters are replaced with a hexadecimal values. After the information is encoded it is sent to the server.

Get Method

The GET method sends the encoded user information appended to the page request. The page and the encoded information are separated by the ? character.http://www.test.com/index.htm?name1=value1&name2=value2

The GET method produces a long string that appears in your server logs, in the browser's Location: box.

The GET method is restricted to send upto 1024 characters only.

Never use GET method if we have password or other sensitive information to be sent to the server.

GET can't be used to send binary data, like images or word documents, to the server.

The data sent by GET method can be accessed using QUERY_STRING environment variable.

The PHP provides $_GET associative array to access all the sent information using GET method.

Example

```
<?php
  if( $_GET["name"] || $_GET["age"] )
  {
     echo "Welcome ". $_GET['name']. "<br />";
     echo "You are ". $_GET['age']. " years old.";
     exit();
  }
?>
<html>
<body>
  <form action="<?php $_PHP_SELF ?>" method="GET">
  Name: <input type="text" name="name" />
  Age: <input type="text" name="age" />
  <input type="submit" />
  </form>
</body>
</html>
```

Post Method

The POST method transfers information via HTTP headers. The information is encoded as described in case of GET method and put into a header called QUERY_STRING.

The POST method does not have any restriction on data size to be sent.

The POST method can be used to send ASCII as well as binary data.

The data sent by POST method goes through HTTP header so security depends on HTTP protocol. By using Secure HTTP we can make sure that your information is secure.

The PHP provides $_POST associative array to access all the sent information using GET method.

Example

```
<?php
  if( $_POST["name"] || $_POST["age"] )
  {
     echo "Welcome ". $_POST['name']. "<br />";
     echo "You are ". $_POST['age']. " years old.";
     exit();
  }
?>
<html>
<body>
  <form action="<?php $_PHP_SELF ?>" method="POST">

  Name: <input type="text" name="name" />
  Age: <input type="text" name="age" />

  <input type="submit" />
  </form>
</body>
</html>
```

$_REQUEST variable

The PHP $_REQUEST variable can be used to get the result from form data sent with both the GET and POST methods.

```
<?php
 if( $_REQUEST["name"] || $_REQUEST["age"] )
 {
    echo "Welcome ". $_REQUEST['name']. "<br />";
    echo "You are ". $_REQUEST['age']. " years old.";
    exit();
 }
?>
<html>
<body>
 <form action="<?php $_PHP_SELF ?>" method="POST">

 Name: <input type="text" name="name" />
 Age: <input type="text" name="age" />

 <input type="submit" />
 </form>
</body>
</html>
```

Functions

PHP functions are similar to other programming languages. A function is a piece of code which takes one more input in the form of parameter and does some processing and returns a value.

There are two part.

Creating a PHP Function

Calling a PHP Function

Creating PHP Function

Its very easy to create our own PHP function. Suppose we want to create a PHP function which will simply write a simple message on our browser when we will call it. Following example creates a function called writeMessage() and then calls it just after creating it.

```
<html>
<head>
<title>Writing PHP Function</title>
</head>
<body>

<?php
/* Defining a PHP Function */
function writeMessage()
{
  echo "You are really a nice person, Have a nice time!";
}
/* Calling a PHP Function */
writeMessage();
?>
</body></html>
```

Function with parameters

PHP gives you option to pass your parameters inside a function. You can pass as many as parameters your like. These parameters work like variables inside our function.

Following example takes two integer parameters and add them together and then print them.

```
<html>
<head>
<title>Writing PHP Function with Parameters</title>
</head>
<body>

<?php
function addFunction($num1, $num2)
{
  $sum = $num1 + $num2;
  echo "Sum of the two numbers is : $sum";
}
addFunction(10, 20);
?>
</body>
</html>
```

Passing Arguments by Reference

It is possible to pass arguments to functions by reference. This means that a reference to the variable is manipulated by the function rather than a copy of the variable's value.

```
<html><head>
<title>Passing Argument by Reference</title>
</head><body>
<?php
function addFive($num)
{
  $num += 5;
}
function addSix(&$num)
{
  $num += 6;
}
$orignum = 10;
addFive( &$orignum );
echo "Original Value is $orignum<br />";
addSix( $orignum );
echo "Original Value is $orignum<br />";
?></body></html>
```

PHP Functions retruning value:

A function can return a value using the return statement in conjunction with a value or object. return stops the execution of the function and sends the value back to the calling code.

We can return more than one value from a function using return array(1,2,3,4).

Example

```
<html>
<head>
<title>Writing PHP Function which returns value</title>
</head>
<body>

<?php
function addFunction($num1, $num2)
{
  $sum = $num1 + $num2;
  return $sum;
}
$return_value = addFunction(10, 20);
echo "Returned value from the function : $return_value”
?>
</body>
</html>
```

Error Handling

- Die()
- Custom Error Handling Function

error_function(error_level,error_message,
error_file,error_line,error_context);

Example

```
<?php
if(!file_exists("/tmp/test.txt"))
{
die("File not found");
 }
else
{
$file=fopen("/tmp/test.txt","r");
print "Opend file sucessfully";
 }
// Test of the code here. ?>
```

Exception Handling

- Try
- Catch
- throw

Example

```
  <?php
 try {
$error = 'Always throw this error';
throw new Exception($error);
 // Code following an exception is not executed.
echo 'Never executed';
}
catch (Exception $e)
 {
echo 'Caught exception: ', $e->getMessage(), "\n"; }
 // Continue execution
echo 'Hello World';
?>
```

Cookies

Cookies are text files stored on the client computer and they are kept of use tracking purpose. PHP transparently supports HTTP cookies.

There are three steps involved in identifying returning users:

Server script sends a set of cookies to the browser. For example name, age, or identification number etc.

Browser stores this information on local machine for future use.

When next time browser sends any request to web server then it sends those cookies information to the server and server uses that information to identify the user.

Setting Cookies with PHP:

PHP provided setcookie() function to set a cookie. This function requires upto six arguments and should be called before <html> tag. For each cookie this function has to be called separately.

setcookie(name, value, expire, path, domain, security);

Here is the detail of all the arguments:

Name - This sets the name of the cookie and is stored in an environment variable called HTTP_COOKIE_VARS. This variable is used while accessing cookies.

Value -This sets the value of the named variable and is the content that you actually want to store.

Expiry - This specify a future time in seconds since 00:00:00 GMT on 1st Jan 1970. After this time cookie will become inaccessible. If this parameter is not set then cookie will automatically expire when the Web Browser is closed.

Path -This specifies the directories for which the cookie is valid. A single forward slash character permits the cookie to be valid for all directories.

Domain - This can be used to specify the domain name in very large domains and must contain at least two periods to be valid. All cookies are only valid for the host and domain which created them.

Security - This can be set to 1 to specify that the cookie should only be sent by secure transmission using HTTPS otherwise set to 0 which mean cookie can be sent by regular HTTP.

Example

```
<?php
   setcookie("name", "John Watkin", time()+3600, "/","", 0);
   setcookie("age", "36", time()+3600, "/", "",  0);
?>
<html>
<head>
<title>Setting Cookies with PHP</title>
</head>
<body>
<?php echo "Set Cookies"?>
</body>
</html>
```

Accessing Cookies with PHP

PHP provides many ways to access cookies.Simplest way is to use either $_COOKIE or $HTTP_COOKIE_VARS variables.

```
<html>
<head>
<title>Accessing Cookies with PHP</title>
</head>
<body>
<?php
echo $_COOKIE["name"]. "<br />";
/* is equivalent to */
echo $HTTP_COOKIE_VARS["name"]. "<br />";
echo $_COOKIE["age"] . "<br />";
/* is equivalent to */
echo $HTTP_COOKIE_VARS["name"] . "<br />";
?>
</body>
</html>
```

You can use isset() function to check if a cookie is set or not.

```
<html>
<head>
<title>Accessing Cookies with PHP</title>
</head>
<body>
<?php
  if( isset($_COOKIE["name"]))
    echo "Welcome " . $_COOKIE["name"] . "<br />";
  else
    echo "Sorry... Not recognized" . "<br />";
?>
</body>
</html>
```

Deleting Cookie with PHP

Officially, to delete a cookie you should call setcookie() with the name argument only but this does not always work well, however, and should not be relied on.

It is safest to set the cookie with a date that has already expired:

```
<?php
  setcookie( "name", "", time()- 60, "/","", 0);
  setcookie( "age", "", time()- 60, "/","", 0);
?>
<html>
<head>
<title>Deleting Cookies with PHP</title>
</head>
<body>
<?php echo "Deleted Cookies" ?>
</body>
</html>
```

Session

An alternative way to make data accessible across the various pages of an entire website is to use a PHP Session.

A session creates a file in a temporary directory on the server where registered session variables and their values are stored. This data will be available to all pages on the site during that visit.

Starting a PHP Session:

A PHP session is easily started by making a call to the session_start() function.This function first checks if a session is already started and if none is started then it starts one. It is recommended to put the call to session_start() at the beginning of the page.

Session variables are stored in associative array called $_SESSION[]. These variables can be accessed during lifetime of a session.

.

Example

The following example starts a session then register a variable called counter that is incremented each time the page is visited during the session.Make use of isset() function to check if session variable is already set or not

```
<?php
   session_start();
   if( isset( $_SESSION['counter'] ) )
   {
      $_SESSION['counter'] += 1;
   }
   else
   {
      $_SESSION['counter'] = 1;
   }
   $msg = "You have visited this page ".  $_SESSION['counter'];
   $msg .= "in this session.";
?>
<html>
<head>
<title>Setting up a PHP session</title>
</head>
<body>
<?php  echo ( $msg ); ?>
</body>
</html>
```

Destroying a PHP Session:

A PHP session can be destroyed by session_destroy() function. This function does not need any argument and a single call can destroy all the session variables. If we want to destroy a single session variable then we can use unset() function to unset a session variable.

Here is the example to unset a single variable:

```
<?php
  unset($_SESSION['counter']);
?>
```

Here is the call which will destroy all the session variables

```
:<?php
  session_destroy();
?>
```

Object Oriented Programming in PHP

The general form for defining a new class in PHP is as follows:

```
<?php
class phpClass{
   var $var1;
   var $var2 = "constant string";
   function myfunc ($arg1, $arg2) {
      [..]
   }
   [..]
}
?>
```

Here is the description of each line:

The special form class, followed by the name of the class that you want to define.

A set of braces enclosing any number of variable declarations and function definitions.

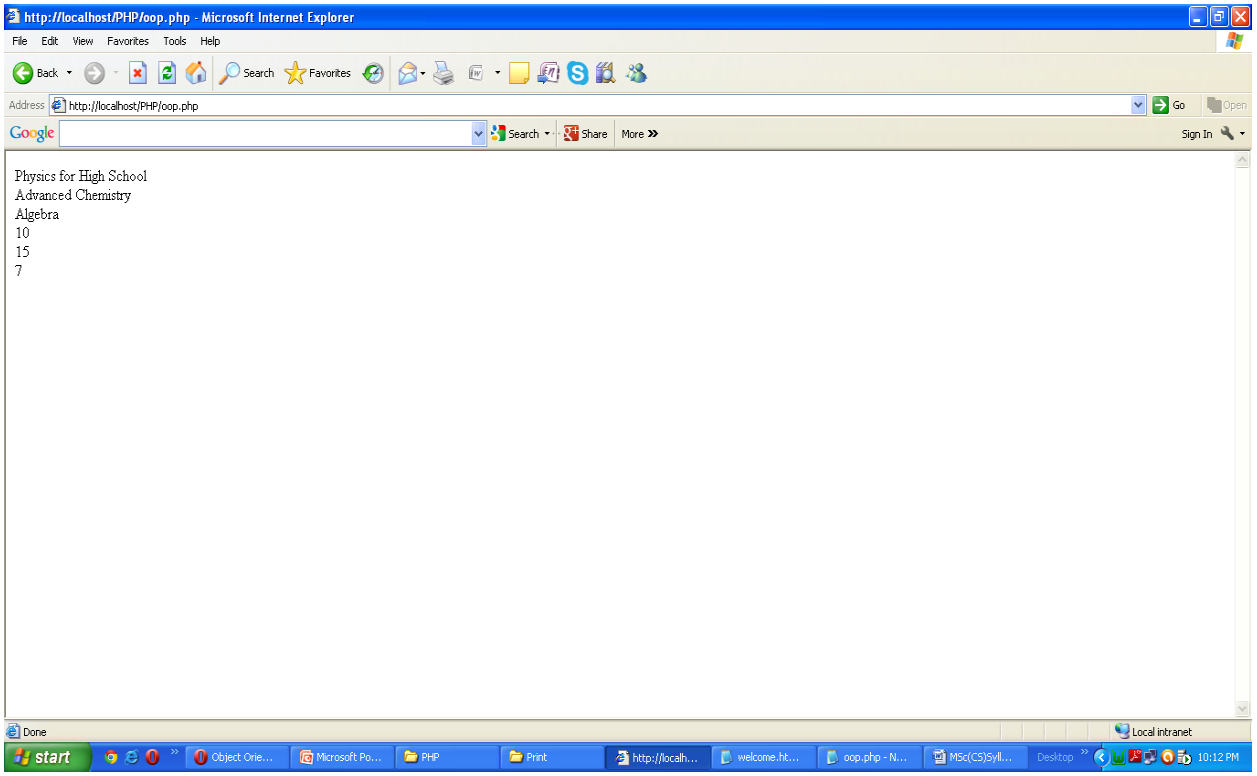
Variable declarations start with the special form var, which is followed by a conventional $ variable name; they may also have an initial assignment to a constant value.

Function definitions look much like standalone PHP functions but are local to the class and will be used to set and access object data.

Class

```
<?php
class  Books{
    /* Member variables */    var $price;    var $title;
    /* Member functions */
    function setPrice($par){
       $this->price = $par;    }
    function getPrice(){
       echo $this->price ."<br/>“;    }
    function setTitle($par){
       $this->title = $par;    }
    function getTitle(){
       echo $this->title ." <br/>“;   }    }
$physics = new Books;   $maths = new Books;   $chemistry = new Books;
$physics->setTitle( "Physics for High School" );   $chemistry->setTitle( "Advanced Chemistry" );
      $maths->setTitle( "Algebra" );
  $physics->setPrice( 10 );   $chemistry->setPrice( 15 );   $maths->setPrice( 7 );
$physics->getTitle();   $chemistry->getTitle();   $maths->getTitle();
  $physics->getPrice();   $chemistry->getPrice();   $maths->getPrice();
?>
```

Output:


http://localhost/PHP/oop.php - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites
Address http://localhost/PHP/oop.php
Go
Google Search Share More
Sign In
Physics for High School
Advanced Chemistry
Algebra
10
15
7
Done
Local intranet
start
10:12 PM

PHP-MySQL

PHP will work with virtually all database software, including Oracle and Sybase but most commonly used is freely available MySQL database

Opening Database Connection:

PHP provides mysql_connect function to open a database connection. This function takes five parameters and returns a MySQL link identifier on success, or FALSE on failure.

Syntax:connection mysql_connect(server,user,passwd,new_link,client_flag);

server Optional - The host name running database server. If not specified then default value is localhost:3036.

user Optional - The username accessing the database. If not specified then default is the name of the user that owns the server process.

passwd Optional - The password of the user accessing the database. If not specified then default is an empty password.

new_link Optional - If a second call is made to mysql_connect() with the same arguments, no new connection will be established; instead, the identifier of the already opened connection will be returned.

client_flags Optional - A combination of the following constants:

MYSQL_CLIENT_SSL - Use SSL encryption

MYSQL_CLIENT_COMPRESS - Use compression protocol

MYSQL_CLIENT_IGNORE_SPACE - Allow space after function names

MYSQL_CLIENT_INTERACTIVE - Allow interactive timeout seconds of inactivity before closing the connection

Closing Database Connection:

Its simplest function mysql_close PHP provides to close a database connection. This function takes connection resource returned by mysql_connect function. It returns TRUE on success or FALSE on failure.

Syntax:bool

mysql_close (resource $link_identifier);

If a resource is not specified then last opend database is closed.

Example

```
<?php
$dbhost = 'localhost';
$dbuser = ‘root';
$dbpass = ‘';
$conn = mysql_connect($dbhost, $dbuser, $dbpass);
if(! $conn )
{
  die('Could not connect: ' . mysql_error());
}
echo 'Connected successfully';
mysql_close($conn);
?>
```

Creating a Database:

To create and delete a database we should have admin priviledge. Its very easy to create a new MySQL database. PHP uses mysql_query function to create a MySQL database. This function takes two parameters and returns TRUE on success or FALSE on failure.

Syntax:bool mysql_query(sql, connection);

sql Required - SQL query to create a database

connection Optional - if not specified then last opened connection by mysql_connect will be used.

Example

```
<?php
$dbhost = 'localhost:';
$dbuser = 'root';
$dbpass = '';
$conn = mysql_connect($dbhost, $dbuser, $dbpass);
if(! $conn )
{
  die('Could not connect: ' . mysql_error());
}
echo 'Connected successfully';
$sql = 'CREATE Database test_db';
$retval = mysql_query( $sql, $conn );
if(! $retval )
{
  die('Could not create database: ' . mysql_error());
}
echo "Database test_db created successfully\n";
mysql_close($conn);
?>
```

Selecting a Database:

Once we establish a connection with a database server then it is required to select a particular database where our all the tables are associated.

This is required because there may be multiple databases residing on a single server and we can do work with a single database at a time.

PHP provides function mysql_select_db to select a database.It returns TRUE on success or FALSE on failure.

Syntax:bool mysql_select_db(db_name, connection);

db_name **Required - Database name to be selected**

connection **Optional - if not specified then last opened connection by mysql_connect will be used.**

Example

```
<?php
$dbhost = 'localhost';
$dbuser = ‘root';
$dbpass = ‘';
$conn = mysql_connect($dbhost, $dbuser, $dbpass);
if(! $conn )
{
  die('Could not connect: ' . mysql_error());
}
echo 'Connected successfully';
mysql_select_db( 'test_db' );
mysql_close($conn);
?>
```

Creating Database Tables:

```
<?php
$dbhost = 'localhost';
$dbuser = 'root';
$dbpass = '';
$conn = mysql_connect($dbhost, $dbuser, $dbpass);
if(! $conn )
{
  die('Could not connect: ' . mysql_error());
}
echo 'Connected successfully';
$sql = 'CREATE TABLE employee( '.
       'emp_id INT NOT NULL AUTO_INCREMENT, '.
       'emp_name VARCHAR(20) NOT NULL, '.
       'emp_address  VARCHAR(20) NOT NULL, '.
       'emp_salary   INT NOT NULL, '.
       'join_date    timestamp(14) NOT NULL, '.
       'primary key ( emp_id ))';

mysql_select_db('test_db');
$retval = mysql_query( $sql, $conn );
if(! $retval )
{
  die('Could not create table: ' . mysql_error());
}
echo "Table employee created successfully\n";
mysql_close($conn);
?>
```

Insert data into MySQL

```
<?php
$dbhost = 'localhost:';
$dbuser = 'root';
$dbpass = '';
$conn = mysql_connect($dbhost, $dbuser, $dbpass);
if(! $conn )
{
  die('Could not connect: ' . mysql_error());
}
$sql = 'INSERT INTO employee '.
       '(emp_name,emp_address, emp_salary, join_date) '.
       'VALUES ( "guest", "XYZ", 2000, NOW() )';

mysql_select_db('test_db');
$retval = mysql_query( $sql, $conn );
if(! $retval )
{
  die('Could not enter data: ' . mysql_error());
}
echo "Entered data successfully\n";
mysql_close($conn);
?>
```

Getting Data From MySQL Database

```
<?php
$dbhost = 'localhost:3036';
$dbuser = 'root';
$dbpass = 'rootpassword';
$conn = mysql_connect($dbhost, $dbuser, $dbpass);
if(! $conn )
{
  die('Could not connect: ' . mysql_error());
}
$sql = 'SELECT emp_id, emp_name, emp_salary FROM employee';

mysql_select_db('test_db');
$retval = mysql_query( $sql, $conn );
if(! $retval )
{
  die('Could not get data: ' . mysql_error());
}
while($row = mysql_fetch_array($retval, MYSQL_ASSOC))
{
    echo "EMP ID :{$row['emp_id']}  <br> ".
         "EMP NAME : {$row['emp_name']} <br> ".
         "EMP SALARY : {$row['emp_salary']} <br> ".
         "--------------------------------<br>";
}
echo "Fetched data successfully\n";
mysql_close($conn);
?>
```

Updating Data into MySQL Database

```
<html>
<head>
<title>Update a Record in MySQL Database</title>
</head>
<body>

<?php
if(isset($_POST['update']))
{
$dbhost = 'localhost:3036';
$dbuser = 'root';
$dbpass = 'rootpassword';
$conn = mysql_connect($dbhost, $dbuser, $dbpass);
if(! $conn )
{
  die('Could not connect: ' . mysql_error());
}

$emp_id = $_POST['emp_id'];
$emp_salary = $_POST['emp_salary'];

$sql = "UPDATE employee ".
       "SET emp_salary = $emp_salary ".
       "WHERE emp_id = $emp_id" ;

mysql_select_db('test_db');
$retval = mysql_query( $sql, $conn );
if(! $retval )
{
  die('Could not update data: ' . mysql_error());
}
echo "Updated data successfully\n";
mysql_close($conn);
}
```

```
else
{
?>
<form method="post" action="<?php $_PHP_SELF ?>">
<table width="400" border="0" cellspacing="1" cellpadding="2">
<tr>
<td width="100">Employee ID</td>
<td><input name="emp_id" type="text" id="emp_id"></td>
</tr>
<tr>
<td width="100">Employee Salary</td>
<td><input name="emp_salary" type="text" id="emp_salary"></td>
</tr>
<tr>
<td width="100"> </td>
<td> </td>
</tr>
<tr>
<td width="100"> </td>
<td>
<input name="update" type="submit" id="update" value="Update">
</td>
</tr>
</table>
</form>
<?php
}
?>
</body>
</html>
```

Deleting Data from MySQL Database

```
<?php
if(isset($_POST['delete']))
{
$dbhost = 'localhost:3036';
$dbuser = 'root';
$dbpass = 'rootpassword';
$conn = mysql_connect($dbhost, $dbuser, $dbpass);
if(! $conn )
{
  die('Could not connect: ' . mysql_error());
}

$emp_id = $_POST['emp_id'];

$sql = "DELETE employee ".
       "WHERE emp_id = $emp_id" ;

mysql_select_db('test_db');
$retval = mysql_query( $sql, $conn );
if(! $retval )
{
  die('Could not delete data: ' . mysql_error());
}
echo "Deleted data successfully\n";
mysql_close($conn);
```