PHP Tutorial

What is PHP?

- PHP == 'PHP: Hypertext Preprocessor' (recursive backronym)
- Open-source, server-side scripting language
- Used to generate dynamic web-pages
- PHP scripts reside between reserved PHP tags
- This allows the programmer to embed PHP scripts within HTML pages

History of PHP

- PHP began in 1995 when Rasmus Lerdorf developed a Perl/CGI script toolset he called the Personal Home Page or PHP
- PHP 2 released 1997 (PHP now stands for Hypertex Processor). Lerdorf developed it further, using C instead
- PHP 3 released in 1998 (50,000 users)
- PHP 4 released in 2000 (3.6 million domains). Considered debut of functional language and including Perl parsing, with other major features
- PHP 5.0.0 released July 13, 2004 (113 libraries>1,000 functions with extensive object-oriented programming)
- PHP 5.6.40 released January 10, 2019
- PHP 7.0 released December 2015
- Documentation available at: http://www.php.net/docs.php
- PHP 7.1, 7.2 ND 7.3 are “stable” releases. PHP 5.6 still updated.

What is PHP (cont'd)

- Interpreted language, scripts are parsed at run-time rather than compiled beforehand
- Executed on the server-side
- Source-code not visible by client: e.g. 'View Source' in browsers does not display the PHP code
- Various built-in functions allow for fast development
- Compatible with many popular databases
- Provides
  + SAPI, Server Application Programming Interface (Direct Module)
  + ISAPI, The Internet Server Application Programming Interface (IIS)
  + CGI interface
  + CLI (Command Line Interface)

What does PHP code look like?

- Structurally similar to C/C++
- Supports procedural and object-oriented paradigm (to some degree)
- All PHP statements end with a semi-colon
- Each PHP script must be enclosed in the reserved PHP tag

```
<?php
    …
?>
```

A Simple Example

- Save as sample.php:

```
<!- sample.php -->
<html><body>
<strong>Hello World!</strong><br />
    <?php
      echo "<h2>Hello, World</h2>";
    ?>
    <?php
    $myvar = "Hello World";
    echo $myvar;
    ?>
</body></html>
```

Comments in PHP

- Standard C, C++, and shell comment symbols

```
// C++ and Java-style comment

# Shell-style comments

/* C-style comments
     These can span multiple lines */
```

Variables in PHP

- PHP variables must begin with a "$" sign
- The variable name must be followed by a letter or underscore
- Case-sensitive ($Foo != $foo != $fOo)

- Static, Global and locally-scoped variables
  + Global variables can be used anywhere (declared outside a function)
  + Local variables restricted to a function or class
  + Variable declared "static" do not disappear when a function is completed
  + Superglobals: predefined variables available in all 'scopes'

- Superglobal examples:
  + Form variables ($_POST, $_GET)
  + Server variables ($_SERVER, $HTTP_SERVER_VARS removed)
  + State variables ($_COOKIE, $_SESSION)
  + Environment variables ($_ENV, $HTTP_ENV_VARS deprecated)

PHP Variables

- Variables are not statically typed
- Integers can become floats, then can become strings
- Variables take the type of the current value
- Variable types include :
  - Boolean
  - Integer
  - Float
  - String
  - Array
  - Object
  - Resource
  - NULL

PHP Variables

- Assigned by value

```
$foo = "Bob"; $bar = $foo;
```

- Assigned by reference, this links vars

```
$bar = &$foo;
```

- Some variables are pre-assigned, e.g. server and env vars
- For example, there are PHP vars
  + PHP_SELF, an index variable that returns the current script being executed, including its name and path (Ex: $_SERVER['PHP_SELF'])
  + $_GET, an associative array of variables passed to the current script ($HTTP_GET_VARS deprecated)
  + $_POST, an associative array of variables passed to the current script ($HTTP_POST_VARS deprecated)

Displaying Variables

- To display a variable with the `echo` statement, pass the variable name to the `echo` statement without enclosing it in quotation marks :

```
$VotingAge = 18;
echo $VotingAge;
```

- To display both text strings and variables, send them to the `echo` statement as individual arguments, separated by commas :

```
echo "<p>The legal voting age is ", $VotingAge,
   ".</p>";
```

Naming Variables

- The following rules and conventions must be followed when naming a variable:
  - Variable names must begin with a dollar sign ($)
  - Variable names may contain uppercase and lowercase letters, numbers, or underscores (_). The first character after the dollar sign must be a letter or underscore.
  - Variable names cannot contain spaces
  - Variable names are case sensitive

PHP Constants

- Constants are special variables that cannot be changed
- Constant names do not begin with a dollar sign ($)
- Start with letter or underscore (_) followed by letters, numbers or underscores
- Use them for named items that will not change
- Constant names use all uppercase letters
- Use the **`define()`** function to create a constant

  `define("`*`CONSTANT_NAME`*`", `*`value`*`);`
- The value you pass to the `define()` function can be a text string, number, or Boolean value
- Constants have global scope

PHP Operators

- Standard Arithmetic operators

`+, -, *, / and % (modulus)`

- String concatenation with a period (.)

```
$car = “SEAT” . “ Altea”;
```

`echo $car; would output “SEAT Altea”`

- Basic Boolean comparison with “==”
- Using only = will overwrite a variable value
- Less than < and greater than >
- <= and >= as above but include equality

PHP Operators (cont'd)

- Assignment (=) and combined assignment

```
$a = 3;
$a += 5; // sets $a to 8;
$b = "Hello ";
$b .= "There!"; // sets $b to "Hello There!";
```

- Bitwise (&, |, ^, ~, <<, >>)

```
$a ^ $b(Xor: Bits that are set in $a or $b but not both
are set.)
~ $a (Not: Bits that are set in $a are not set, and
vice versa.)
```

Data Types

- PHP is **not** strictly typed
- PHP support 8 “primitive” types:
  + 4 scalar types: boolean, integer, double (floating-point), string
  + 2 compound types: array and object
  + 2 special types; resource and null
- PHP decides what type a variable is
- PHP can use variables in an appropriate way automatically
- E.g.

```
$vat_rate = 0.175; /* VAT Rate is numeric */
echo $vat_rate * 100 . “%”; //outputs “17.5%”
```

- $vat_rate is converted to a string for the purpose of the echo statement

Numeric Data Types

- PHP supports two numeric data types:
  - An **integer** is a positive or negative number and 0 with no decimal places (-250, 2, 100, 10,000)
  - A **floating-point number** (double) is a number that contains decimal places or that is written in exponential notation (-6.16, 3.17, 2.7541)

Boolean Values

- A **Boolean value** is a value of TRUE or FALSE
- It decides which part of a program should execute and which part should compare data
- In PHP programming, you can only use TRUE or FALSE Boolean values
- In other programming languages, you can use integers such as 1 = TRUE, 0 = FALSE

Variable usage

```
<?php
$foo = 25;              //Numerical variable
$bar = "Hello";         //String variable

$foo = ($foo * 7);      //Multiples foo by 7
$bar = ($bar * 7);      //Invalid expression
?>
```

echo example

```
<?php
$foo = 25;            // Numerical variable
$bar = "Hello";       // String variable

echo $bar;            // Outputs Hello
echo $foo,$bar;       // Outputs 25Hello
echo "5x5=",$foo;     // Outputs 5x5=25
echo "5x5=$foo";      // Outputs 5x5=25
echo '5x5=$foo';      // Outputs 5x5=$foo
?>
```

- Notice how echo '5x5=$foo' outputs $foo rather than replacing it with 25
- Strings in single quotes ('') are not interpreted or evaluated by PHP
- This is true for both variables and character escape-sequences (such as "\n" or "\\")

Arithmetic Operations

```
<?php
      $a=15;
      $b=30;
      $total=$a+$b;
      Print $total;
      Print "<p><h1>$total</h1>";
      // total is 45
?>
```

```
$a - $b       // subtraction
$a * $b       // multiplication
$a / $b       // division
$a += 5       // $a = $a+5        - also works for *= and /=
```

Concatenation

- Use a period to join strings into one.

```
<?php
$string1="Hello";
$string2="PHP";
$string3=$string1 . " " . $string2;
Print $string3;
?>
```

```
Hello PHP
```

Escaping the Character

- If the string has a set of double quotation marks that must remain visible, use the \ [backslash] before the quotation marks to ignore and display them.

```
<?php
$heading="\"Computer Science\"";
Print $heading;
?>
```

```
"Computer Science"
```

PHP Control Structures

- Control Structures: the structures within a language that allow us to control the flow of execution through a program or script.
- Grouped into conditional / branching structures (e.g. if/else) and repetition structures (e.g. while loops).
- Example if/else if/else statement:

```
if ($foo == 0) {
    echo 'The variable foo is equal to 0';
}
else if (($foo > 0) && ($foo <= 5)) {
    echo 'The variable foo is between 1 and 5';
}
else {
    echo 'The variable foo is equal to '.$foo;
}
```

If ... Else...

```
If (condition)
{
      Statements;
}
Else
{
      Statement;
}
```

```
<?php
If($user=="John")
{
      Print "Hello John.";
}
Else
{
      Print "You are not John.";
}
?>
```

No ‘Then’ in PHP !

While Loops

```
General format:

While (condition)
        {
        Statements;
        }
```

```
<?php
$count=0;
While($count<3)
{
      Print "hello PHP. ";
      $count += 1;
      // $count = $count + 1;
      // or
      // $count++;
}
?>
```

```
hello PHP. hello PHP. hello PHP.
```

Date Display

```
$datedisplay=date("yyyy/m/d");
Print $datedisplay;
# If the date is April 1st, 2012
# It would display as 2012/4/1
```

2012/4/1

```
$datedisplay=date("l, F j, Y");  (see next slide for symbol meanings)
Print $datedisplay;
# If the date is April 1st, 2012
# Wednesday, April 1, 2012
```

Wednesday, April 1, 2012

Month, Day & Date Format Symbols

M	Jan
F	January
m	01
n	1

Day of Month	d	01
Day of Month	j	1
Day of Week	l	Monday
Day of Week	D	Mon

Functions

- Functions MUST be defined before they can be called
- Function headers are of the format

```
function functionName($arg_1, $arg_2, …, $arg_n)
```

  + Note that no return type is specified

- Unlike variables, function names are not case sensitive

```
(foo(…) == Foo(…) == FoO(…))
```

Functions example

```
<?php
    // This is a function
    function foo($arg_1, $arg_2)
    {
      $arg_2 = $arg_1 * $arg_2;
      return $arg_2;
    }

    $result_1 = foo(12, 3);        // Store the function
    echo $result_1;                // Outputs 36
    echo foo(12, 3);               // Outputs 36
?>
```

Include Files

- Include “footer.php” by placing within the HTML the line

```
<?php include 'footer.php';  ?>
```

- The file footer.php might look like:

```
<hr SIZE=11 NOSHADE WIDTH=“100%”>
<i>Copyright © 2010-2012 USC </i></font><br>
<i>ALL RIGHTS RESERVED</i></font><br>
<i>URL: http://www.usc.edu</i></font><br>
```

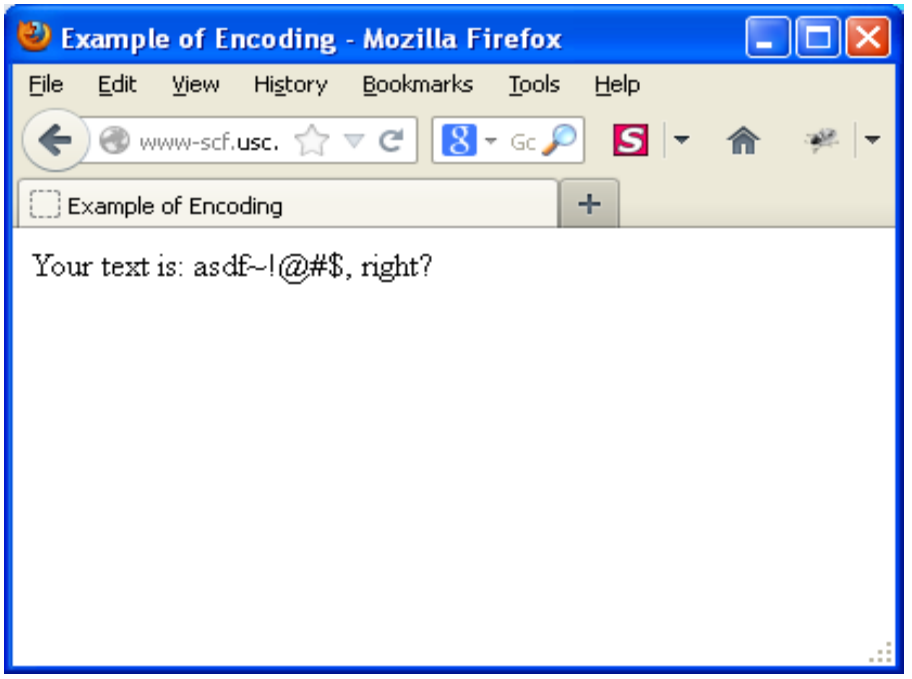
Some simple examples

These examples can be found at

http://csci571.com/examples/php/php_ex/translated/index.html

Example – Encoding Form Data

before



after

Example – Encoding Form Data Script

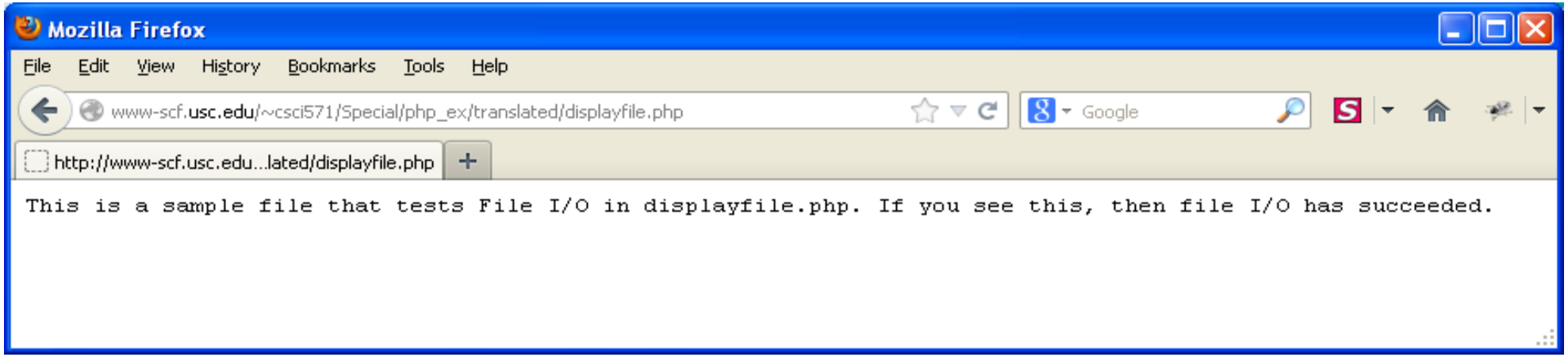
```
<HTML>
<HEAD><TITLE>Example of Encoding</TITLE></HEAD>
<BODY>
<?php if($_POST["submit"]): ?>
        Your text is: <?php echo $_POST["input"]; ?>, right?
<?php else: ?>
        <H1>Please enter some text</H1>
        <FORM ACTION=""  METHOD=POST>
        Enter text: <INPUT NAME=input><BR>
        <INPUT TYPE=submit name="submit">
        <INPUT TYPE=reset></form>
<?php endif; ?>
</BODY>
</HTML>
```

- Note: PHP 5.4+ warns if not doing this: `if (isset($_POST["submit"])`

Example – Displaying a Text File

This php program is invoked by clicking on the link

Example – Displaying a text file



Resulting Output

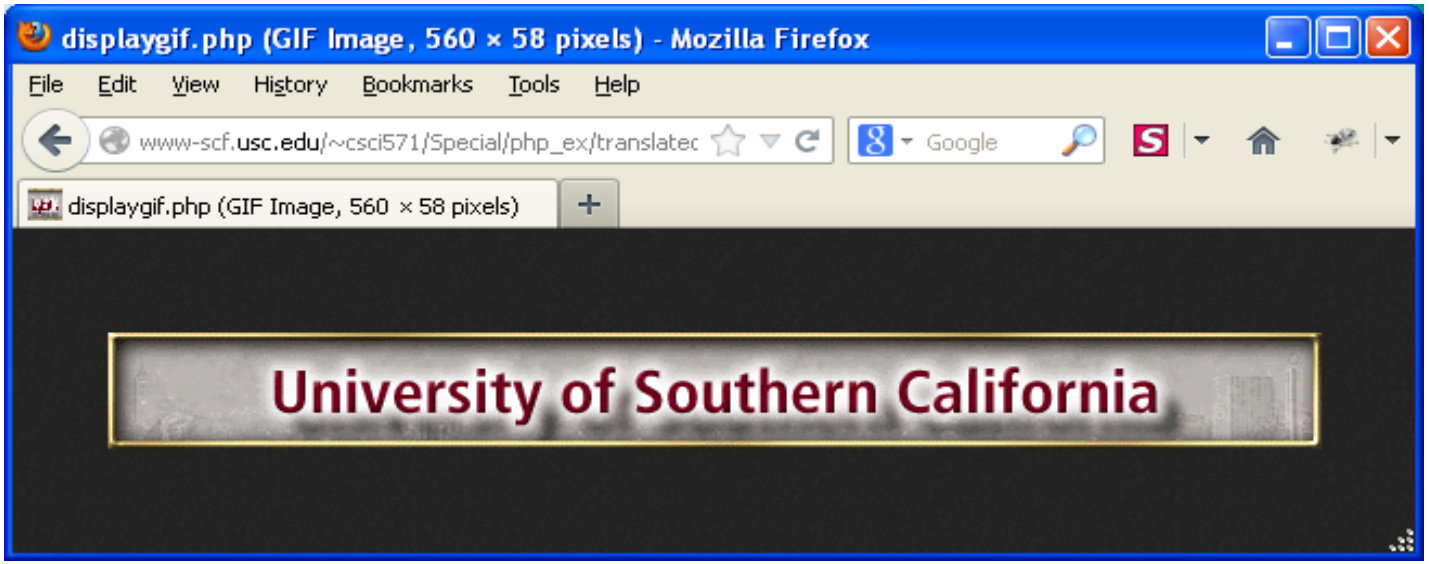
Example – Source of displayfile.php Script

```
<?php
$ourFileName = "apple.txt";
$ourFileHandle = fopen($ourFileName, "r") or die("can't open
   file");
$file = fread($ourFileHandle, filesize($ourFileName));
fclose($ourFileHandle);
header("Content-type: text/plain");
echo $file;
?>
```

Example – Returning a GIF Image

This program is also invoked by clicking on a link

Example – Returning a GIF Image



Resulting Output

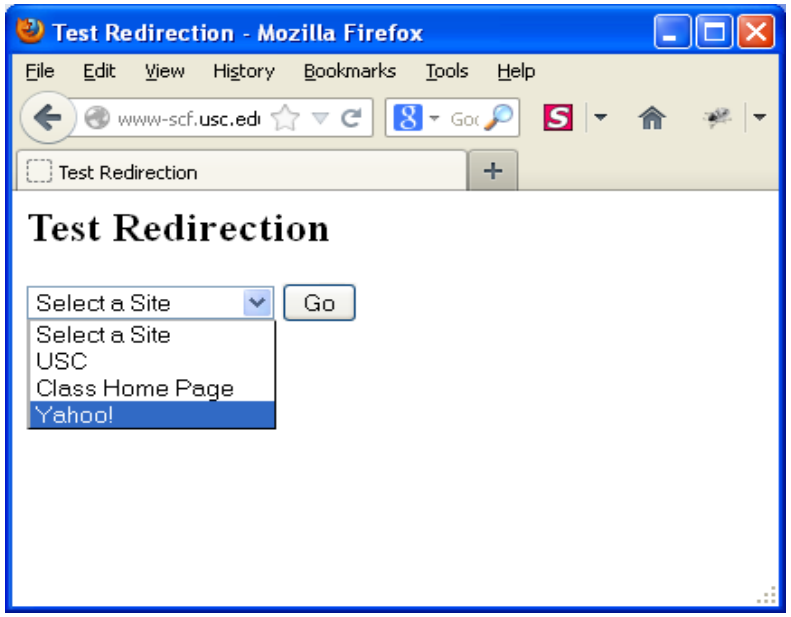
Example – Source for displaygif.php Script

```
<?php
$ourFileName = "BanS_USC.gif";
$ourFileHandle = fopen($ourFileName, "r") or die("can't
  open file");
$file = fread($ourFileHandle, filesize($ourFileName));
fclose($ourFileHandle);
header("Content-type: image/gif");
echo $file;
?>
```

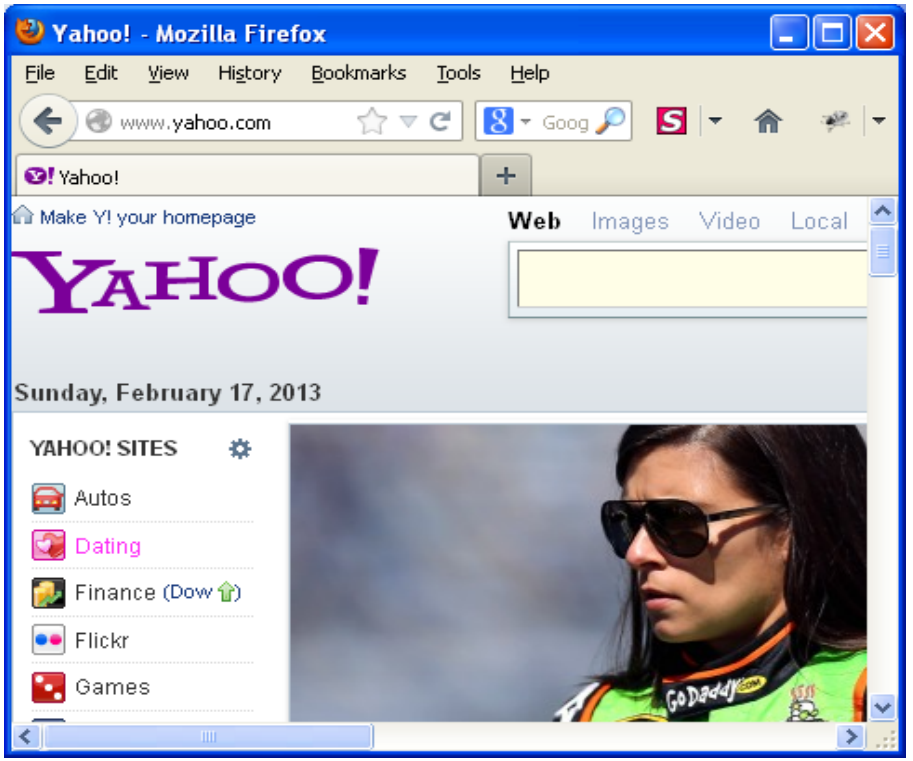
Example – Redirection in php

This program is also invoked by clicking on a link

Example – Redirection



Before



After

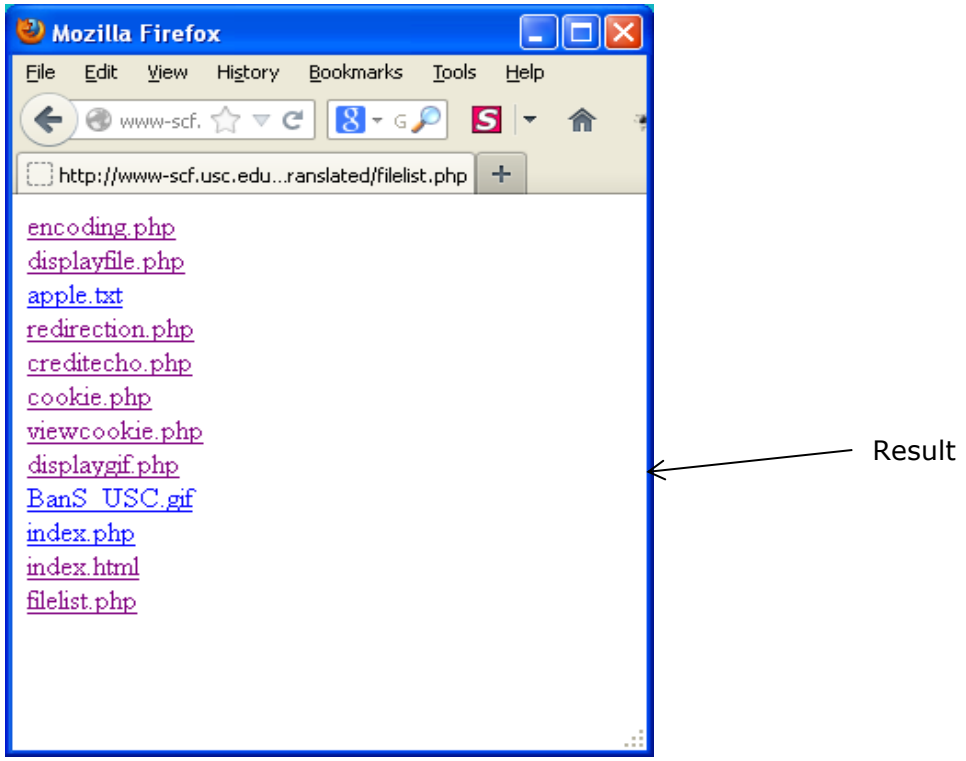
Example – redirection.php Script

```
<?php if($_POST["submit"]): ?>
<?php header("Location: $_POST[url]"); ?>
<?php else: ?>
<html><head><title>Test Redirection</title></head>
<body>
<h2>Test Redirection</h2>
<form method="post" action="">
<select name="url">
<option selected=selected value="">Select a Site</option>
<option value="http://www.usc.edu">USC</option>
<option value="http://www-scf.usc.edu/~csci571/index.html">Class Home
   Page</option>
<option value="http://www.yahoo.com">Yahoo!</option>
</select> <input type="submit" value="Go" name="submit">
</form></body></html>
<?php endif; ?>
```

Example - Creating a File List

This program is also invoked by clicking on a link

Example – Creating a File List



Example – Source for filelist.php Script

```
<?php
//echo getcwd(); get current working directory
if ($handle =
   opendir('/var/www/html/examples/php/php_ex/translated')) {
    while (false !== ($entry = readdir($handle))) {
                if ($entry != "." && $entry != "..") {
               echo "<a href='$entry'>$entry</a><br/>\n";
                }
    }
    closedir($handle);
}
?>
```

Simple counter example

This example is currently stored at: http://csci571.herokuapp.com/example_counter.php

Simple counter script

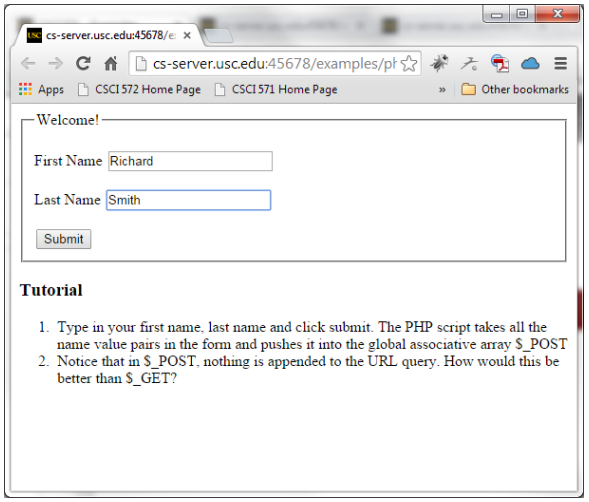
```
<?php
$ourFileName = "counter.txt";
$ourFileHandle = fopen($ourFileName, "r") or die("can't open file");
$num = fread($ourFileHandle, filesize($ourFileName));
fclose($ourFileHandle);
$ourFileHandle = fopen($ourFileName,"w") or die("can't open file");
$num++;
echo "<h1>Welcome Visitor #" . $num . "</h1>";
fwrite($ourFileHandle, $num);
fclose($ourFileHandle);
?>
<h3>Simple Counter PHP Example</h3>
<ol>
<li>The PHP script reads in the txt file and gets the current
   value.</li>
<li>Then, it increments that current value by 1, prints out the visitor
#, and writes it to the file.</li>
</ol>
```

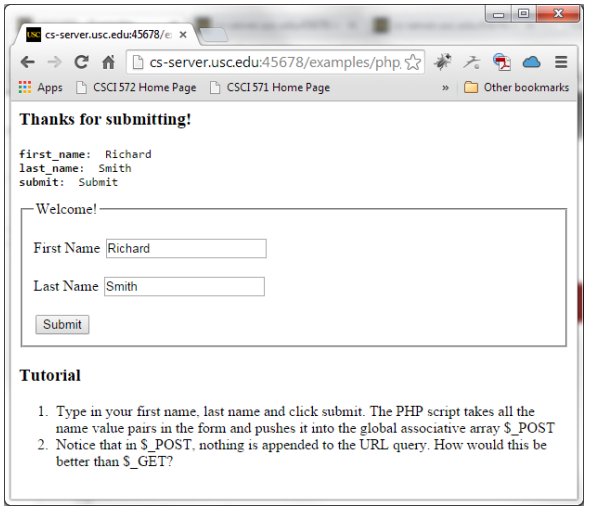
PHP - Dealing with the client

- <form method="post" action="file.php" id="frmid" >
  + Method specifies how the data will be sent
  + Action specifies the file to go to. E.g., file.php
  + id gives the form a unique name
- Post method sends all contents of a form with basically hidden headers (not easily visible to users)
- Get method sends all form input in the URL requested using name=value pairs separated by ampersands (&)
  + E.g., process.php?name=trevor&number=345
  + Is visible in the URL shown in the browser

PHP - Example Using POST

```
<?php
include_once("inc.php");
if(isset($_POST["submit"])):
?>
<h3>Thanks for submitting!</h3>
 <pre>
   <?php print_array($_POST); ?>
 </pre>
<?php endif; ?>
<form method="POST" action="">
<fieldset>
        <legend>Welcome!</legend>
        <p><label for="first_name">First Name</label>
<input type="text" name="first_name"
value="<?php echo isset($_POST["first_name"]) ?
$_POST["first_name"] : "" ?>"></p>
        <p><label for="first_name">Last Name</label>
 <input type="text" name="last_name" value="<?php echo
isset($_POST["last_name"]) ? $_POST["last_name"] : "" ?>">
        </p>
        <input type="submit" name="submit" value="Submit">
</fieldset></form>
```





PHP - Dealing with the client

- Summary
  + Form elements contain input elements
  + Each input element has an id
  + If a form is posted, the file stated as the action can use:

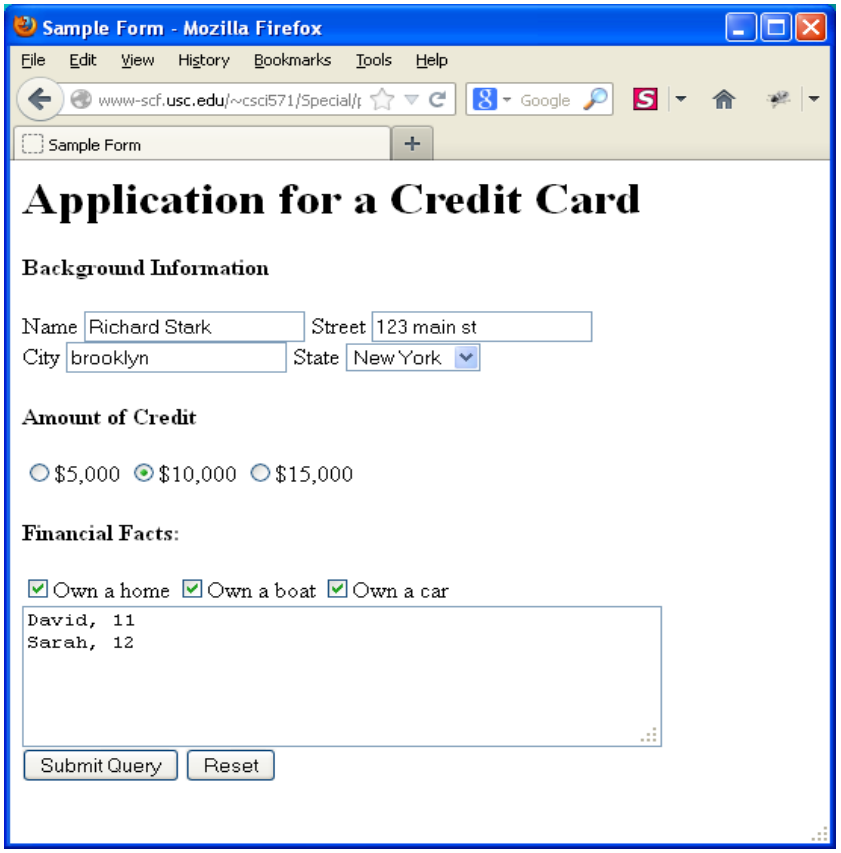
    ```
    $_POST["inputid"]
    ```
  + If a form uses the get method:

    ```
    $_GET["inputid"]
    ```
- Ensure you set all id attributes for form elements and their contents

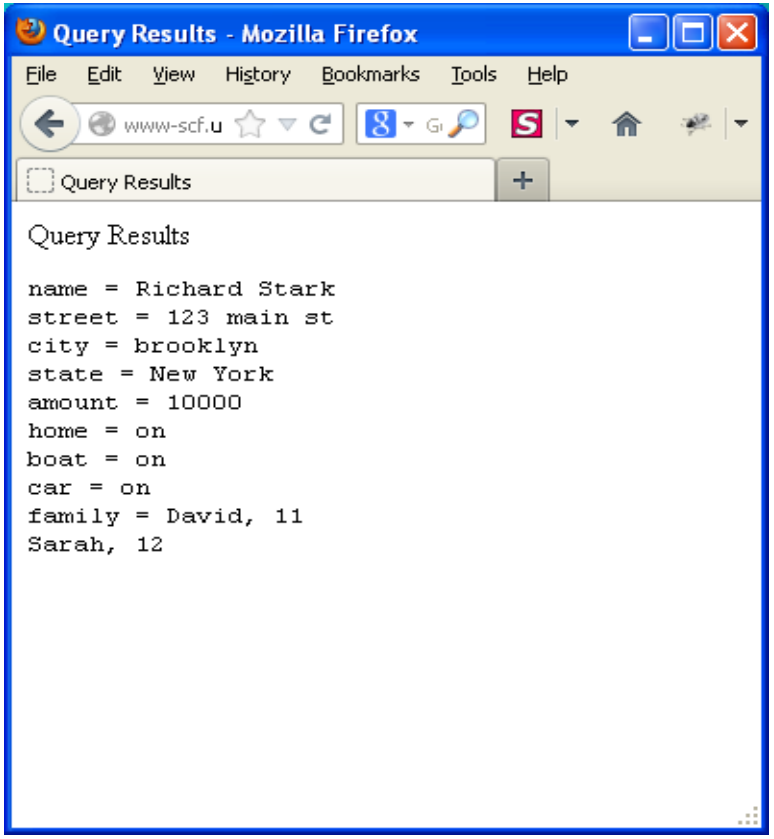
EXAMPLE - CGI Env. Access

```
<?php
      $env["REMOTE_ADDR"] = getenv("REMOTE_ADDR");
      $env["SERVER_SOFTWARE"] = getenv("SERVER_SOFTWARE");
      $env["SERVER_NAME"] = getenv("SERVER_NAME");
      $env["GATEWAY_INTERFACE"] = getenv("GATEWAY_INTERFACE");
      $env["SERVER_PROTOCOL"] = getenv("SERVER_PROTOCOL");
      $env["SERVER_PORT"] = getenv("SERVER_PORT");
      $env["REQUEST_METHOD"] = getenv("REQUEST_METHOD");
      $env["PATH_INFO"] = getenv("PATH_INFO");
      $env["PATH_TRANSLATED"] = getenv("PATH_TRANSLATED");
      $env["DOCUMENT_ROOT"] = getenv("DOCUMENT_ROOT");
      $env["SCRIPT_NAME"] = getenv("SCRIPT_NAME");
      $env["QUERY_STRING"] = getenv("QUERY_STRING");
      $env["REMOTE_HOST"] = getenv("REMOTE_HOST");
      $env["AUTH_TYPE"] = getenv("AUTH_TYPE");
      $env["REMOTE_USER"] = getenv("REMOTE_USER");
      $env["REMOTE_IDENT"] = getenv("REMOTE_IDENT");
      $env["CONTENT_TYPE"] = getenv("CONTENT_TYPE");
      $env["CONTENT_LENGTH"] = getenv("CONTENT_LENGTH");
      $env["HTTP_ACCEPT"] = getenv("HTTP_ACCEPT");
      $env["HTTP_HOST"] = getenv("HTTP_HOST");
      $env["HTTP_USER_AGENT"] = getenv("HTTP_USER_AGENT");
      $env["HTTP_REFERER"] = getenv("HTTP_REFERER");
      $env["HTTP_REFERRER"] = getenv("HTTP_REFFERER");
      print "<table border=1 cellspacing=0 cellpadding=2>";
      print "<caption>Environment Variables</caption>";
      while ( list( $key, $val ) = each( $env ) ) {
        print "<tr><td bgcolor=#CCCCCC><b>$key</b></td><td bgcolor=#EEEEEE><i>$val</i></t
    d></tr>";
      }
      print "</table>";  }    ?>
```

Example – Echoing Inputs



Input



Output

For the following slides, see "Translated PHP Examples from Perl":

http://csci571.com/examples/php/php_ex/translated/index.html

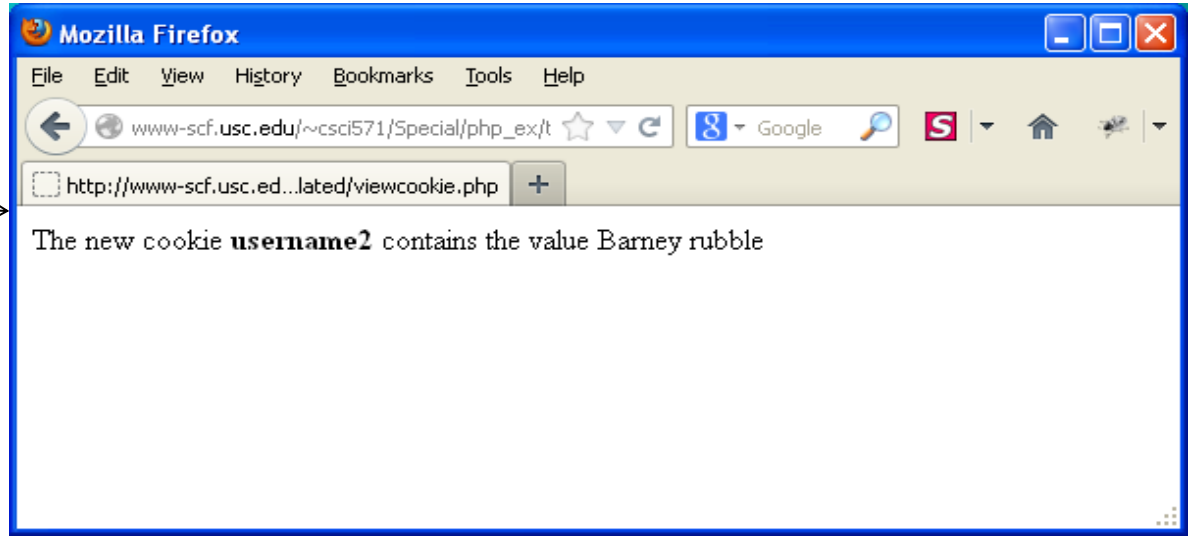
Example – Echoing Inputs Scripts

```
<?php if($_GET["submit"]): ?>
<HTML><HEAD><TITLE>Query Results</TITLE></HEAD><BODY>
Query Results<pre>
<?php
foreach($_GET as $key => $value) {
        if ($key !== "submit") {
                echo $key . " = " . $value . "\n";
        }
}
?>
</pre></BODY></HTML>
<?php else: ?>
<HTML><HEAD><TITLE>Sample Form</TITLE></HEAD><BODY>
<H1>Application for a Credit Card</H1>
<FORM METHOD="GET" ACTION="">
<H4>Background Information</H4>
Name  <INPUT name=name> Street <INPUT name=street><BR>
City <INPUT name=city> State <SELECT name=state>
<OPTION> Alabama <OPTION> California <OPTION> New York<OPTION> Wisconsin </SELECT>
<H4>Amount of Credit</H4> <INPUT type=radio name=amount value=5000>$5,000
<INPUT type=radio name=amount value=10000>$10,000
<INPUT type=radio name=amount value=15000>$15,000
<H4>Financial Facts:</H4> <INPUT type=checkbox name=home>Own a home
<INPUT type=checkbox name=boat>Own a boat
<INPUT type=checkbox name=car>Own a car<BR>
<TEXTAREA rows=5 cols=50 name=family>
Please describe here the names and ages of people in your family and the number of cards
you are requesting. </TEXTAREA>
<INPUT type=submit name="submit"> <INPUT type=reset></FORM></BODY>
</HTML>
<?php endif; ?>
```

Example - Setting a Cookie

before

after



Set / View cookie

```
Set cookie:
<?php
setcookie("username2", "Barney Rubble”, time() + 3600 );
?>

View cookie:
<?php
if(isset($_COOKIE["username2"])) {
        echo "The new cookie <b>username2</b> contains the
   value " . $_COOKIE["username2"];
}
?>
```

Why PHP Sessions?

- Whenever you want to create a website that allows you to store and display information about a user, determine which user-groups a person belongs to, or utilize permissions on your website, **PHP Sessions** are vital to each of these features.

- PHP has a set of functions that can achieve the same results of Cookies without storing information on the user's computer. **PHP Sessions** store the information on the *web server* in a location that you chose in special files. These files are connected to the user's web browser via the server and a special ID called a "Session ID". This is virtually invisible to the user.

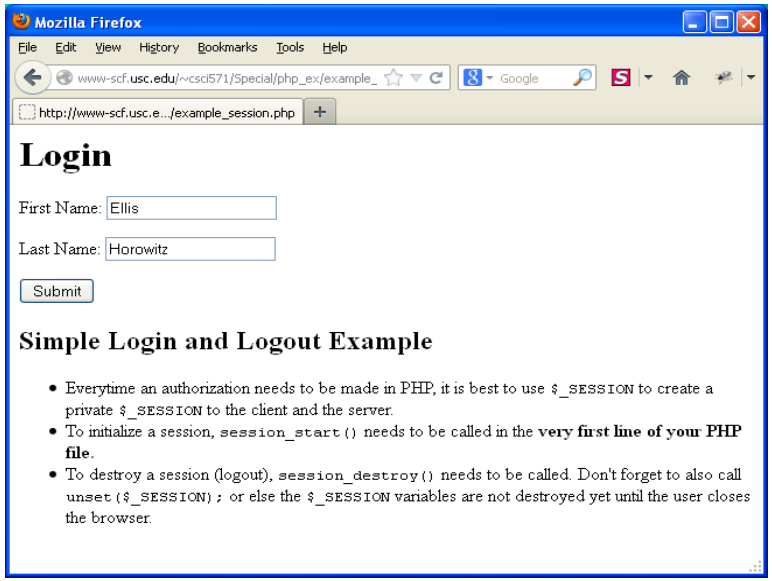
PHP Sessions

- Sessions store their identifier in a cookie in the client's browser
- Every page that uses session data must be preceeded by the session_start() function
- Session variables are then set and retrieved by accessing the global $_SESSION[]

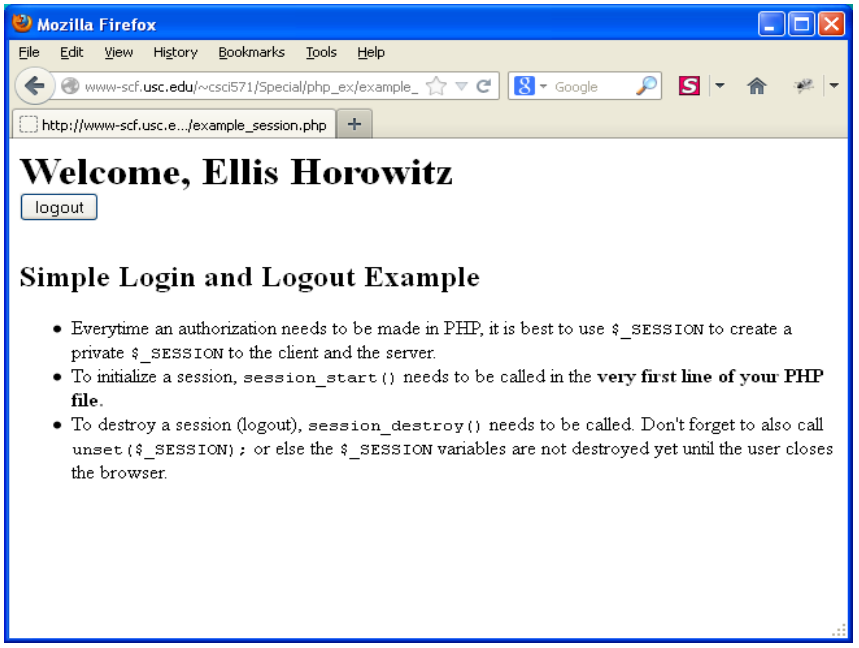
- Sample session.php code:

```
<?php
    session_start();
    if (!$_SESSION["count"])
        $_SESSION["count"] = 0;
    if ($_GET["count"] == "yes")
        $_SESSION["count"] = $_SESSION["count"] + 1;
    echo "<h1>".$_SESSION["count"]."</h1>";
?>
<a href="session.php?count=yes">Click here to count</a>
```

EXAMPLE – SESSIONS



Initial Login Screen



Resulting Screen

$_SESSION creates a private ID; session_start() and session_destroy()

example-session.php

```
<?php
        session_start();
        if(isset($_POST["submit"])) {
                $_SESSION["fname"] = $_POST["fname"];
                $_SESSION["lname"] = $_POST["lname"];
        }
        if(isset($_POST["logout"])) {
                session_destroy();
                unset($_SESSION);
        }
?>
<?php if(!(isset($_SESSION["fname"],$_SESSION["lname"]))): ?>
<h1>Login</h1>
<form method="POST">
<p><label for="username">First Name:</label>
        <input type="text" name="fname" />
</p> <p>
        <label for="lname">Last Name:</label>
        <input type="text" name="lname" />
</p> <p><input type="submit" name="submit" value="Submit"></p>
</form>
```

example-session.php (cont'd)

```
<?php   else:  ?>
<h1>Welcome, <?php echo ucwords($_SESSION["fname"] . " " . $_SESSION["lname"]);
?>
<form method="POST">
        <input type="submit" name="logout" value="logout">
</form>
<?php endif; ?>

<h2>Simple Login and Logout Example</h2>
<ul>
<li>Everytime an authorization needs to be made in PHP, it is best to use
<code>$_SESSION</code> to create a private <code>$_SESSION</code>  to the client
   and the server.</li>
<li>To initialize a session, <code>session_start()</code>  needs to be
called in the <b>very first line of your PHP file.</b></li>
<li>To destroy a session (logout), <code>session_destroy()</code>  needs
 to be called. Don't forget to also call <code>unset($_SESSION);</code> or else
the <code>$_SESSION</code> variables are not destroyed yet until the user closes
 the browser.</li>
</ul>
```

Note: The **ucwords**() function converts the first character of each word in a string to uppercase.

Connecting to a Database

- PHP Has a set of functions that can be used with MySQL
- First step is to setup a link to the desired database
- See "MySQL Functions" docs at:
  http://php.net/manual/en/ref.mysql.php
- See MySQL API docs at:
  http://php.net/manual/en/book.mysql.php

```
$link = mysql_connect($host, $user, $password);
mysql_select_db($database);
```

Making a Query

- Once a link is established, querying is easy
- Errors for any given function are returned by mysql_error()

```
$query = “SELECT * FROM $table;”;
$result = mysql_query($query);
```

MySQL Result Set

- The value returned by mysql_query() is a reference to an internal data structure
- It can be parsed by various functions

```
$row = mysql_fetch_array($result);
$num_rows = mysql_num_rows($result);
$affected = mysql_affected_rows($result);
```

Associative Arrays

- An array that can be indexed by a string
- A set of key->value pairs
- Very similar to a hash in Perl

```
$row['id'] = $id;
$row = array('id' => $id);
echo $row['id'];
```

PHP foreach

- Similar to the Perl equivalent
- Allows iterating through each element of an array

```
foreach($arr as $item) {}
foreach($row as $key=>$value) {}
```

Put it All Together

```
<html><body>
<?php
  // setup a query
  $link = mysql_connect($host, $user, $password);
  mysql_select_db($database);
  $query = “SELECT * FROM $table WHERE id = ‘$id’;”;
  $result = mysql_query($query);
>
```

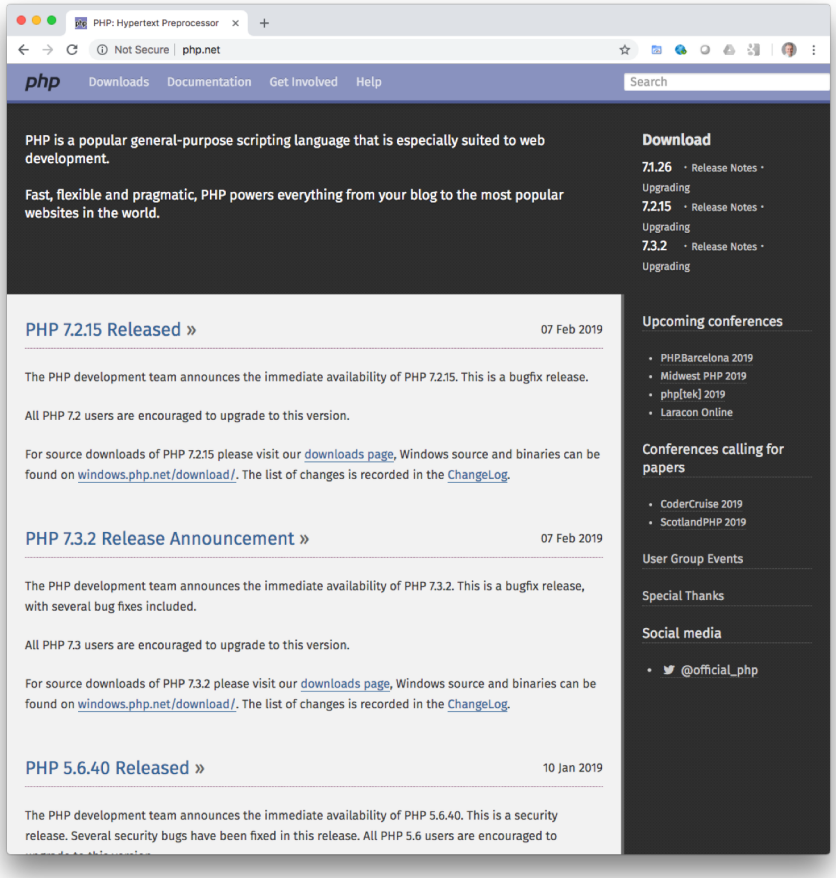
Put it All Together (cont'd)

```
//Display a table
echo “<table>”;
While ($row = mysql_fetch_array($result)) {
  echo “<tr>”;
    foreach ($row as $key => $value) {
       echo “<td>$value</td>”;
    }
    echo “</tr>”;
 }
echo “</table>”;
mysql_close($link);
?>
</body></html>
```

The Results

ID	Time	New Rain	Total Rain
382422089522600	2007-08-13 03:00:00	0.19	11.76
382422089522600	2007-08-13 03:15:00	0.01	11.77
382422089522600	2007-08-19 13:30:00	0.05	11.82
382422089522600	2007-08-19 13:45:00	0.01	11.83
382422089522600	2007-08-20 13:30:00	0.01	11.84
382422089522600	2007-08-20 13:45:00	0.01	11.85
382422089522600	2007-08-20 17:30:00	0.01	11.86
382422089522600	2007-08-24 13:15:00	0.01	11.87
382422089522600	2007-08-24 15:00:00	0.11	11.98

www.php.net



www.php.net is the main destination for PHP. The site includes all source/binary releases of PHP plus tutorials and discussion groups. Another excellent site for PHP is www.phphelp.com.