Part 2: JavaScript, PHP, SQL, Advanced PHP

EE4727/IM4727 Web Application Design
Sessions

Lecturer :
Dr Karim
Dr Wesley Tan Chee Wah
Dr Hu Xiao

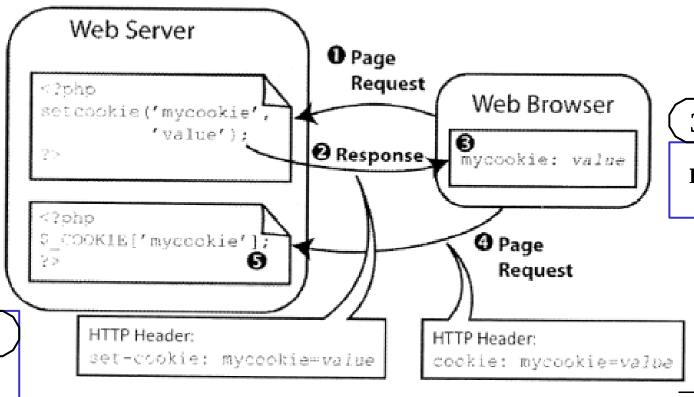
Cookies: what is it?

- Why cookies
  - For preserving state across a number of transactions
- What is a cookie
  - A name/value pair associated with a given website and stored on the computer that runs the client (browser)
- Use of cookies
  - A small piece of information that PHP stores on a client-side machine
  - Browser when connected to an URL, searches cookies stored locally
  - Relevant cookie information are transmitted back to server

1
```
<?php
 setcookie('mycookie', 'value');
?>
```

5
```
<?php
 $_COOKIE['mycookie']; ?>
```

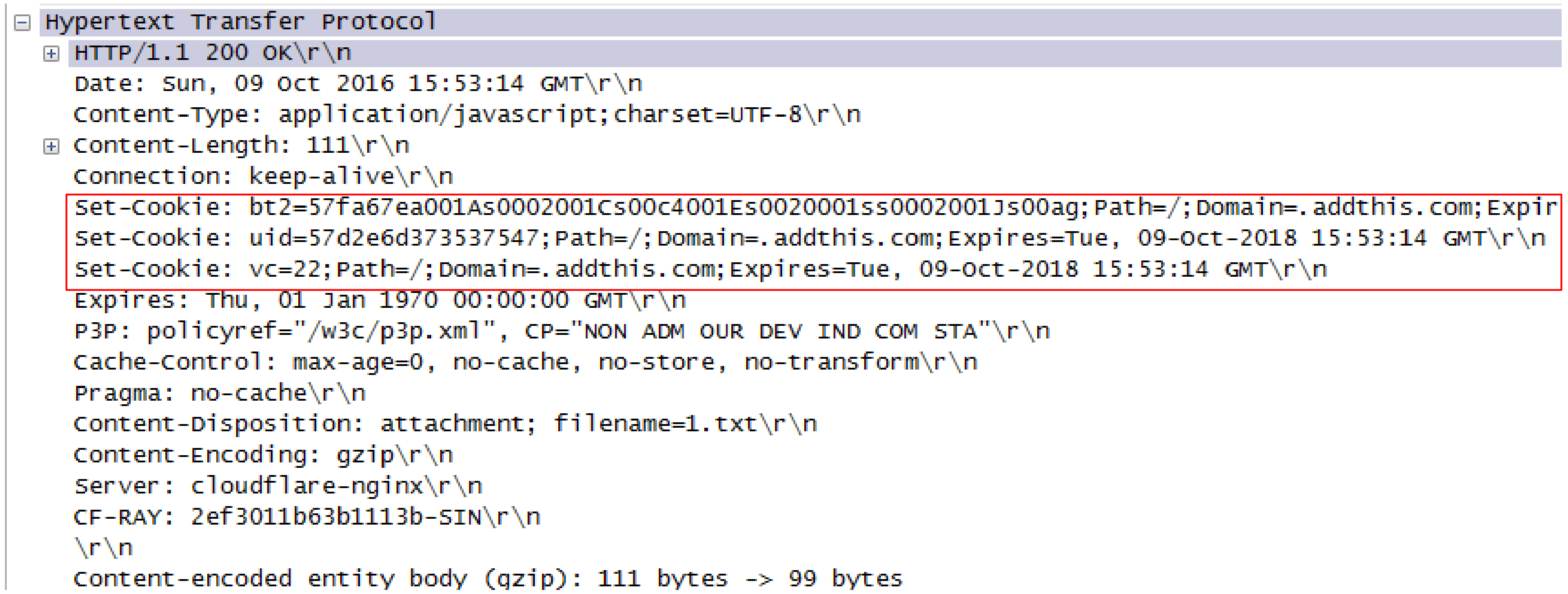
2
HTTP Header
set-cookie: mycookie=value



3
mycookie: value

4
HTTP Header
cookie: mycookie=value

Setting Cookies via HTTP header



```
⊟ Hypertext Transfer Protocol
  ⊞ HTTP/1.1 200 OK\r\n
    Date: Sun, 09 Oct 2016 15:53:14 GMT\r\n
    Content-Type: application/javascript;charset=UTF-8\r\n
  ⊞ Content-Length: 111\r\n
    Connection: keep-alive\r\n
    Set-Cookie: bt2=57fa67ea001As0002001Cs00c4001Es0020001ss0002001Js00ag;Path=/;Domain=.addthis.com;Expir
    Set-Cookie: uid=57d2e6d373537547;Path=/;Domain=.addthis.com;Expires=Tue, 09-Oct-2018 15:53:14 GMT\r\n
    Set-Cookie: vc=22;Path=/;Domain=.addthis.com;Expires=Tue, 09-Oct-2018 15:53:14 GMT\r\n
    Expires: Thu, 01 Jan 1970 00:00:00 GMT\r\n
    P3P: policyref="/w3c/p3p.xml", CP="NON ADM OUR DEV IND COM STA"\r\n
    Cache-Control: max-age=0, no-cache, no-store, no-transform\r\n
    Pragma: no-cache\r\n
    Content-Disposition: attachment; filename=1.txt\r\n
    Content-Encoding: gzip\r\n
    Server: cloudflare-nginx\r\n
    CF-RAY: 2ef3011b63b1113b-SIN\r\n
    \r\n
    Content-encoded entity body (gzip): 111 bytes -> 99 bytes
```

Cookies: use of it

- Setting cookies from PHP

  ```
  setcookie (string name [, string value [, int expire
     [, string path [, string domain [, int secure]]]]])
  ```

  - `expire` sets date of expiry of cookie
  - `path` and `domain` specify the URL(s) for which cookie is relevant
    - E.g. path as '/`~directory`/', domain as '`.domain.com`'
  - `secure` requires cookie be sent over a secured HTTPS connection

- Using cookies

  ```
  setcookie ('mycookie', 'value');
  ```

  - Once set by a website, all future page requests to the site will also include the cookie, until it expires
  - On reloads of current or other pages at the browser site, cookie variables will be available via…

  `$_COOKIE['mycookie']` - contents are stored at the server

  - Calling `setcookie()` again with only the name will delete the cookie

Cookies: using it

cookiecounter.php

- Set a cookie to expire in 1 year

```
setcookie('mycookie', 'somevalue', time() + 3600 * 24 * 365);
```

- Delete a cookie that has a preset expiry time

```
setcookie('mycookie', '', time() - 3600 * 24 * 365);
```

- Cookies must be set before any page content is output
  - Cookie is not actually set until the browser receives the web page
- Never assume cookies to be retained at website
  - Cookies are best used for logging in a user
    - If cookie is deleted, user simply has to reenter the user and password
- Browsers place a limit on number and size of cookies allowed per website
- Use sessions to overcome these issues

Session Control in PHP

- Why session control?
  - HTTP is stateless, no way to maintain transactions across different pages
  - Cookies not appropriate for storing large amounts of information; some may not accept or disable cookies altogether
- What is a session in PHP
  - Sessions let you store data on your web server
  - Is a superglobal, `$_SESSION`
- Session ID
  - Session ID generated by PHP
    - Unless configured otherwise, PHP session automatically sets in the user's browser a cookie that contains the session ID
  - Stored on client side for the lifetime of a session
    - Store a single cookie of the user's session ID
    - Session ID acts as a key to register session variables
  - Content of variables stored at the server
    - PHP keeps track registered variables in each session, and their values

Storing the Session ID

- PHP uses cookies by default with sessions in `php.ini` file

  `Session.use_cookies    = 1`

  - If possible, a cookie will be set to store the session ID
- PHP may send session ID via URL query string variable
  - PHP automatically add the session ID to all relative links on your page via URL as in $_GET for data.
  - However, all pages must be PHP files for this to work and `session.use_trans_sid` must be enabled in `php.ini` file
  - Caution: setting `session.use_trans_sid` increases site's security risks as session ID in URL could be stored or bookmarked and become accessible by others. By default it is turned off

    `Session.use_trans_sid = 0`
- Alternatively, session ID can be manually embedded in links
  - <a href="link.php? **`<?php echo SID; ?>`** ">
  - `session ID` is stored in the constant SID
  - SID will evaluate to NULL if `Session.use_cookie` has been set to 1
  - use `session_id()` instead

Implementing Simple Sessions

- The basic steps

1. Starting a session
2. Registering session variables
3. Using session variables
4. De-registering variables and destroying the session

- Session functions

```
Session_start(); //start a new session
$_SESSION['pwd']='mypassword'; //$_SESSION array assignment
Session_destroy(); //end and delete all registered variables
```

Steps in using Sessions

- Starting a session

  `session_start();`

  - If not already a session, create one
  - If already exists, loads the registered session variables
- Registering session variables

  `$_SESSION['myvar'] = 5;`

  - Session variables are stored in superglobal array
  - Session variable will be tracked until session ends or manually `unset`
- Using session variables

  `If (isset($_SESSION['myvar']))…`

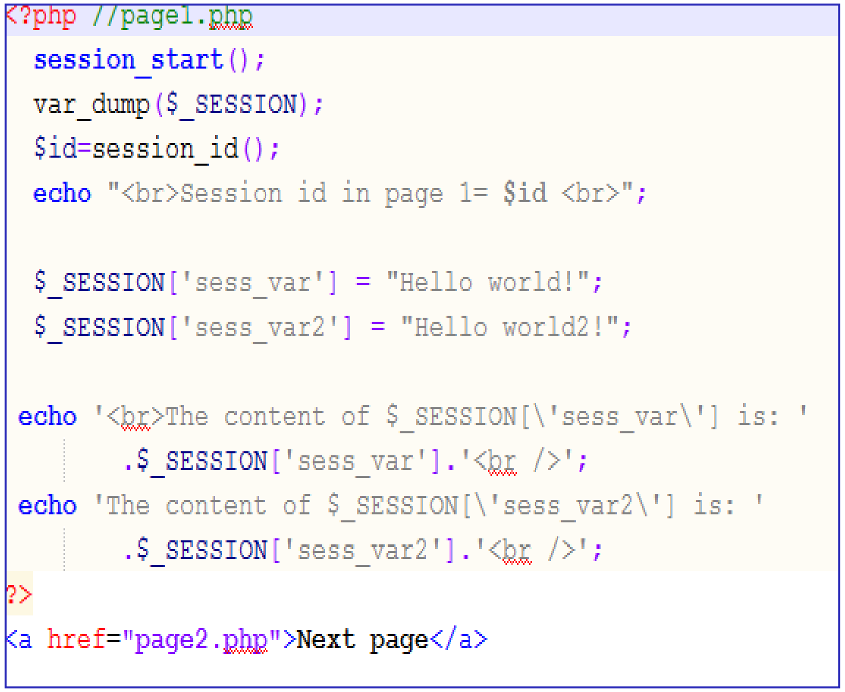
  - Checking if session variables have been set (or by `empty()`)
  - Note that variables can also be set by the user via GET or POST methods
- Unsetting variables and destroying the session

  ```
  unset ($_SESSION['myvar']);
  session_destroy();
  ```

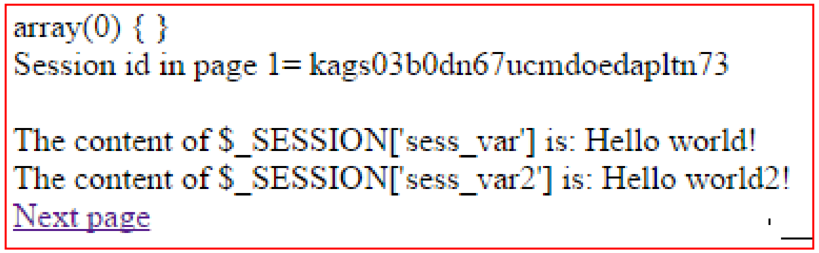
A Simple Session Example – Page 1

page1.php

- Start a session and create the variables `$_SESSION['sess_var']` and `$_SESSION['sess_var2']`
- var dump shows no variables stored in `$_SESSION` array
- Final value of variables on the page will be available on subsequent pages 2 and 3
- Session variable are frozen until they are reloaded via `session_start();`



```
<?php //page1.php
  session_start();
  var_dump($_SESSION);
  $id=session_id();
  echo "<br>Session id in page 1= $id <br>";

  $_SESSION['sess_var'] = "Hello world!";
  $_SESSION['sess_var2'] = "Hello world2!";

 echo '<br>The content of $_SESSION[\'sess_var\'] is: '
        .$_SESSION['sess_var'].'<br />';
 echo 'The content of $_SESSION[\'sess_var2\'] is: '
        .$_SESSION['sess_var2'].'<br />';
?>
<a href="page2.php">Next page</a>
```

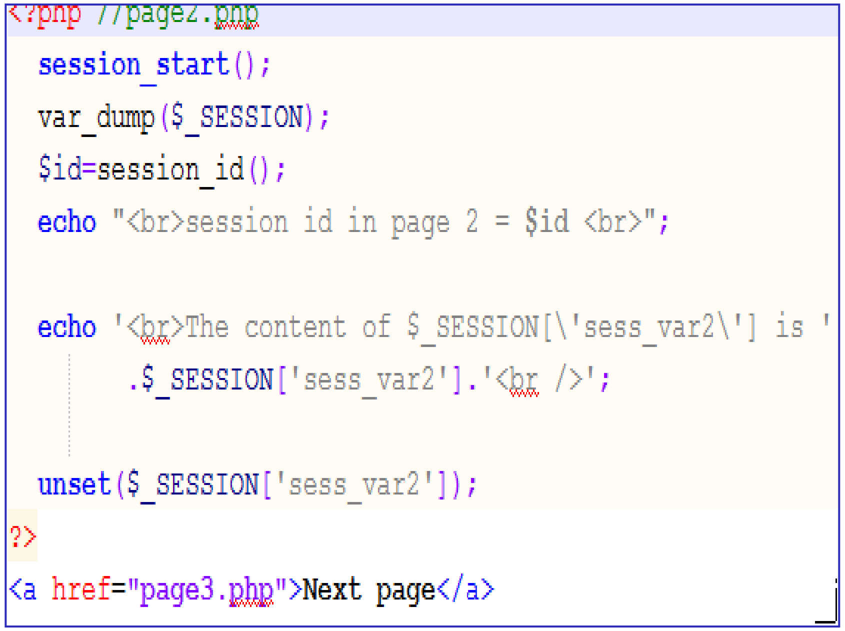


```
array(0) { }
Session id in page 1= kags03b0dn67ucmdoedapltn73

The content of $_SESSION['sess_var'] is: Hello world!
The content of $_SESSION['sess_var2'] is: Hello world2!
Next page
```

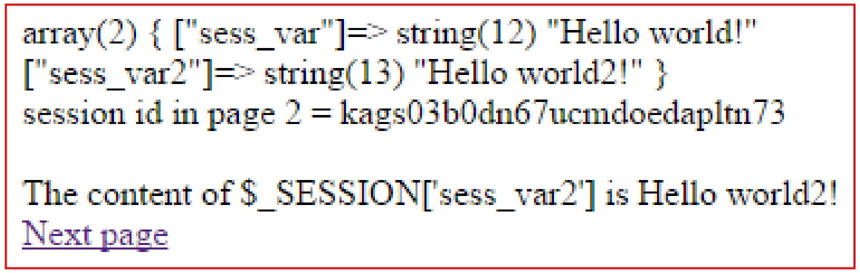
A Simple Session Example – Page 2

page2.php

- After session starts the variables `$_SESSION['sess_var']` and `$_SESSION['sess_var2']` are available with previously stored values
- var dump shows current variables stored in the `$_SESSION` array
- After unsetting a variable, the session still exist
- The session variables are passed along to page 3



```
<?php //page2.php
  session_start();
  var_dump($_SESSION);
  $id=session_id();
  echo "<br>session id in page 2 = $id <br>";

  echo '<br>The content of $_SESSION[\'sess_var2\'] is '
        .$_SESSION['sess_var2'].'<br />';

  unset($_SESSION['sess_var2']);
?>
<a href="page3.php">Next page</a>
```

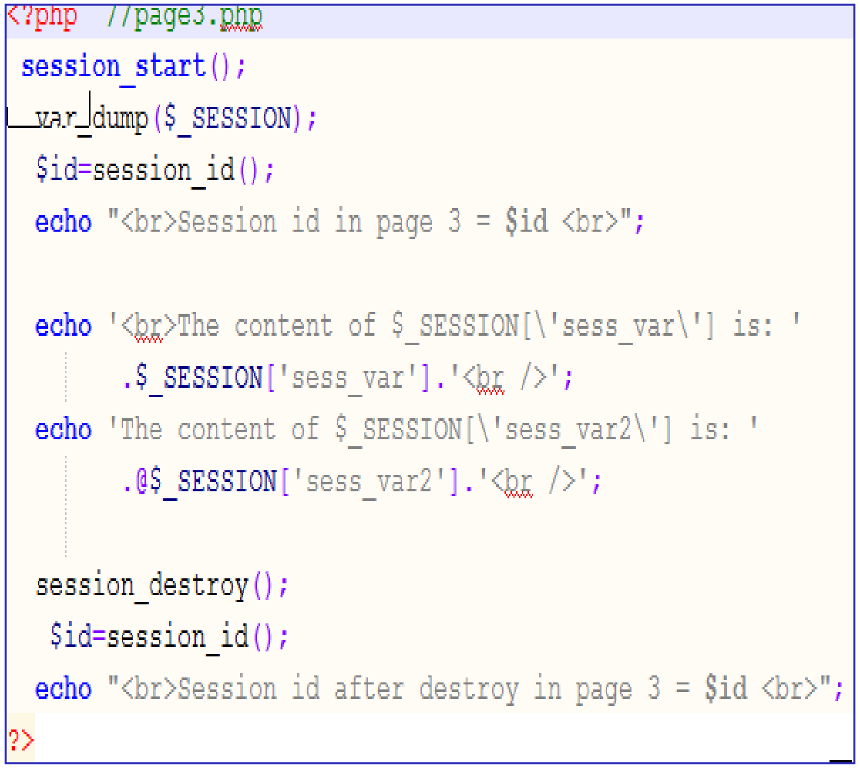


```
array(2) { ["sess_var"]=> string(12) "Hello world!"
["sess_var2"]=> string(13) "Hello world2!" }
session id in page 2 = kags03b0dn67ucmdoedapltn73

The content of $_SESSION['sess_var2'] is Hello world2!
Next page
```

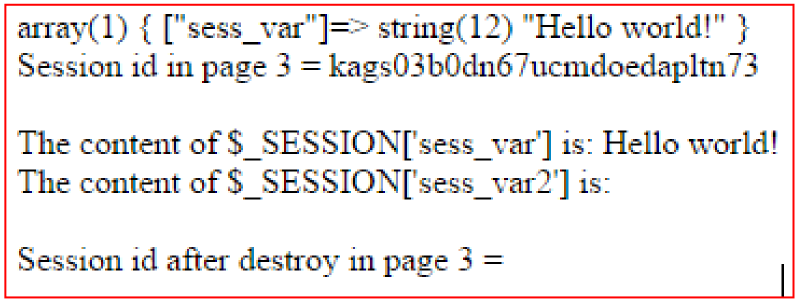
A Simple Session Example – Page 3

page3.php

- The unset variable `$_SESSION['sess_var2']` no longer available whereas the persistent value of `$_SESSION['sess_var']` remained
- var dump shows remaining variable `$_SESSION['sess_var']` still available in the `$_SESSION` array
- Session ID no longer exist after `session_destroy()`



```
<?php  //page3.php
session_start();
 var_dump($_SESSION);
 $id=session_id();
 echo "<br>Session id in page 3 = $id <br>";

 echo '<br>The content of $_SESSION[\'sess_var\'] is: '
       .$_SESSION['sess_var'].'<br />';
 echo 'The content of $_SESSION[\'sess_var2\'] is: '
       .@$_SESSION['sess_var2'].'<br />';

 session_destroy();
  $id=session_id();
 echo "<br>Session id after destroy in page 3 = $id <br>";
?>
```



```
array(1) { ["sess_var"]=> string(12) "Hello world!" }
Session id in page 3 = kags03b0dn67ucmdoedapltn73

The content of $_SESSION['sess_var'] is: Hello world!
The content of $_SESSION['sess_var2'] is:

Session id after destroy in page 3 =
```

Multipurpose Pages

Multipurpose_page.php

```
<html>
<head><title>Multipurpose Page Outline  </title>
</head>
<body>
<?php  if     (condition)      { ?>

<!- - HTML content to display if condition is true - - >

<?php  }  else  {  ?>

<! - - HTML content to display if condition is false  - - >

<?php  }  ?>
</body>
</html>
```

Use isset() function for condition testing and $_SERVER['PHP_SELF'] to reload the current page

Implementing A Simple Shopping Cart

- The basic steps

1. Starting a session
2. Registering session variables
3. Using session variables
4. De-registering variables and destroying the session

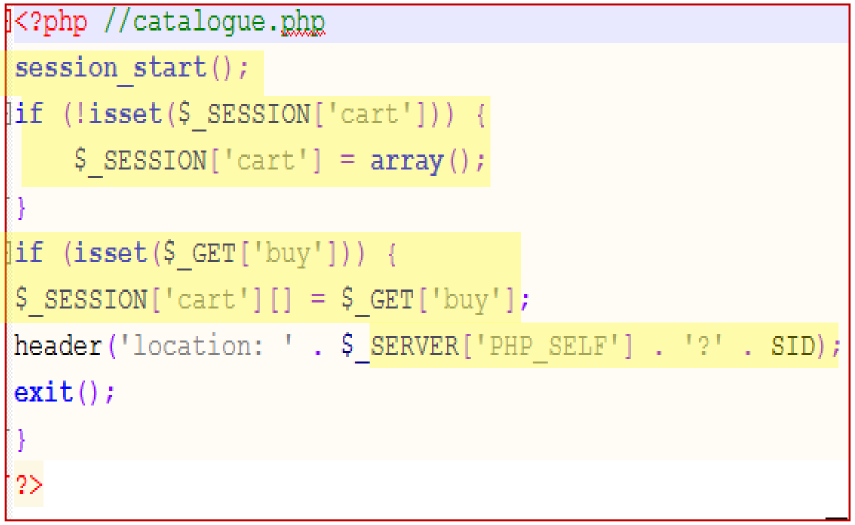
- Pass variables to another page via URL

- Two PHP scripts:
  - A product catalogue, `catalogue.php`
  - A checkout page, `cart.php`

A Simple Shopping Cart - catalogue.php(1)

catalogue.php

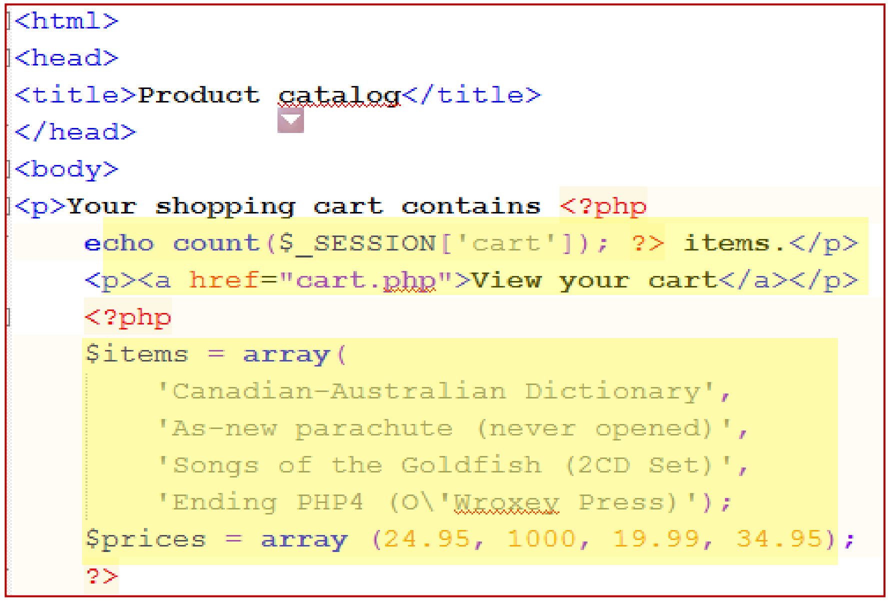
- Session start
  - `session_start` either starts a new session and sets the session ID cookie
  - Or, restores variables registered in existing session, if one exists
  - Initialize `$_SESSION['cart']` to an `empty array()` if not already exist
  - On detecting `$_GET['buy']`, add item to `$_SESSION['cart']` array
  - Reload current page with `$_SERVER['PHP_SELF']`
    - header() function sends a HTTP header to the client
    - Redirect the page to a specific URL location; in this case the current page
    - SID contains session ID when cookies is disabled, otherwise NULL when cookies is enabled.



```php
<?php //catalogue.php
session_start();
if (!isset($_SESSION['cart'])) {
    $_SESSION['cart'] = array();
}
if (isset($_GET['buy'])) {
$_SESSION['cart'][] = $_GET['buy'];
header('location: ' . $_SERVER['PHP_SELF'] . '?' . SID);
exit();
}
?>
```

A Simple Shopping Cart - catalogue.php(2)

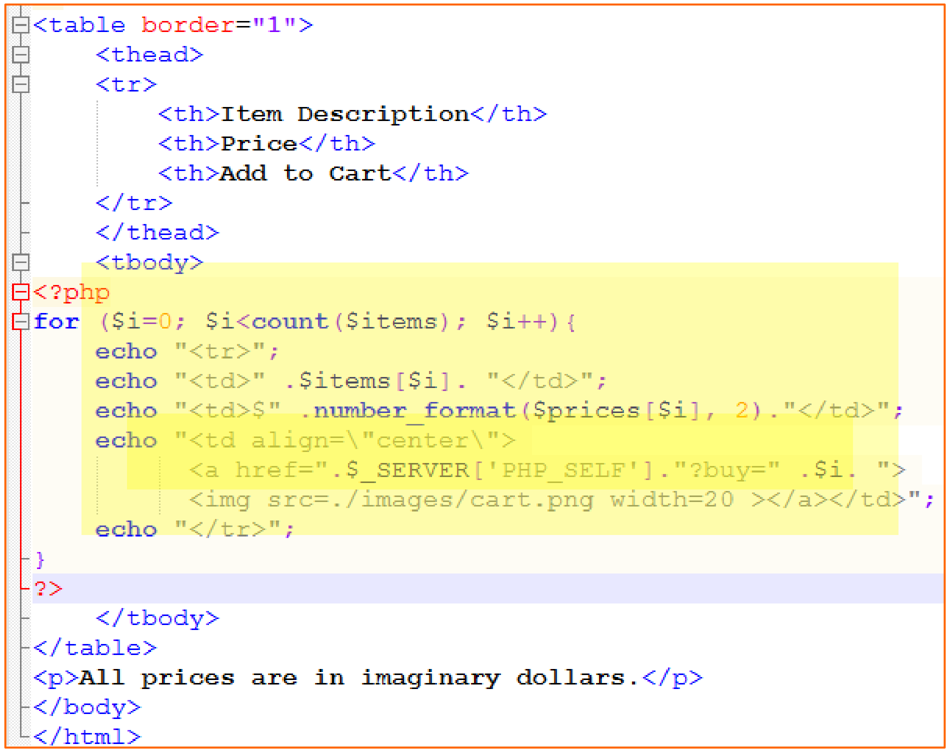
- Catalogue of items
  - Catalogue of items and prices in table simulate database records
- View your cart
  - Link to `cart.php`



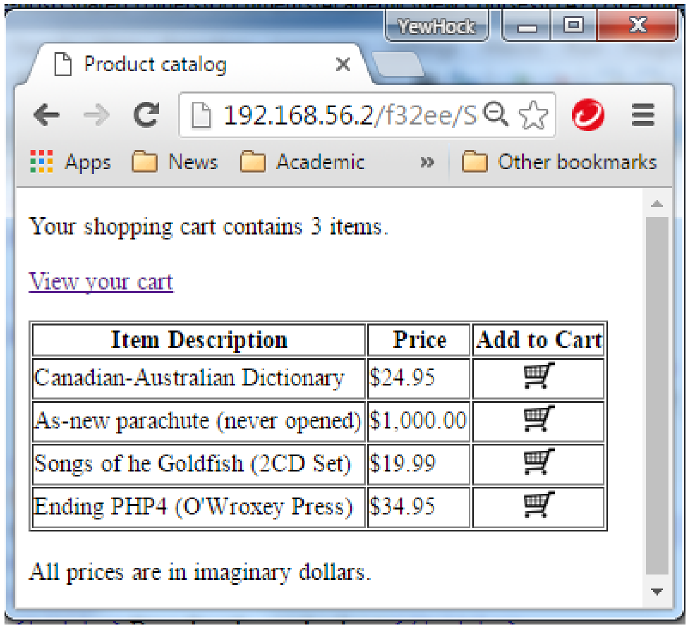
```
<html>
<head>
<title>Product catalog</title>
</head>
<body>
<p>Your shopping cart contains <?php
    echo count($_SESSION['cart']); ?> items.</p>
    <p><a href="cart.php">View your cart</a></p>
    <?php
    $items = array(
        'Canadian-Australian Dictionary',
        'As-new parachute (never opened)',
        'Songs of the Goldfish (2CD Set)',
        'Ending PHP4 (O\'Wroxey Press)');
    $prices = array (24.95, 1000, 19.99, 34.95);
    ?>
```

A Simple Shopping Cart - catalogue.php(2)

- Catalogue table
  - Each product has a link back to the catalogue with `buy=idx` in the query string
  - `Idx` saved to `$_SESSION['cart']` **via** `$_GET['buy']`



```
<table border="1">
    <thead>
    <tr>
        <th>Item Description</th>
        <th>Price</th>
        <th>Add to Cart</th>
    </tr>
    </thead>
    <tbody>
<?php
for ($i=0; $i<count($items); $i++){
    echo "<tr>";
    echo "<td>" .$items[$i]. "</td>";
    echo "<td>$" .number_format($prices[$i], 2)."</td>";
    echo "<td align=\"center\">
        <a href=".$_SERVER['PHP_SELF']."?buy=" .$i. ">
        <img src=./images/cart.png width=20 ></a></td>";
    echo "</tr>";
}
?>
    </tbody>
</table>
<p>All prices are in imaginary dollars.</p>
</body>
</html>
```



Your shopping cart contains 3 items.

View your cart

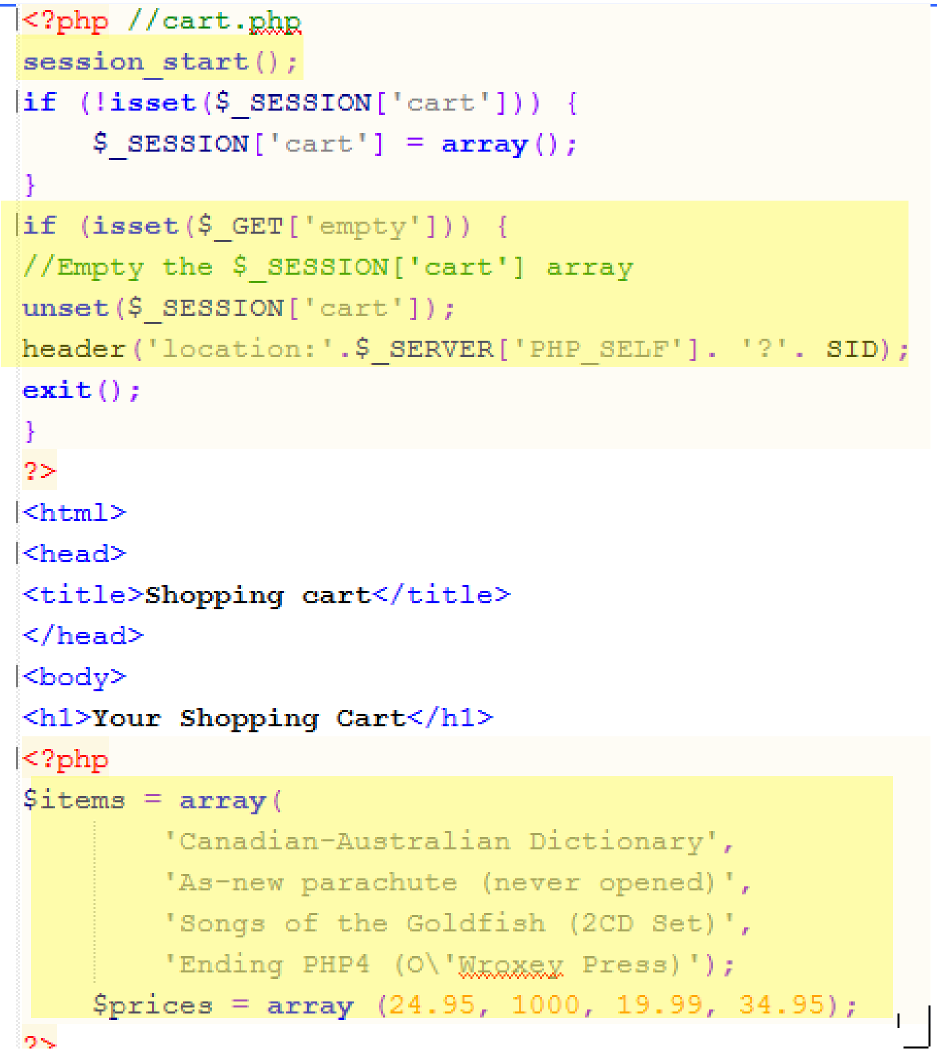
Item Description	Price	Add to Cart
Canadian-Australian Dictionary	$24.95	🛒
As-new parachute (never opened)	$1,000.00	🛒
Songs of he Goldfish (2CD Set)	$19.99	🛒
Ending PHP4 (O'Wroxey Press)	$34.95	🛒

All prices are in imaginary dollars.

A Simple Shopping Cart – cart.php(1)

cart.php

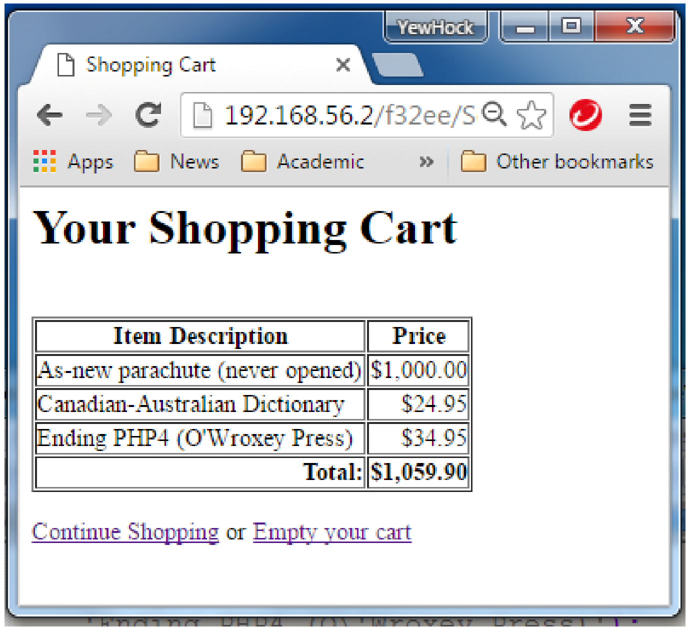
- Session start
  - Similar to catalogue.php
- Checkout page
  - On `$_GET['empty']` unset `$_SESSION['cart']` variable; thus emptying shopping cart
  - Use the numbers stored in `$_SESSION['cart'][]` variable to print out the corresponding items from $items array



```
<?php //cart.php
session_start();
if (!isset($_SESSION['cart'])) {
    $_SESSION['cart'] = array();
}
if (isset($_GET['empty'])) {
//Empty the $_SESSION['cart'] array
unset($_SESSION['cart']);
header('location:'.$_SERVER['PHP_SELF']. '?'. SID);
exit();
}
?>
<html>
<head>
<title>Shopping cart</title>
</head>
<body>
<h1>Your Shopping Cart</h1>
<?php
$items = array(
        'Canadian-Australian Dictionary',
        'As-new parachute (never opened)',
        'Songs of the Goldfish (2CD Set)',
        'Ending PHP4 (O\'Wroxey Press)');
    $prices = array (24.95, 1000, 19.99, 34.95);
?>
```

A Simple Shopping Cart – cart.php(2)

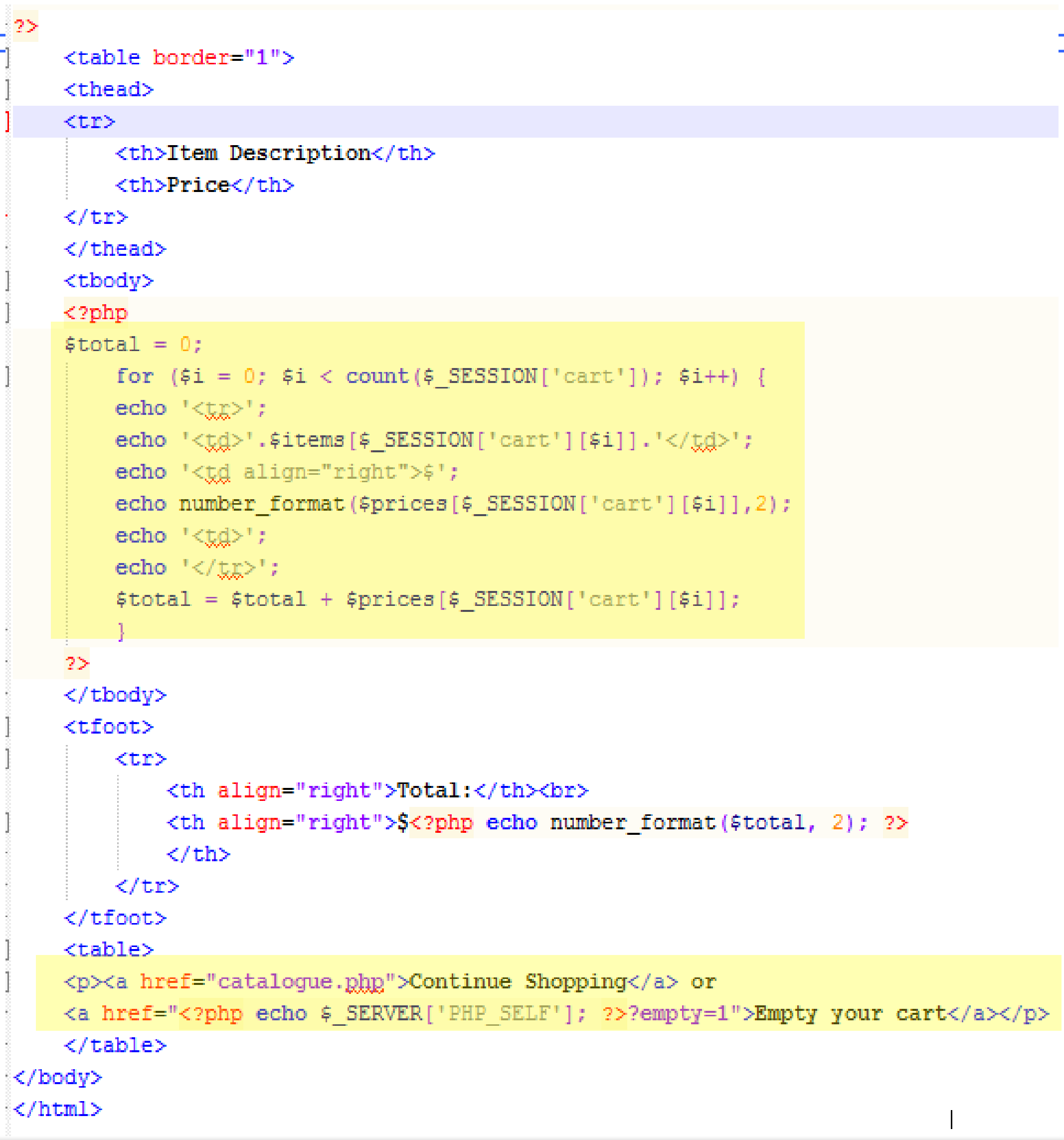
- Checking out
  - Compute total cost of items in shopping cart.
- Continuing shopping
  - Return to catalogue.php to continue shopping without changing the session context



Your Shopping Cart

Item Description	Price
As-new parachute (never opened)	$1,000.00
Canadian-Australian Dictionary	$24.95
Ending PHP4 (O'Wroxey Press)	$34.95
Total:	$1,059.90

Continue Shopping or Empty your cart



```
?>
    <table border="1">
    <thead>
    <tr>
        <th>Item Description</th>
        <th>Price</th>
    </tr>
    </thead>
    <tbody>
    <?php
    $total = 0;
        for ($i = 0; $i < count($_SESSION['cart']); $i++) {
        echo '<tr>';
        echo '<td>'.$items[$_SESSION['cart'][$i]].'</td>';
        echo '<td align="right">$';
        echo number_format($prices[$_SESSION['cart'][$i]],2);
        echo '<td>';
        echo '</tr>';
        $total = $total + $prices[$_SESSION['cart'][$i]];
        }
    ?>
    </tbody>
    <tfoot>
        <tr>
            <th align="right">Total:</th><br>
            <th align="right">$<?php echo number_format($total, 2); ?>
            </th>
        </tr>
    </tfoot>
    <table>
    <p><a href="catalogue.php">Continue Shopping</a> or
    <a href="<?php echo $_SERVER['PHP_SELF']; ?>?empty=1">Empty your cart</a></p>
    </table>
</body>
</html>
```

Passing Hidden Element Variables to Other Pages

- Form variables can be passed to other pages using the $_GET() or $_POST() methods
- Variables of hidden elements are not displayed in the form, but their values may be passed through the superglobals

```
<form method=post
    action="<?php
     echo $_SERVER['PHP_SELF']; ?>">
     <input type=hidden name=elmname
          value=" <?php echo $elmvalue; ?>" >
     <input type=submit name=submit value="Input Label">
     <input type=reset name=reset value="reset">
</form>
```

Implementing Membership Registration and Login

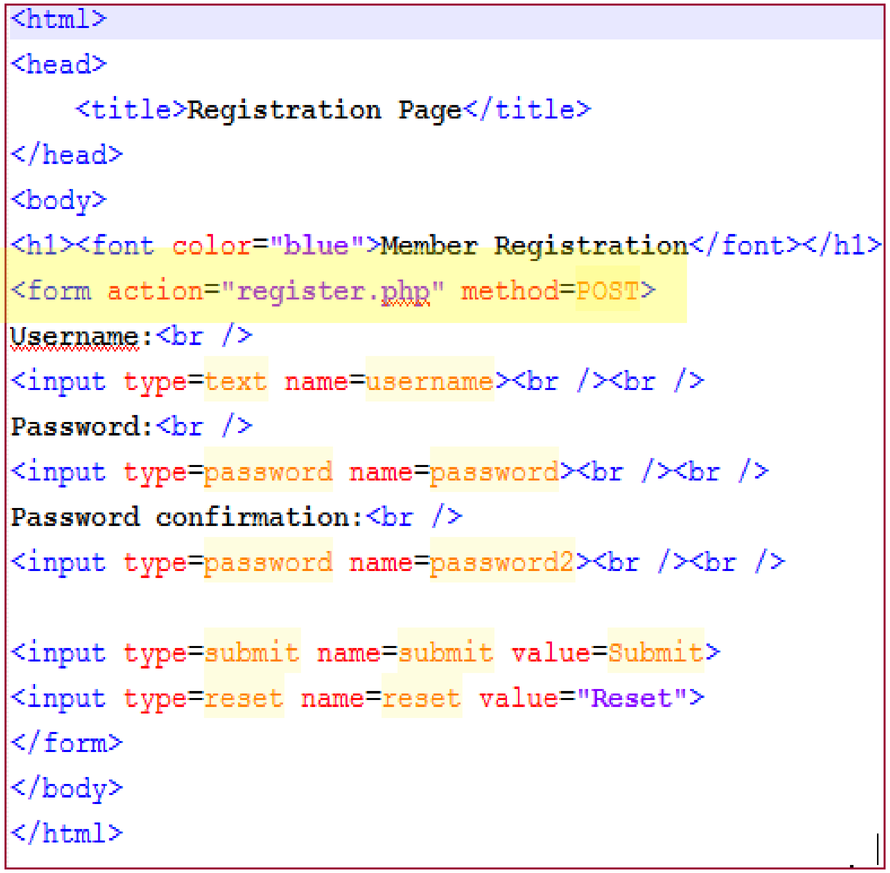
- A common use of session control to keep track of users after they have been authenticated via a login mechanism.
- Combine authentication from MySQL database, and sessions for login functionality and page control

- Five scripts
  - Membership registration form, `registration.html`
  - Membership registration, `register.php`
  - Members authentication, `authmain.php`
  - Members-Only information page, `members_only.php`
  - Members logged out page, `logout.php`

Member Registration – registration.html

register.php

- Form action handled by `register.php`
- Global variables handled by `POST` method
- Create “users” table and the fields are “username” and “password”. This is not created by syntax, it is created by using MySQL interface. Please take not the “password” type should be varchar(40).
- The length should be at least 40 and above.

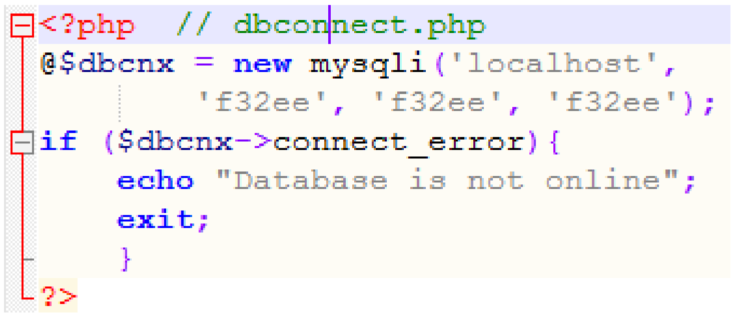


```
<html>
<head>
    <title>Registration Page</title>
</head>
<body>
<h1><font color="blue">Member Registration</font></h1>
<form action="register.php" method=POST>
Username:<br />
<input type=text name=username><br /><br />
Password:<br />
<input type=password name=password><br /><br />
Password confirmation:<br />
<input type=password name=password2><br /><br />

<input type=submit name=submit value=Submit>
<input type=reset name=reset value="Reset">
</form>
</body>
</html>
```

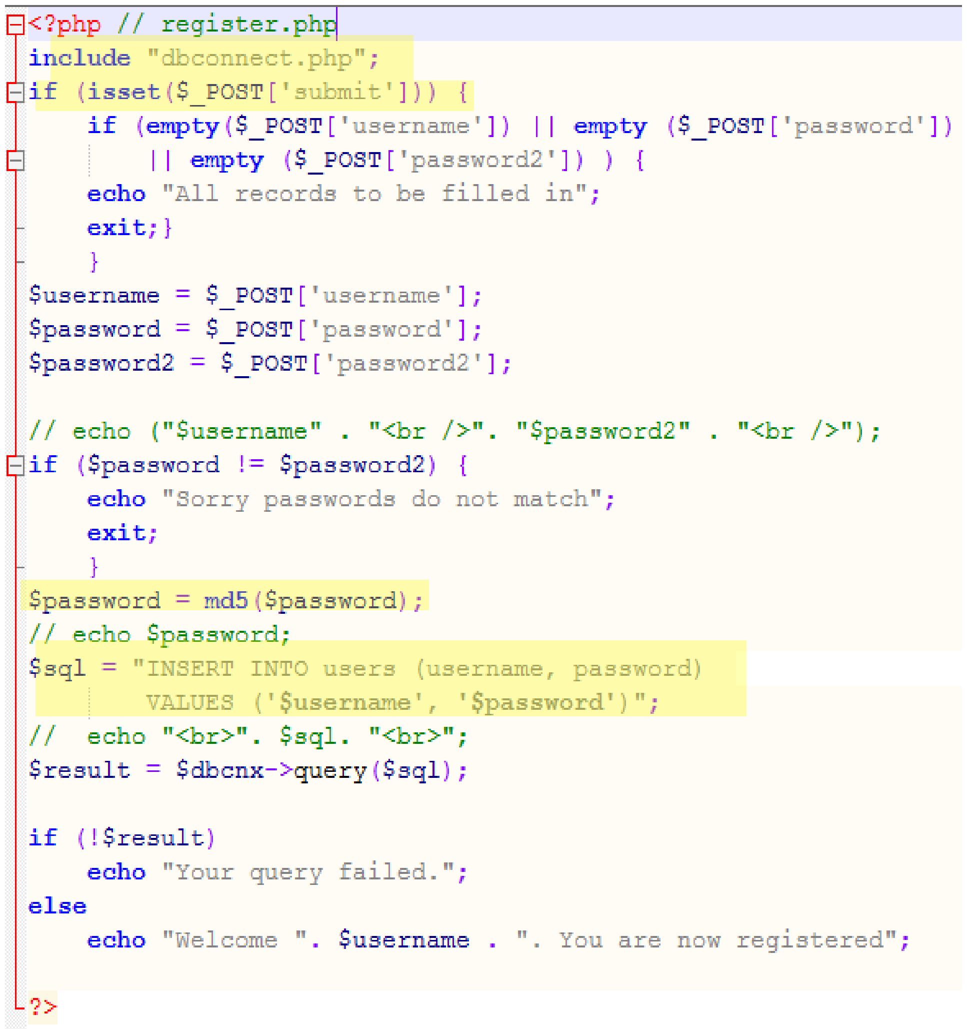
Member Registration – register.php

register.php

- Include `dbconnect.php`
  - Allow single point update on database connection: domain, user, password, database name.
- On 'submit', POST input form variables
  - Password is encrypted using the MD5 function for 120-bit encryption
- Username and encrypted password are stored in "users" table



```php
<?php  // dbconnect.php
@$dbcnx = new mysqli('localhost',
        'f32ee', 'f32ee', 'f32ee');
if ($dbcnx->connect_error){
    echo "Database is not online";
    exit;
    }
?>
```

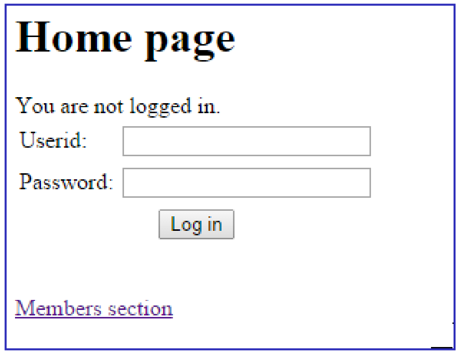


```php
<?php // register.php
include "dbconnect.php";
if (isset($_POST['submit'])) {
    if (empty($_POST['username']) || empty ($_POST['password'])
        || empty ($_POST['password2']) ) {
    echo "All records to be filled in";
    exit;}
    }
$username = $_POST['username'];
$password = $_POST['password'];
$password2 = $_POST['password2'];

// echo ("$username" . "<br />". "$password2" . "<br />");
if ($password != $password2) {
    echo "Sorry passwords do not match";
    exit;
    }
$password = md5($password);
// echo $password;
$sql = "INSERT INTO users (username, password)
        VALUES ('$username', '$password')";
//  echo "<br>". $sql. "<br>";
$result = $dbcnx->query($sql);

if (!$result)
    echo "Your query failed.";
else
    echo "Welcome ". $username . ". You are now registered";

?>
```

Login Authentication with Session Control

authmain.php

- Three files:
  - authmain.php
  - members_only.php
  - logout.php
- First login
  - Login form in `authmain.php` posts "`userid`" and "`password`"
  - SQL query validation



Home page

You are not logged in.

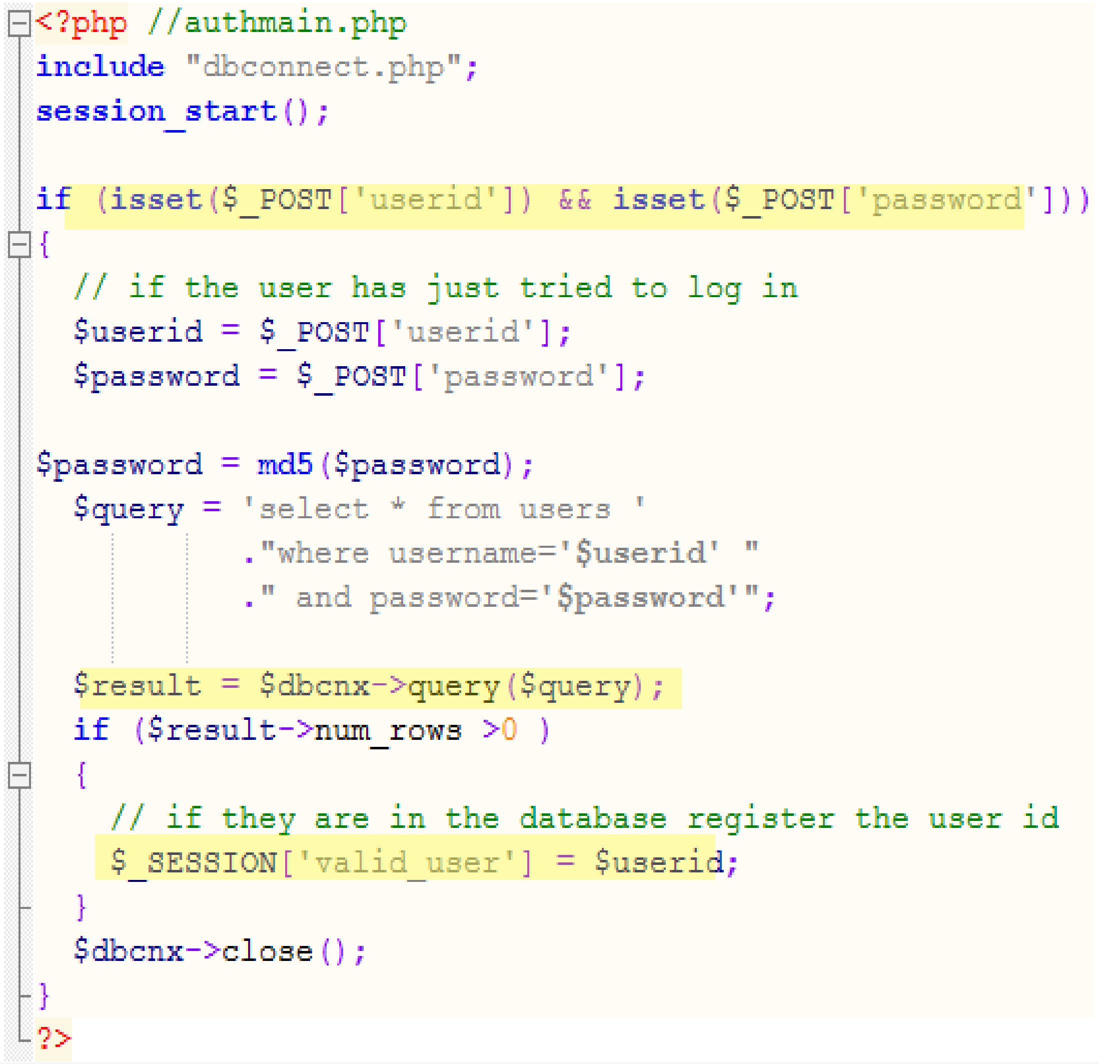
Userid:

Password:

Log in

Members section

- $_SESSION['valid_user'] tracks login state

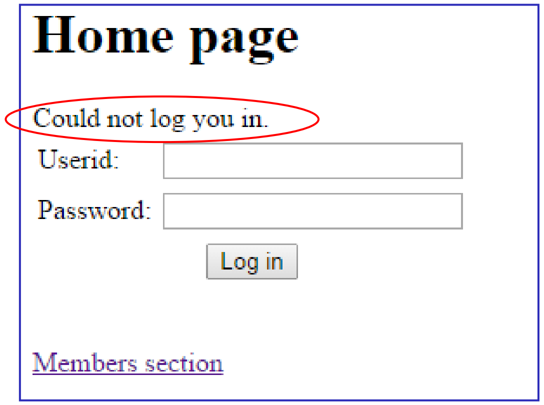


```
<?php //authmain.php
include "dbconnect.php";
session_start();

if (isset($_POST['userid']) && isset($_POST['password']))
{
  // if the user has just tried to log in
  $userid = $_POST['userid'];
  $password = $_POST['password'];

$password = md5($password);
  $query = 'select * from users '
           ."where username='$userid' "
           ." and password='$password'";

  $result = $dbcnx->query($query);
  if ($result->num_rows >0 )
  {
    // if they are in the database register the user id
    $_SESSION['valid_user'] = $userid;
  }
  $dbcnx->close();
}
?>
```

Login Authentication (2) – unsuccessful login

authmain.php

- If not authenticated user
  - return to members' home page and display failed to log in message
  - Allow re-login on same page



Home page

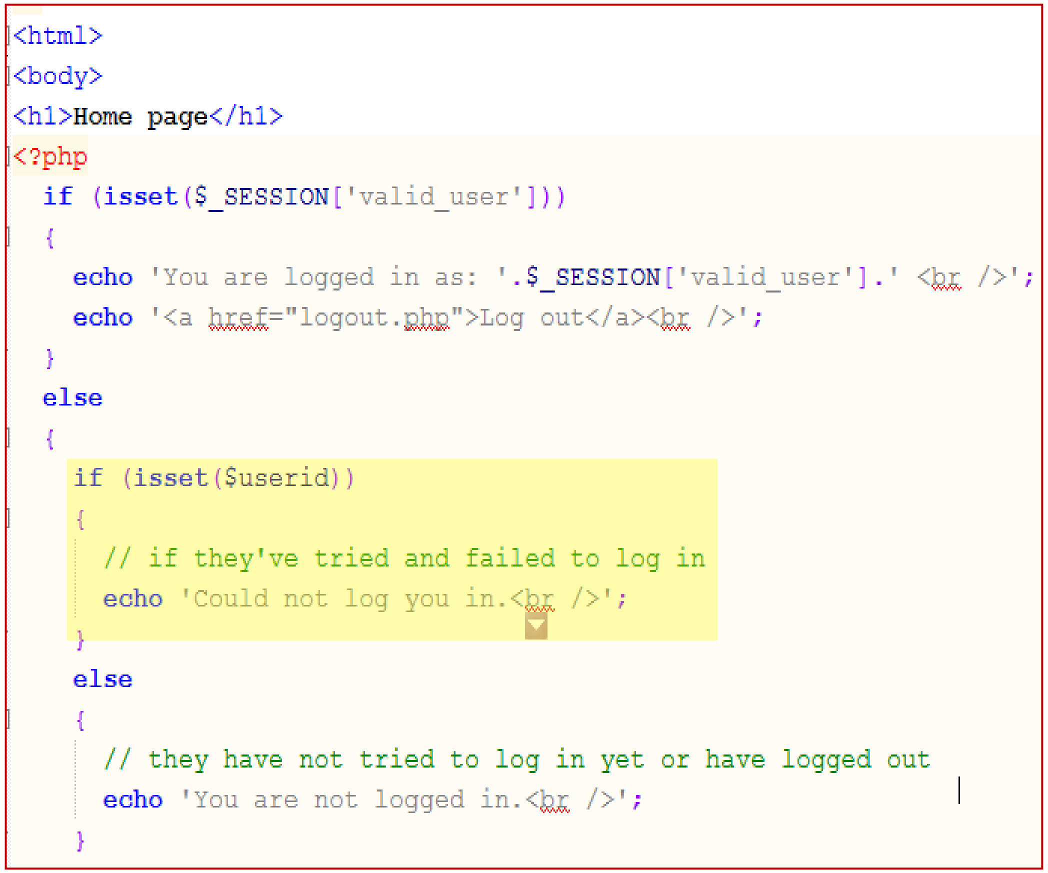
Could not log you in.

Userid:

Password:

Log in

Members section



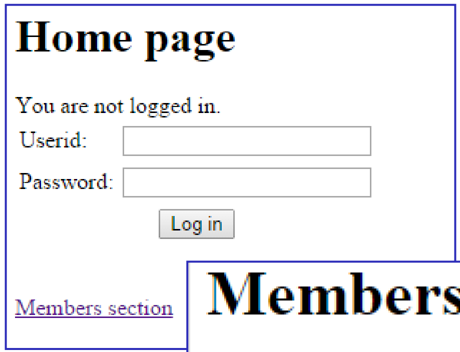
```
<html>
<body>
<h1>Home page</h1>
<?php
  if (isset($_SESSION['valid_user']))
  {
    echo 'You are logged in as: '.$_SESSION['valid_user'].' <br />';
    echo '<a href="logout.php">Log out</a><br />';
  }
  else
  {
    if (isset($userid))
    {
      // if they've tried and failed to log in
      echo 'Could not log you in.<br />';
    }
    else
    {
      // they have not tried to log in yet or have logged out
      echo 'You are not logged in.<br />';
    }
```

Login Authentication (3) – not logged in

authmain.php

- If not logged in and attempt to enter members_only page
  - results in "Members Only" message
  - Allow user to return to main page

```
    // provide form to log in
    echo '<form method="post" action="authmain.php">';
    echo '<table>';
    echo '<tr><td>Userid:</td>';
    echo '<td><input type="text" name="userid"></td></tr>';
    echo '<tr><td>Password:</td>';
    echo '<td><input type="password" name="password"></td></tr>';
    echo '<tr><td colspan="2" align="center">';
    echo '<input type="submit" value="Log in"></td></tr>';
    echo '</table></form>';
  }
?>
<br />
<a href="members_only.php">Members section</a>
</body>
</html>
```

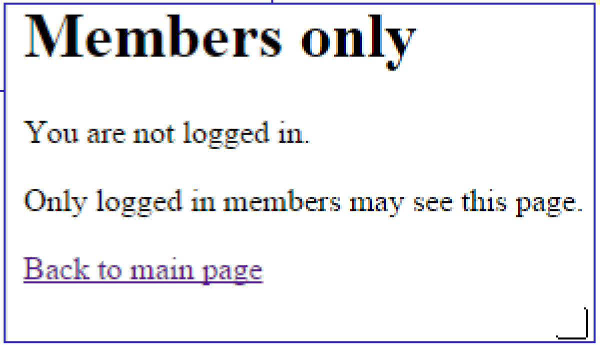

Home page

You are not logged in.

Userid:	
Password:	

Log in

Members section


Members only

You are not logged in.

Only logged in members may see this page.

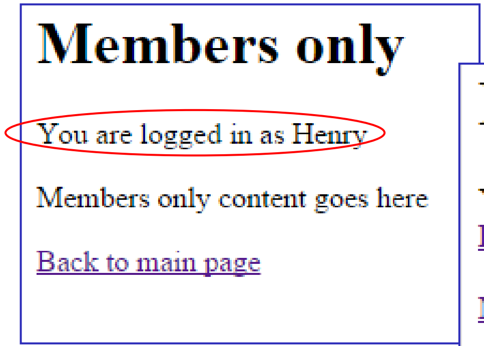
Back to main page

Login Authentication (4) – members page

member_only.php

- If authenticated user
  - Go to members' home page and display username in logged in members page
- At members section,
  - allow to go back to home page
- At home page, allow return to members section or log out

```
<?php //members_only.php
 session_start();

 echo '<h1>Members only</h1>';

 // check session variable

 if (isset($_SESSION['valid_user']))
 {
   echo '<p>You are logged in as '.$_SESSION['valid_user'].'</p>';
   echo '<p>Members only content goes here</p>';
 }
 else
 {
   echo '<p>You are not logged in.</p>';
   echo '<p>Only logged in members may see this page.</p>';
 }

 echo '<a href="authmain.php">Back to main page</a>';
```

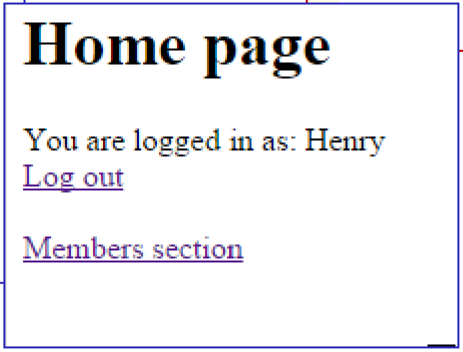


Members only

You are logged in as Henry

Members only content goes here

Back to main page



Home page

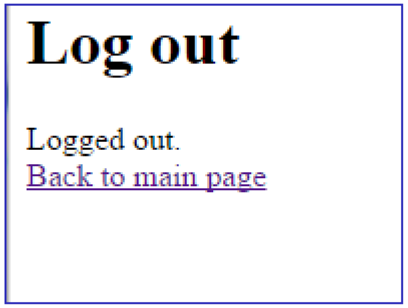
You are logged in as: Henry
Log out

Members section

Login Authentication (5) – logout page

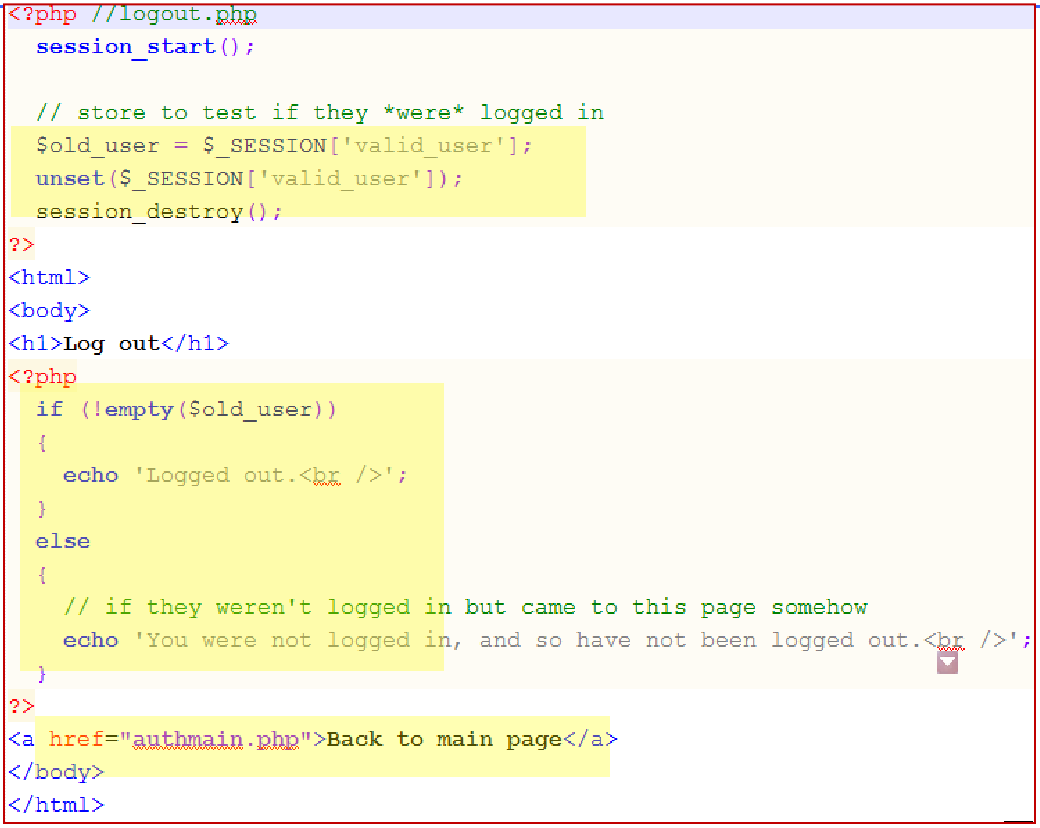
logout.php

- At logout page
  - Store local variable before unset session variable and destroy session
  - Display logged out message according to login status
  - Allow return to main page



Log out

Logged out.
Back to main page



```
<?php //logout.php
  session_start();

  // store to test if they *were* logged in
  $old_user = $_SESSION['valid_user'];
  unset($_SESSION['valid_user']);
  session_destroy();
?>
<html>
<body>
<h1>Log out</h1>
<?php
  if (!empty($old_user))
  {
    echo 'Logged out.<br />';
  }
  else
  {
    // if they weren't logged in but came to this page somehow
    echo 'You were not logged in, and so have not been logged out.<br />';
  }
?>
<a href="authmain.php">Back to main page</a>
</body>
</html>
```

Sending Emails

hellomail.php

- Setup the following:
  - $to
  - $from
  - Reply-To
  - Return mails (-f)

- Sending emails using mail() with return email address.

Mail($to, $subject, $message,
$headers,'   -ff32ee@localhost')
;

- Read emails on server at 192.168.56.2:2000

```
<!DOCTYPE html>
<html>
<body>
<h1>Hello Mail</h1>
<p>My first mail test.</p>

<?php
$to      = 'f32ee@localhost';
$subject = 'the subject';
$message = 'hello from php mail';
$headers = 'From: f32ee@localhost' . "\r\n" .
    'Reply-To: f32ee@localhost' . "\r\n" .
    'X-Mailer: PHP/' . phpversion();

mail($to, $subject, $message, $headers,
                                        '-ff32ee@localhost');
echo ("mail sent to : ".$to);
?>

</body>
</html>
```

Bounce Emails

- Setup the following:
  - $to
  - $from
  - Reply-To
  - Return mails (-f) for bounce mails

- Sending emails using mail() with return email address.
  - Bounce mail returned to ‘f32ee@localhost’

```
Mail($to, $subject, $message,
     $headers,’   -ff32ee@localhost')
;
```

```
<!DOCTYPE html>
<html>
<body>
<h1>Hello Mail</h1>
<p>My first mail test.</p>

<?php
$to      = ’user@ntu.edu.sg';
$subject = 'the subject';
$message = 'hello to bounce mail';
$headers = 'From: f32ee@localhost' . "\r\n" .
    'Reply-To: f32ee@localhost' . "\r\n" .
    'X-Mailer: PHP/' . phpversion();

mail($to, $subject, $message, $headers,
                                    '-ff32ee@localhost');
echo ("mail sent to : ".$to);
?>

</body>
</html>
```