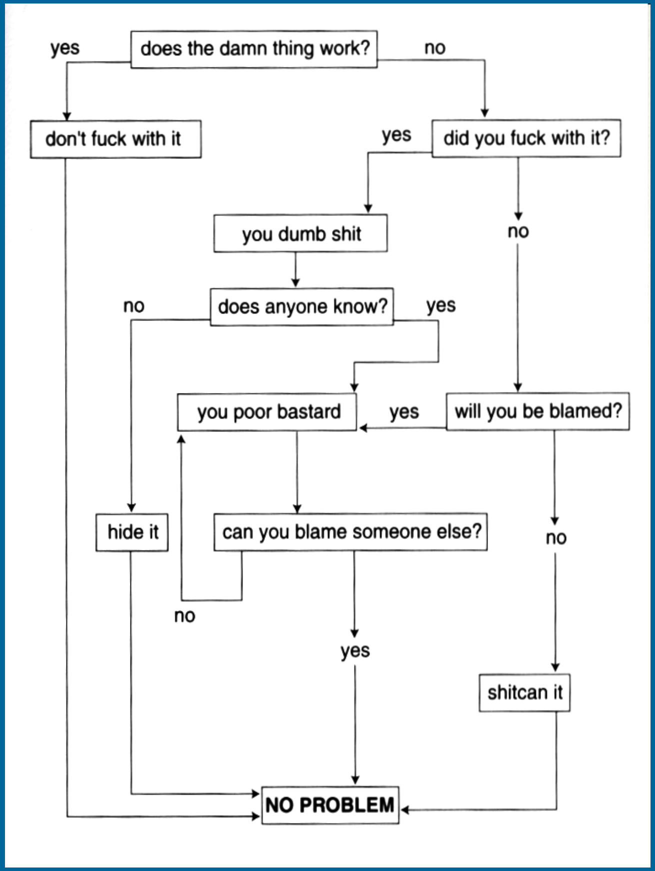
COMS 469: Interactive Media II

Agenda

- Review
- Functions
- Cookies

Review

- Conditional Expressions
  - – Making Decisions
  - – Examples
    - if, else, elseif
    - switch, break
    - while, do while



yes

does the damn thing work?

no

don't fuck with it

yes

did you fuck with it?

you dumb shit

no

no

does anyone know?

yes

you poor bastard

yes

will you be blamed?

hide it

can you blame someone else?

no

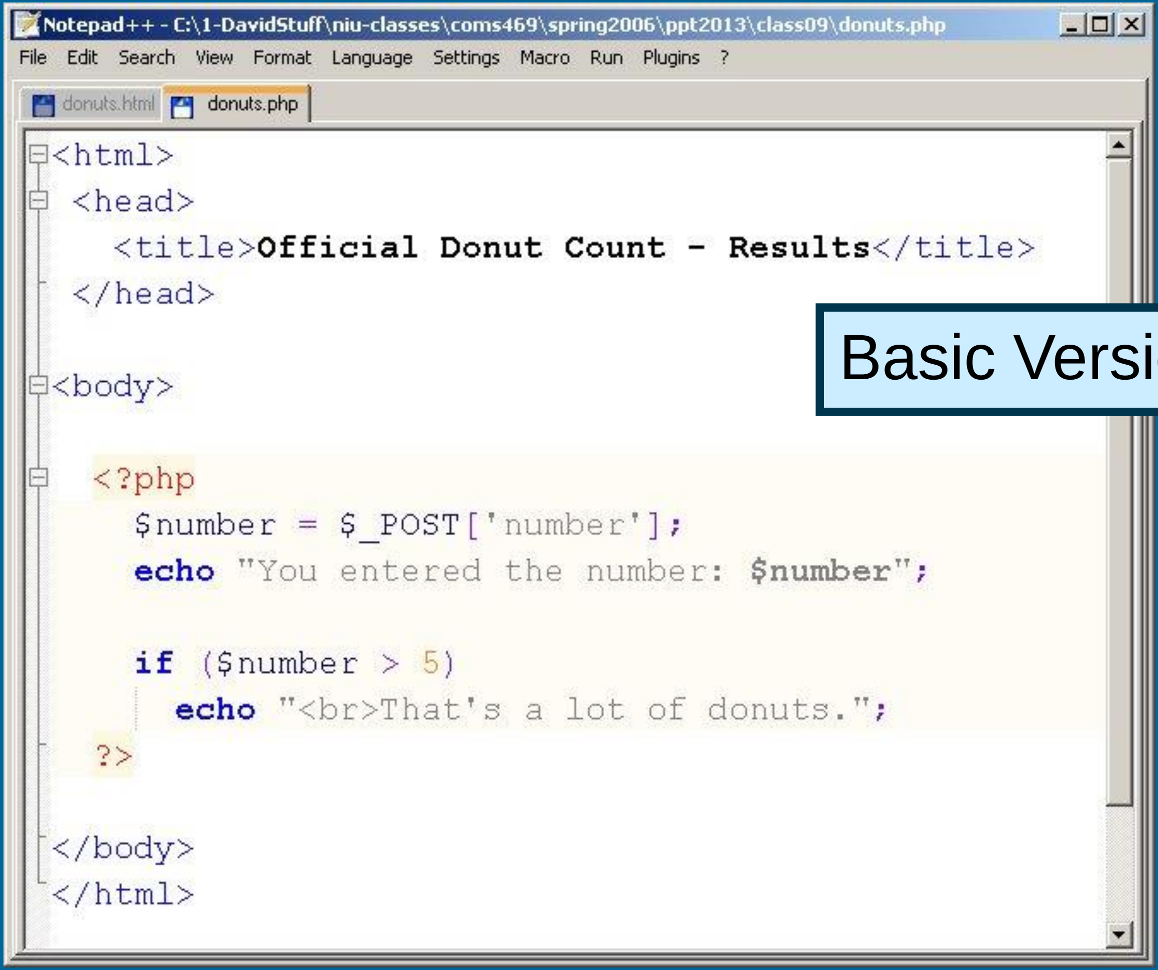
no

yes

shitcan it

NO PROBLEM

Review

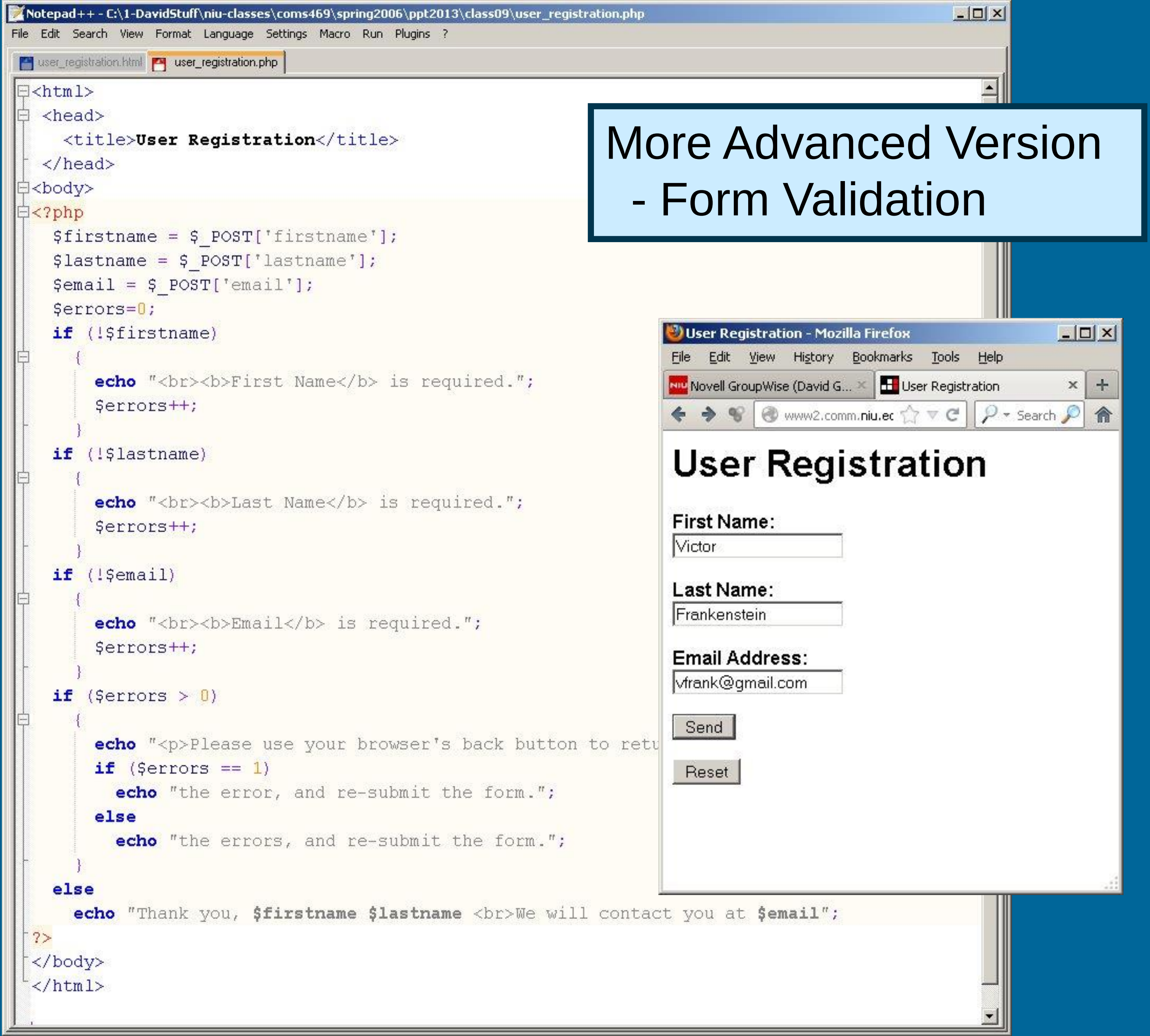


Notepad++ - C:\1-DavidStuff\niu-classes\coms469\spring2006\ppt2013\class09\donuts.php
File Edit Search View Format Language Settings Macro Run Plugins ?
donuts.html
donuts.php

```
<html>
 <head>
   <title>Official Donut Count - Results</title>
 </head>

<body>

  <?php
   $number = $_POST['number'];
   echo "You entered the number: $number";

   if ($number > 5)
     echo "<br>That's a lot of donuts.";
  ?>

</body>
</html>
```

Basic Version

More Advanced Version - Form Validation


Notepad++ - C:\1-DavidStuff\niu-classes\coms469\spring2006\ppt2013\class09\user_registration.php
File Edit Search View Format Language Settings Macro Run Plugins ?
user_registration.html
user_registration.php
User Registration - Mozilla Firefox
File Edit View History Bookmarks Tools Help
Novell GroupWise (David G...
User Registration
www2.comm.niu.ec
Search

```
<html>
 <head>
   <title>User Registration</title>
 </head>
<body>
<?php
  $firstname = $_POST['firstname'];
  $lastname = $_POST['lastname'];
  $email = $_POST['email'];
  $errors=0;
  if (!$firstname)
    {
      echo "<br><b>First Name</b> is required.";
      $errors++;
    }
  if (!$lastname)
    {
      echo "<br><b>Last Name</b> is required.";
      $errors++;
    }
  if (!$email)
    {
      echo "<br><b>Email</b> is required.";
      $errors++;
    }
  if ($errors > 0)
    {
      echo "<p>Please use your browser's back button to retu
      if ($errors == 1)
        echo "the error, and re-submit the form.";
      else
        echo "the errors, and re-submit the form.";
    }
  else
    echo "Thank you, $firstname $lastname <br>We will contact you at $email";
?>
</body>
</html>
```

User Registration

First Name:
Victor

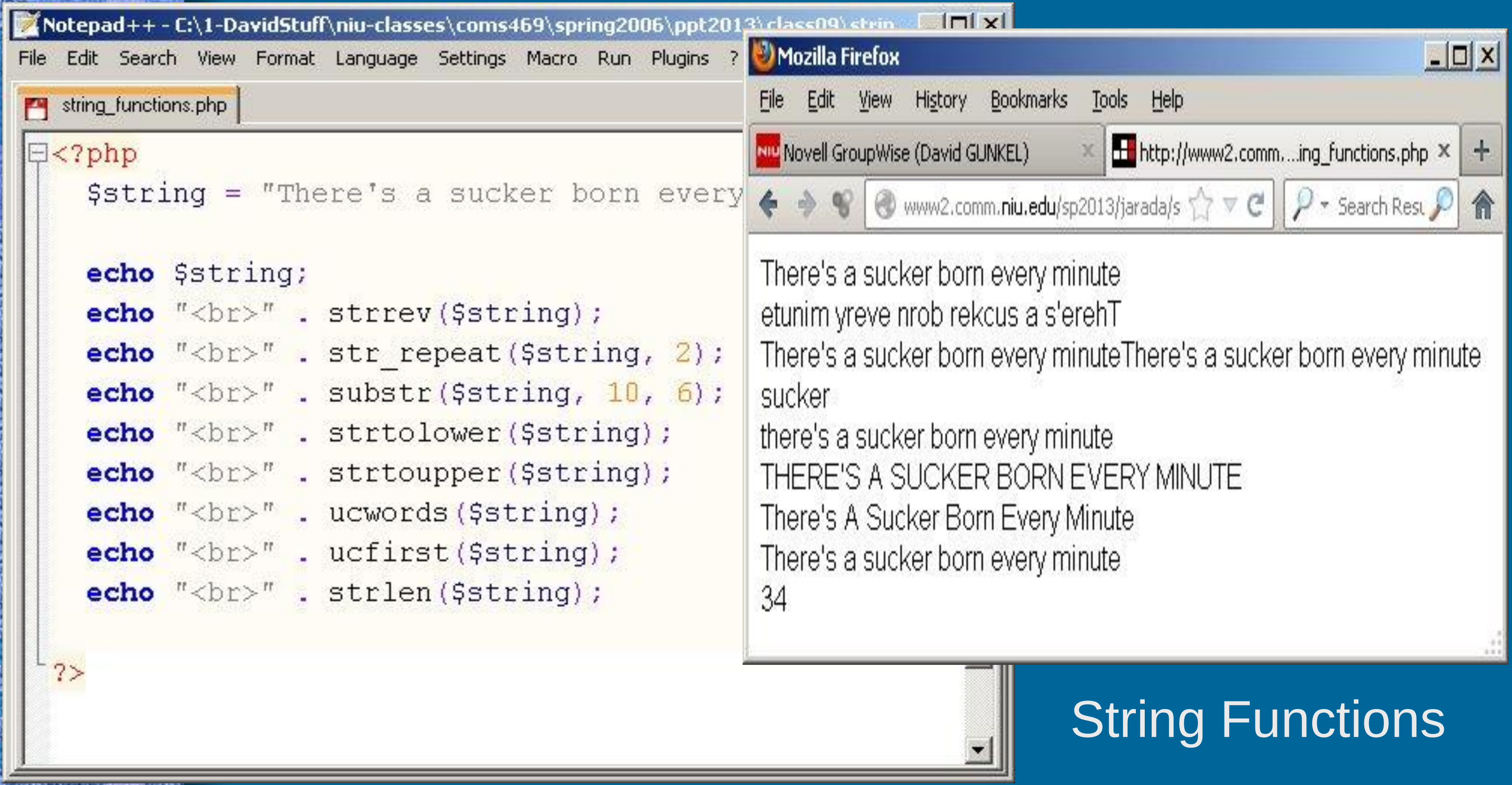
Last Name:
Frankenstein

Email Address:
vfrank@gmail.com

Send

Reset

Review

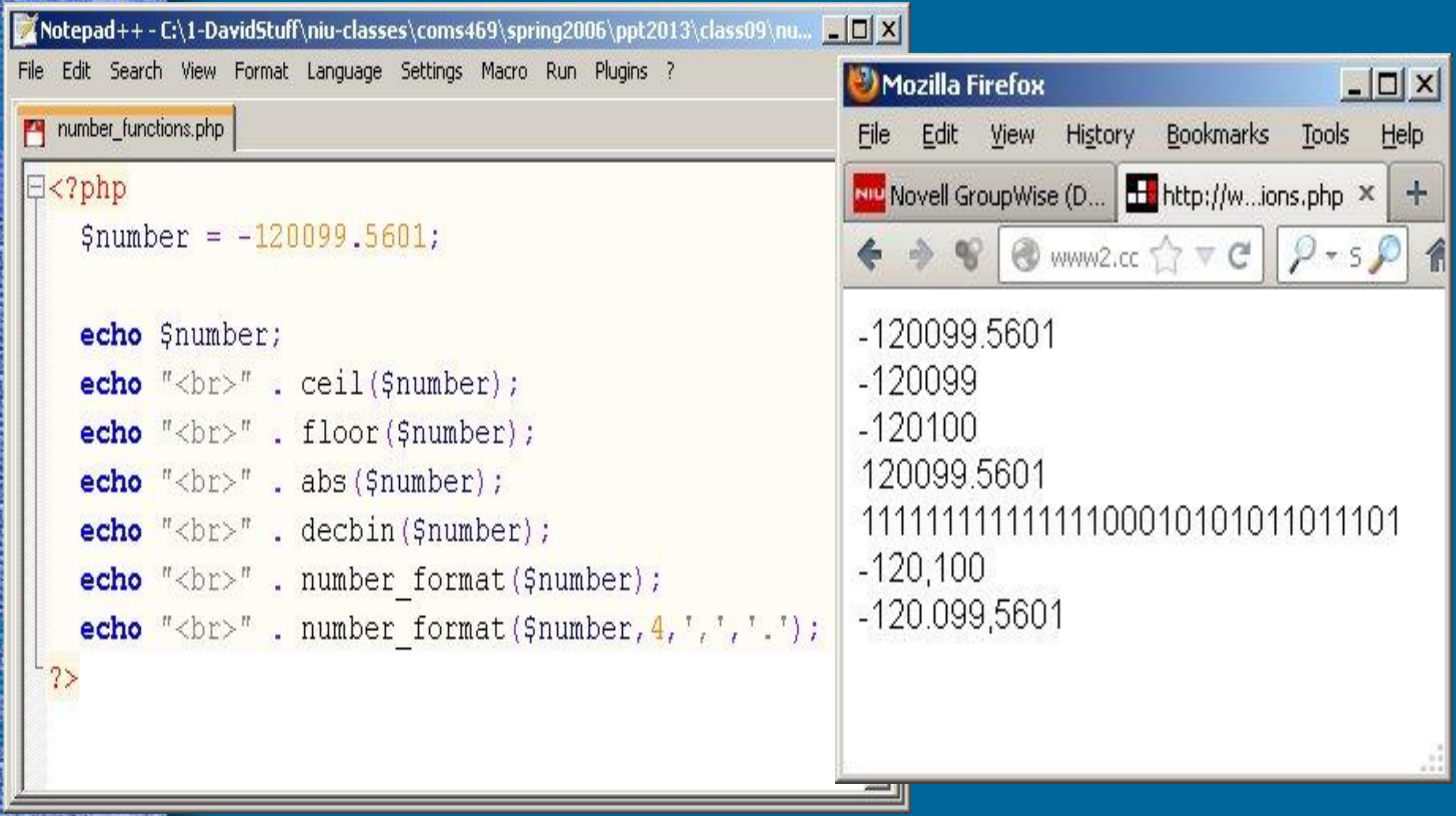

Notepad++ - C:\1-DavidStuff\niu-classes\coms469\spring2006\ppt2013\class09\strin
File Edit Search View Format Language Settings Macro Run Plugins ?
string_functions.php
Mozilla Firefox
File Edit View History Bookmarks Tools Help
Novell GroupWise (David GUNKEL)
http://www2.comm....ing_functions.php
www2.comm.niu.edu/sp2013/jarada/s
Search Resu

```php
<?php
    $string = "There's a sucker born every

    echo $string;
    echo "<br>" . strrev($string);
    echo "<br>" . str_repeat($string, 2);
    echo "<br>" . substr($string, 10, 6);
    echo "<br>" . strtolower($string);
    echo "<br>" . strtoupper($string);
    echo "<br>" . ucwords($string);
    echo "<br>" . ucfirst($string);
    echo "<br>" . strlen($string);

?>
```

```
There's a sucker born every minute
etunim yreve nrob rekcus a s'erehT
There's a sucker born every minuteThere's a sucker born every minute
sucker
there's a sucker born every minute
THERE'S A SUCKER BORN EVERY MINUTE
There's A Sucker Born Every Minute
There's a sucker born every minute
34
```

String Functions

Review


Notepad++ - C:\1-DavidStuff\niu-classes\coms469\spring2006\ppt2013\class09\nu...
File Edit Search View Format Language Settings Macro Run Plugins ?
number_functions.php
Mozilla Firefox
File Edit View History Bookmarks Tools Help
Novell GroupWise (D...
http://w...ions.php
www2.cc

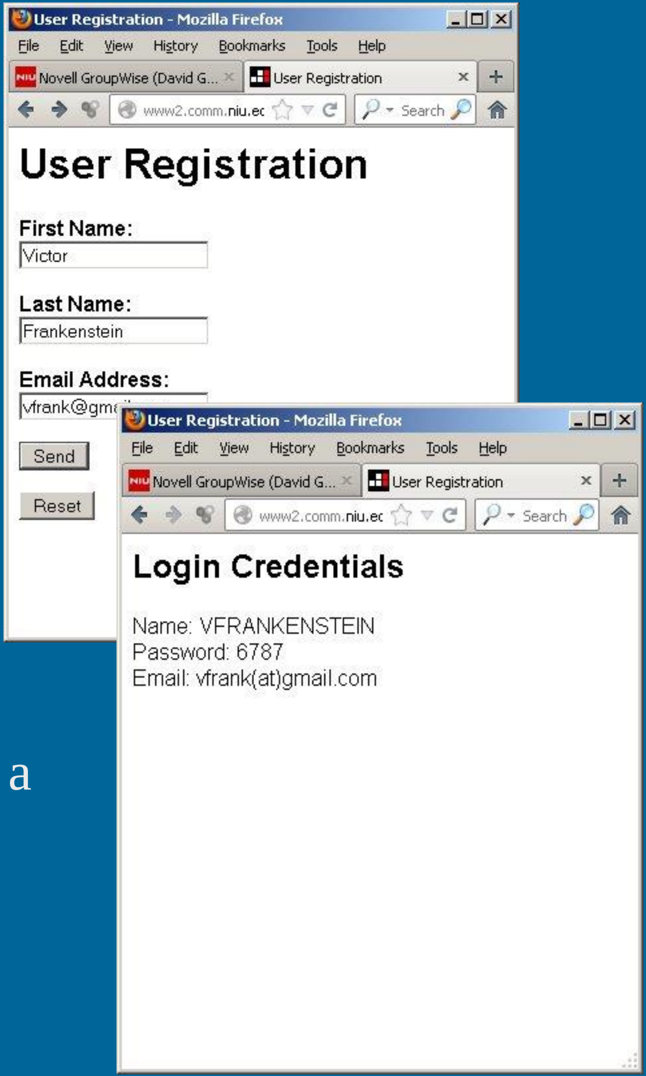
```php
<?php
  $number = -120099.5601;

  echo $number;
  echo "<br>" . ceil($number);
  echo "<br>" . floor($number);
  echo "<br>" . abs($number);
  echo "<br>" . decbin($number);
  echo "<br>" . number_format($number);
  echo "<br>" . number_format($number,4,',','.');
?>
```

```
-120099.5601
-120099
-120100
120099.5601
11111111111111100010101011011101
-120,100
-120.099,5601
```

Numeric Functions

Review

- Modify Registration Form
  - Validate email address
    - Use the ereg( ) function
    - Regular expression from http://regexlib.com/
  - Provide detailed feedback
    - Use string functions to format username and email
    - Use rand( ) function to generate a random number password



User Registration

First Name: Victor

Last Name: Frankenstein

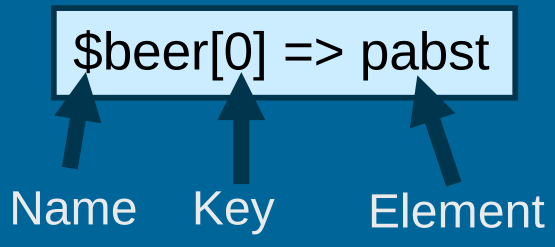
Email Address: vfrank@gm

Login Credentials

Name: VFRANKENSTEIN
Password: 6787
Email: vfrank(at)gmail.com

Review

- Arrays
  - Multi-element variables
  - Terminology
  - Creating Arrays
    - array( ) function



```
$beer[0] => pabst
```

```
$beer = array(“pabst”, “schlitz”, “blatz”);
```

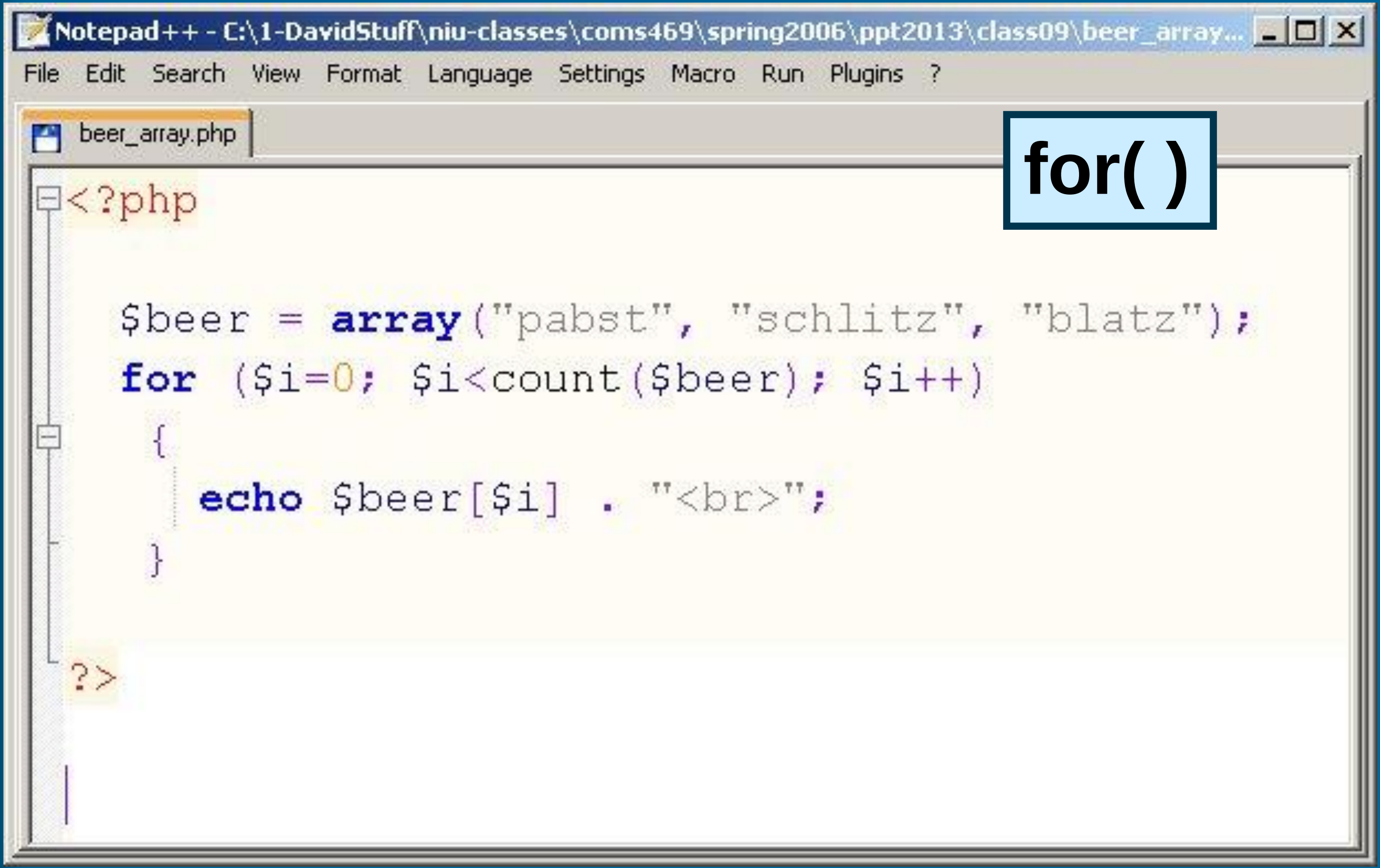
- Assignment Statement

```
$beer[0] = “pabst”;
$beer[1] = “schlitz”;
$beer[2] = “blatz”;
```

Review

- Looping Methods
  - for( )
  - foreach( )
  - while( )
  - do while( )

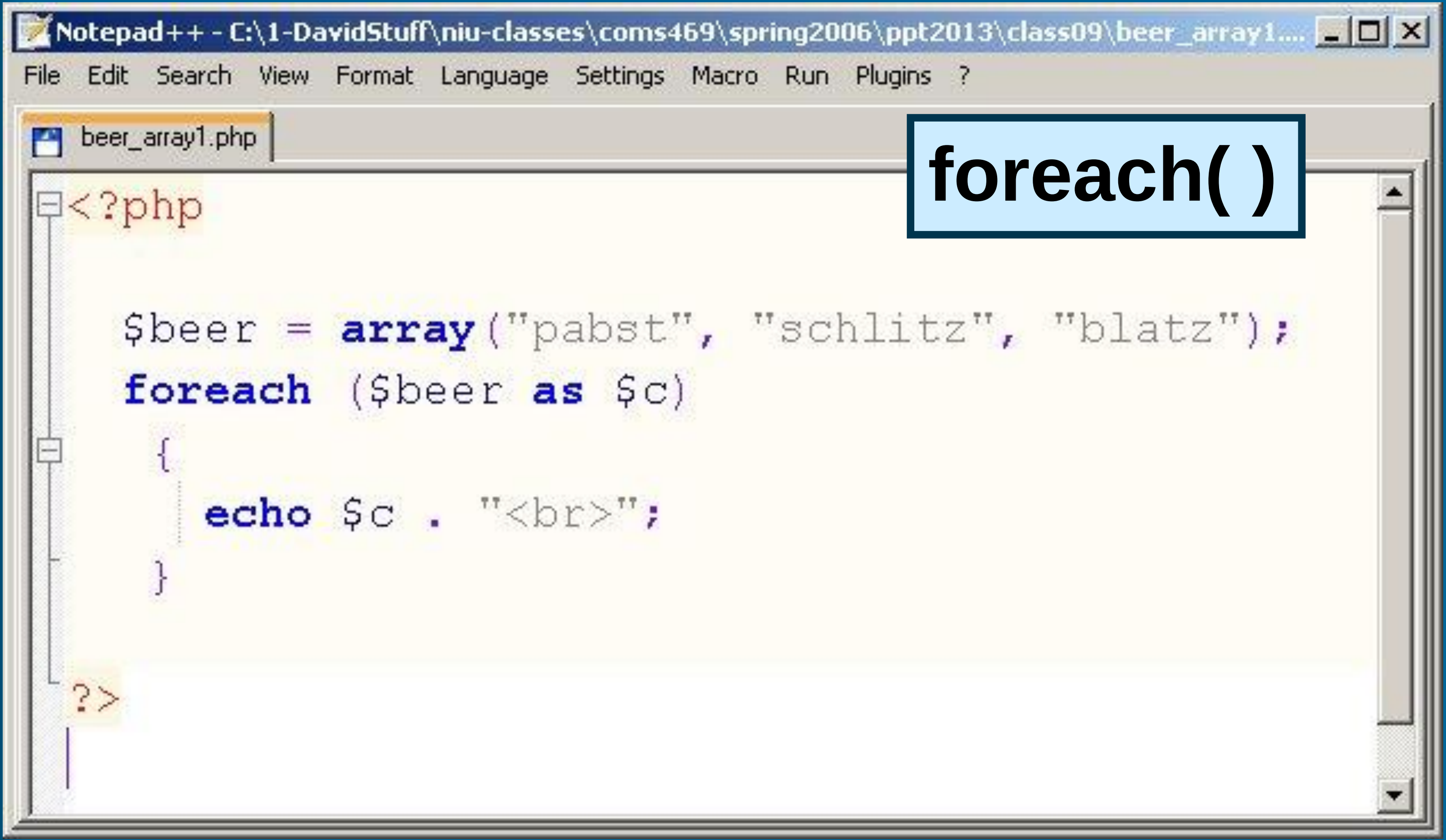
Review


Notepad++ - C:\1-DavidStuff\niu-classes\coms469\spring2006\ppt2013\class09\beer_array...
File Edit Search View Format Language Settings Macro Run Plugins ?
beer_array.php

```
<?php

  $beer = array("pabst", "schlitz", "blatz");
  for ($i=0; $i<count($beer); $i++)
   {
     echo $beer[$i] . "<br>";
   }

?>
```

for( )

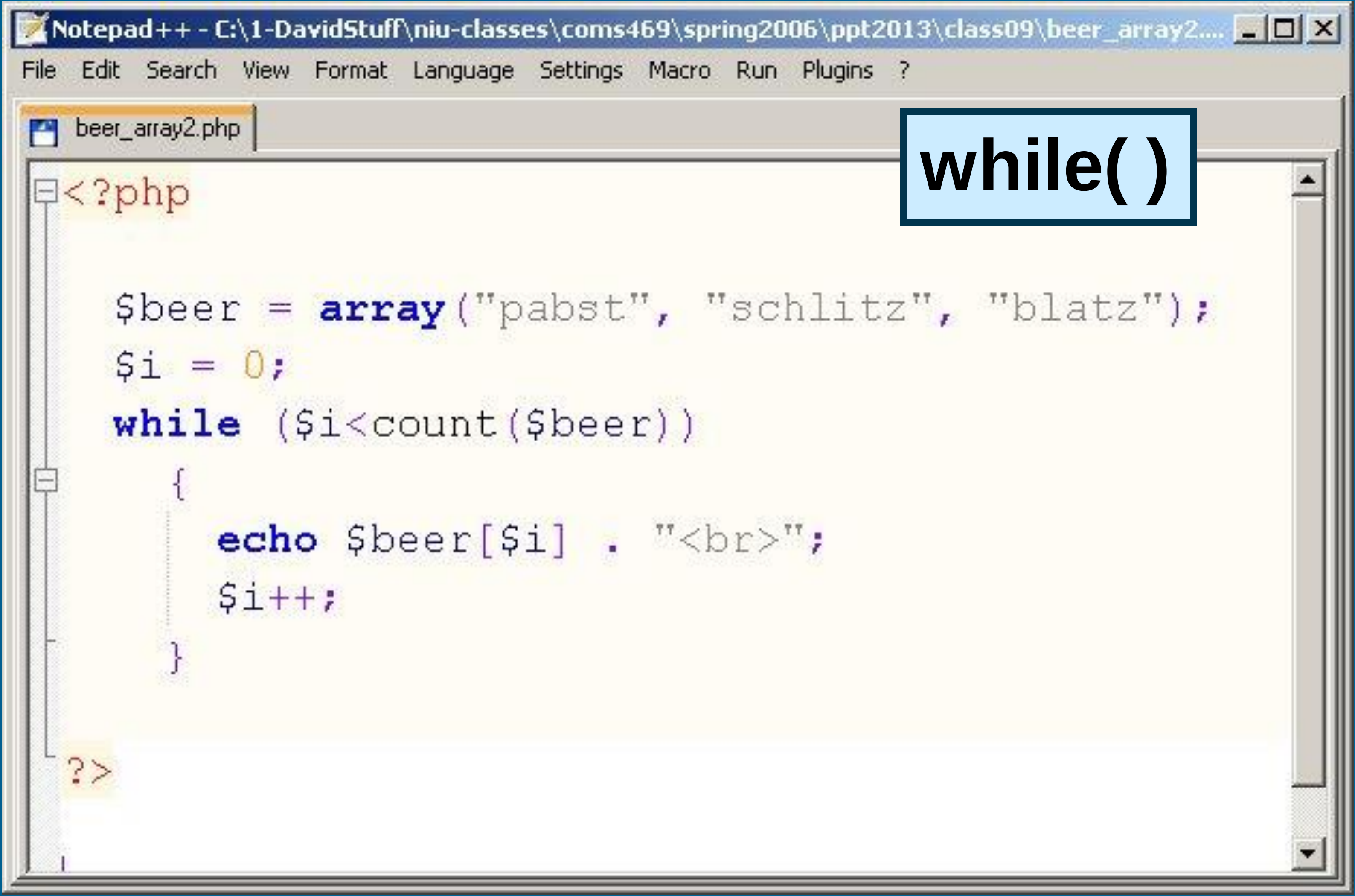
Review


Notepad++ - C:\1-DavidStuff\niu-classes\coms469\spring2006\ppt2013\class09\beer_array1....
File Edit Search View Format Language Settings Macro Run Plugins ?
beer_array1.php

```
<?php

  $beer = array("pabst", "schlitz", "blatz");
  foreach ($beer as $c)
   {
     echo $c . "<br>";
   }

?>
```

foreach( )

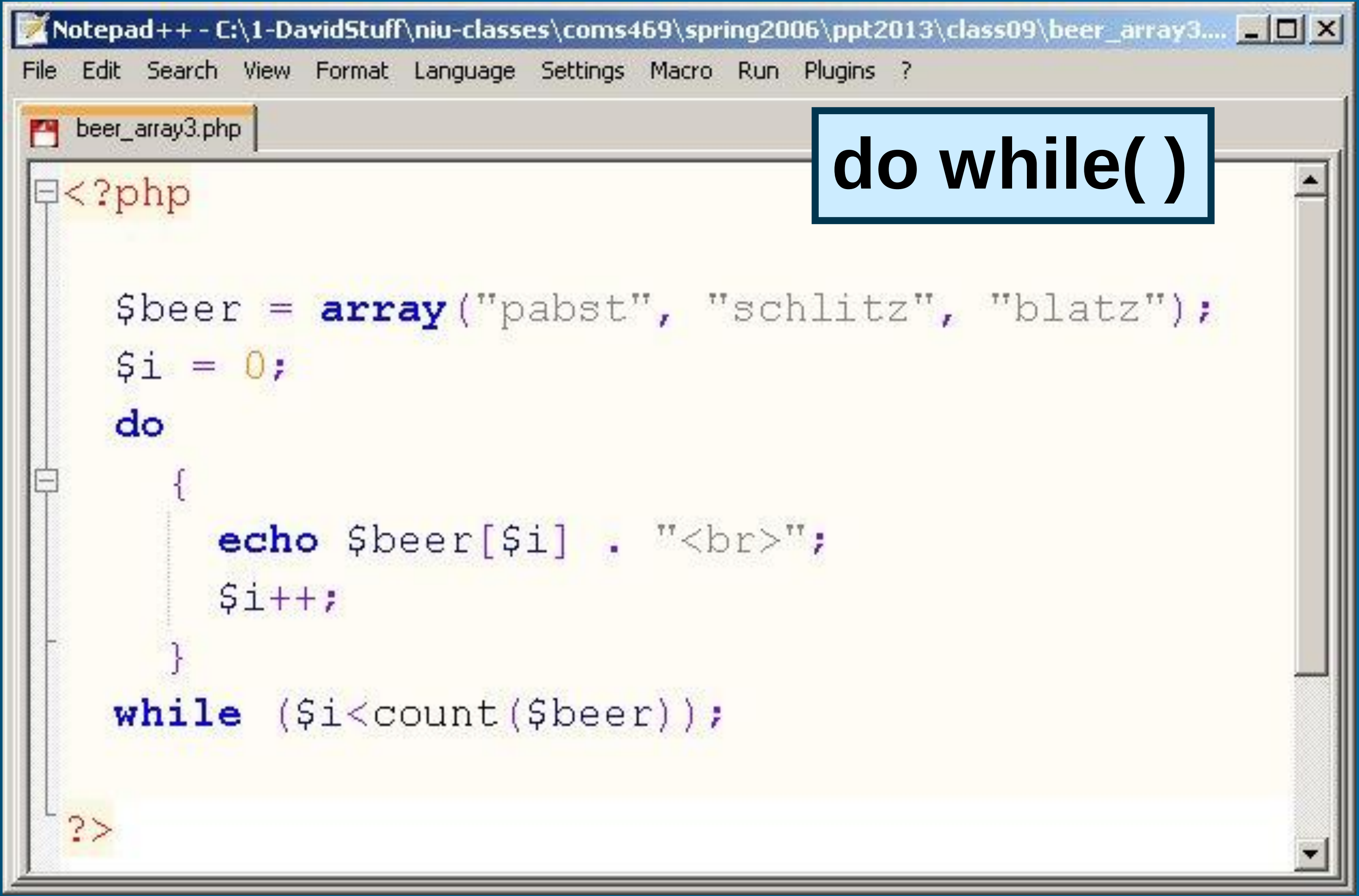
Review


Notepad++ - C:\1-DavidStuff\niu-classes\coms469\spring2006\ppt2013\class09\beer_array2....
File Edit Search View Format Language Settings Macro Run Plugins ?
beer_array2.php

```
<?php

  $beer = array("pabst", "schlitz", "blatz");
  $i = 0;
  while ($i<count($beer))
    {
      echo $beer[$i] . "<br>";
      $i++;
    }

?>
```

while( )

Review

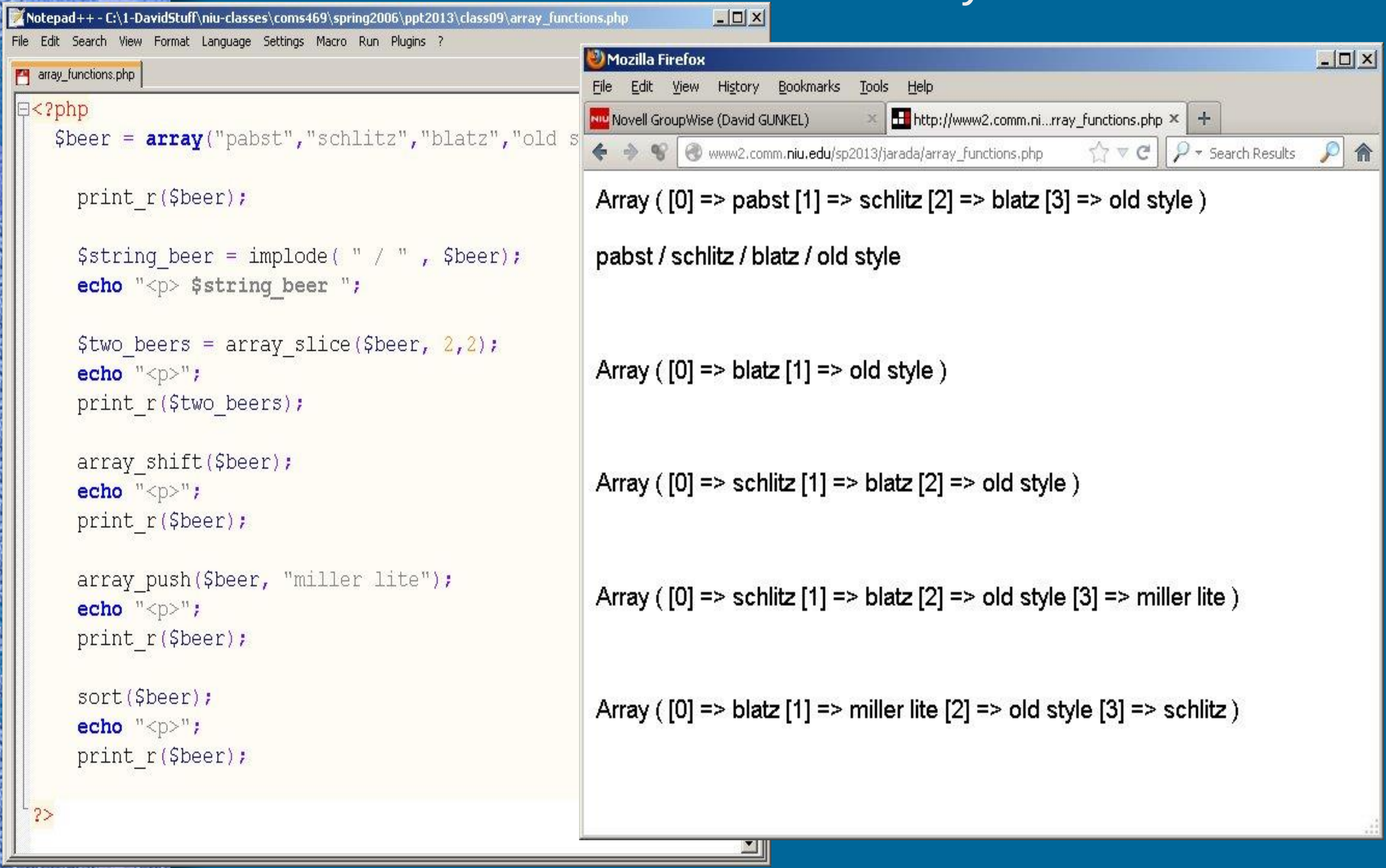


Notepad++ - C:\1-DavidStuff\niu-classes\coms469\spring2006\ppt2013\class09\beer_array3....
File Edit Search View Format Language Settings Macro Run Plugins ?
beer_array3.php

do while( )

```
<?php

  $beer = array("pabst", "schlitz", "blatz");
  $i = 0;
  do
    {
      echo $beer[$i] . "<br>";
      $i++;
    }
  while ($i<count($beer));

?>
```

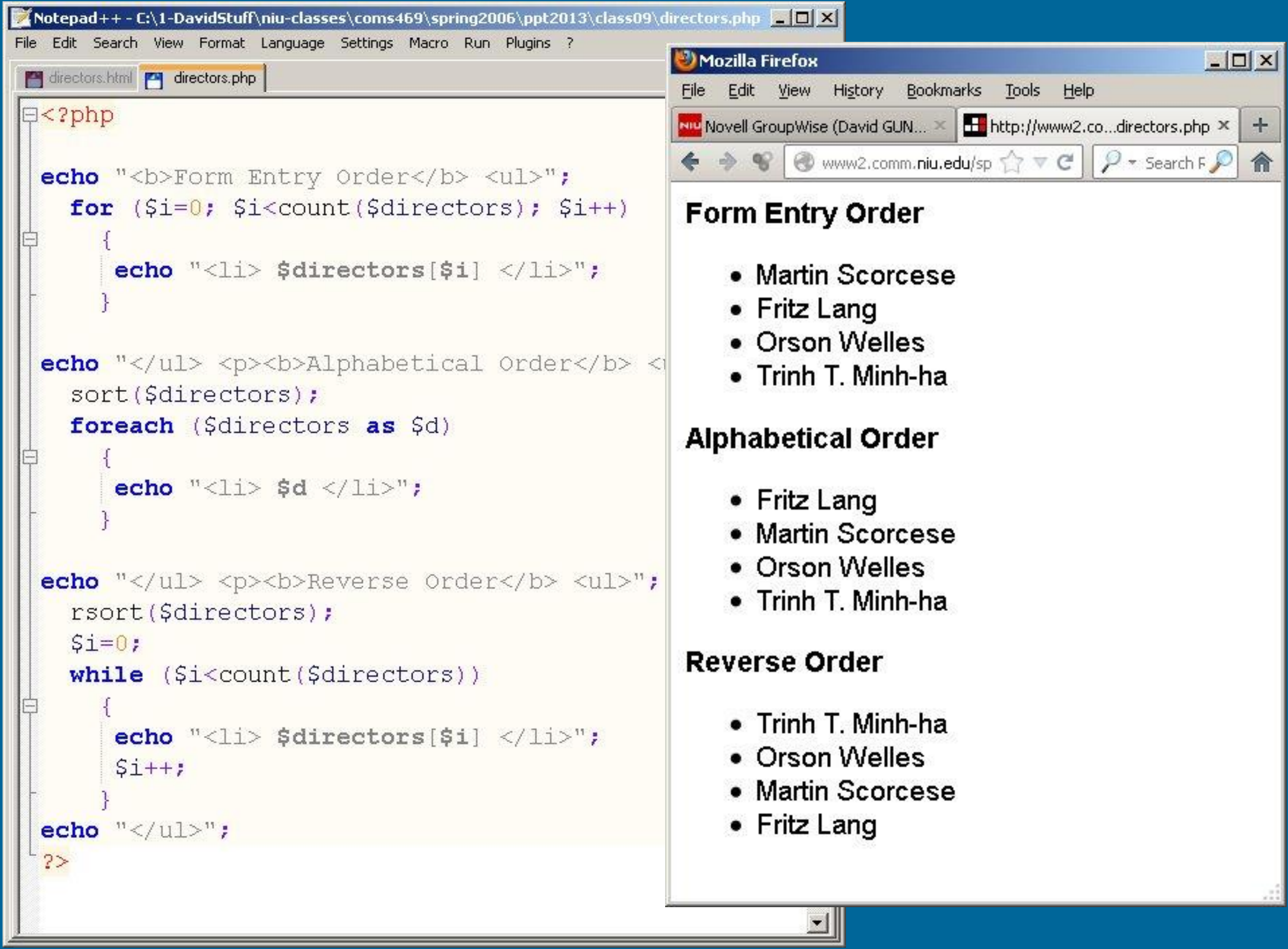
Array Functions


Notepad++ - C:\1-DavidStuff\niu-classes\coms469\spring2006\ppt2013\class09\array_functions.php
File Edit Search View Format Language Settings Macro Run Plugins ?
array_functions.php
Mozilla Firefox
File Edit View History Bookmarks Tools Help
Novell GroupWise (David GUNKEL)
http://www2.comm.ni...rray_functions.php
www2.comm.niu.edu/sp2013/jarada/array_functions.php
Search Results

```
<?php
  $beer = array("pabst","schlitz","blatz","old s

    print_r($beer);

    $string_beer = implode( " / " , $beer);
    echo "<p> $string_beer ";

    $two_beers = array_slice($beer, 2,2);
    echo "<p>";
    print_r($two_beers);

    array_shift($beer);
    echo "<p>";
    print_r($beer);

    array_push($beer, "miller lite");
    echo "<p>";
    print_r($beer);

    sort($beer);
    echo "<p>";
    print_r($beer);

?>
```

```
Array ( [0] => pabst [1] => schlitz [2] => blatz [3] => old style )

pabst / schlitz / blatz / old style


Array ( [0] => blatz [1] => old style )


Array ( [0] => schlitz [1] => blatz [2] => old style )


Array ( [0] => schlitz [1] => blatz [2] => old style [3] => miller lite )


Array ( [0] => blatz [1] => miller lite [2] => old style [3] => schlitz )
```

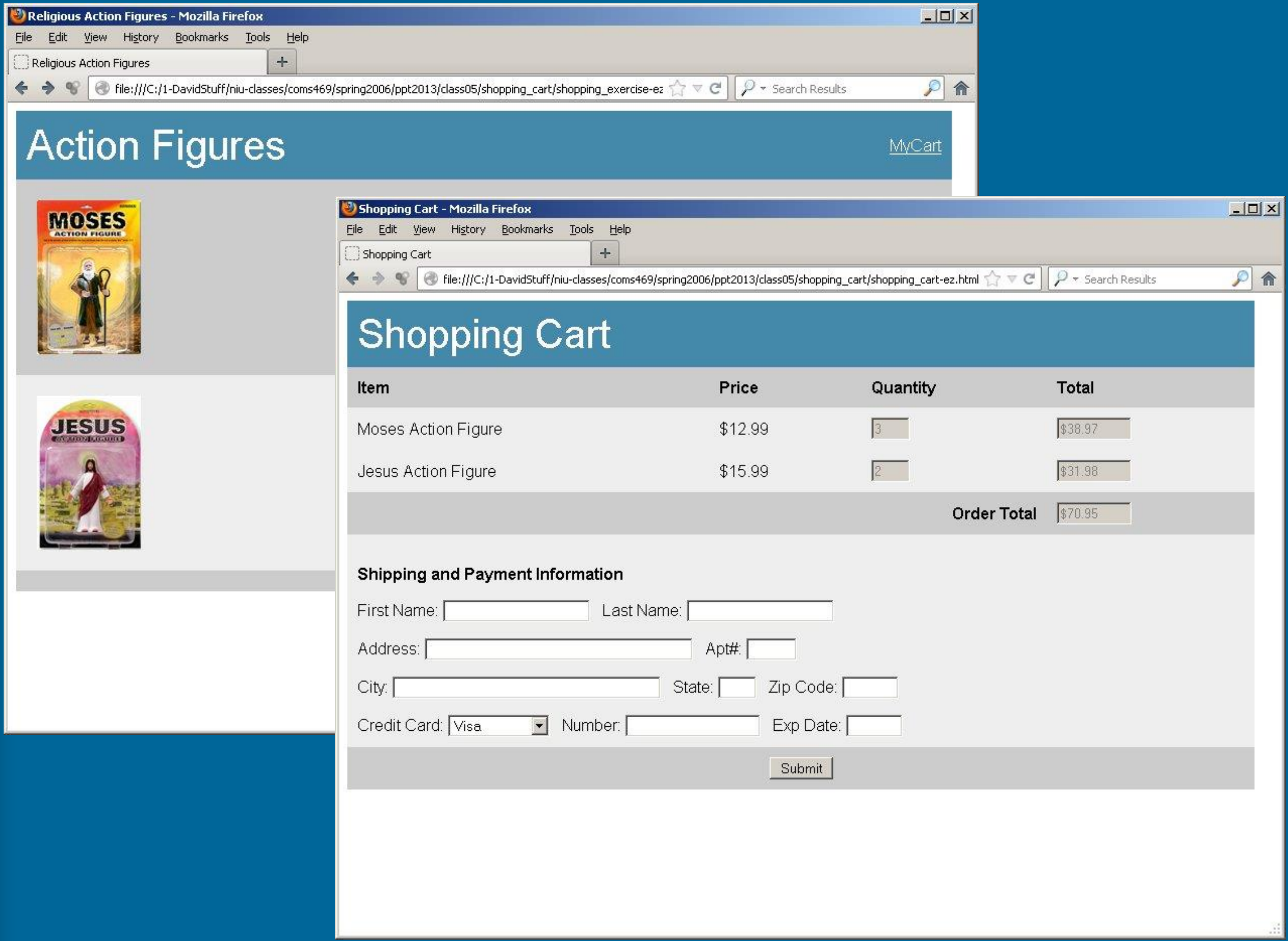
Review


Notepad++ - C:\1-DavidStuff\niu-classes\coms469\spring2006\ppt2013\class09\directors.php
File Edit Search View Format Language Settings Macro Run Plugins ?
directors.html
directors.php
Mozilla Firefox
File Edit View History Bookmarks Tools Help
Novell GroupWise (David GUN...
http://www2.co...directors.php
www2.comm.niu.edu/sp
Search F

```
<?php

echo "<b>Form Entry Order</b> <ul>";
  for ($i=0; $i<count($directors); $i++)
    {
     echo "<li> $directors[$i] </li>";
    }

echo "</ul> <p><b>Alphabetical Order</b> <
  sort($directors);
  foreach ($directors as $d)
    {
     echo "<li> $d </li>";
    }

echo "</ul> <p><b>Reverse Order</b> <ul>";
  rsort($directors);
  $i=0;
  while ($i<count($directors))
    {
     echo "<li> $directors[$i] </li>";
     $i++;
    }
echo "</ul>";
?>
```

```
Form Entry Order

  • Martin Scorcese
  • Fritz Lang
  • Orson Welles
  • Trinh T. Minh-ha

Alphabetical Order

  • Fritz Lang
  • Martin Scorcese
  • Orson Welles
  • Trinh T. Minh-ha

Reverse Order

  • Trinh T. Minh-ha
  • Orson Welles
  • Martin Scorcese
  • Fritz Lang
```

Review


Religious Action Figures - Mozilla Firefox
File Edit View History Bookmarks Tools Help
Religious Action Figures
file:///C:/1-DavidStuff/niu-classes/coms469/spring2006/ppt2013/class05/shopping_cart/shopping_exercise-ez
Search Results
MOSES
ACTION FIGURE
JESUS
ACTION FIGURE
Shopping Cart - Mozilla Firefox
File Edit View History Bookmarks Tools Help
Shopping Cart
file:///C:/1-DavidStuff/niu-classes/coms469/spring2006/ppt2013/class05/shopping_cart/shopping_cart-ez.html
Search Results

Action Figures

MyCart

Shopping Cart

Item	Price	Quantity	Total
Moses Action Figure	$12.99	3	$38.97
Jesus Action Figure	$15.99	2	$31.98
		Order Total	$70.95

Shipping and Payment Information

First Name: Last Name:

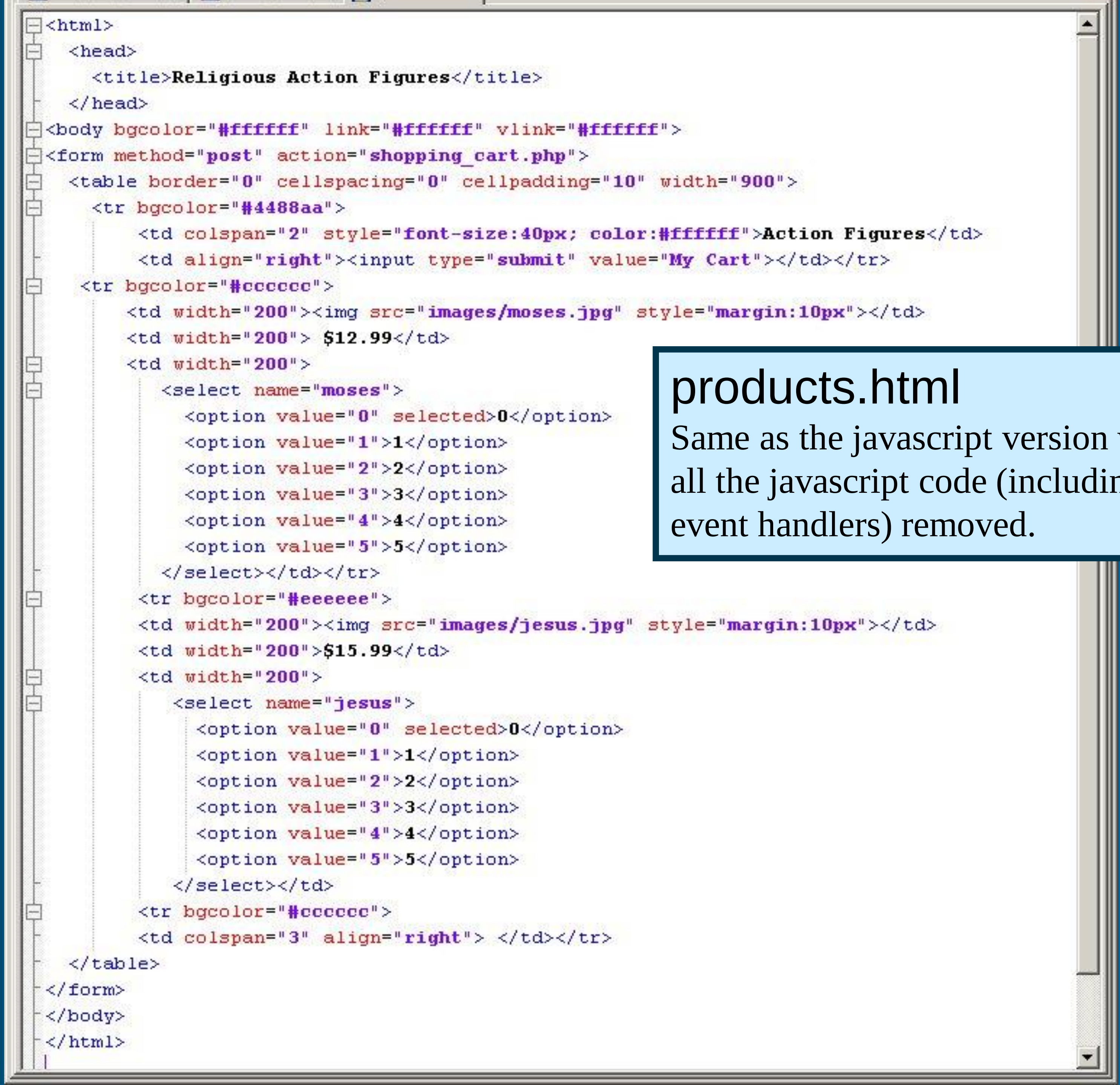
Address: Apt#:

City: State: Zip Code:

Credit Card: Visa Number: Exp Date:

Submit

http://gunkelweb.com/coms469/php_shopping_cart/products.html



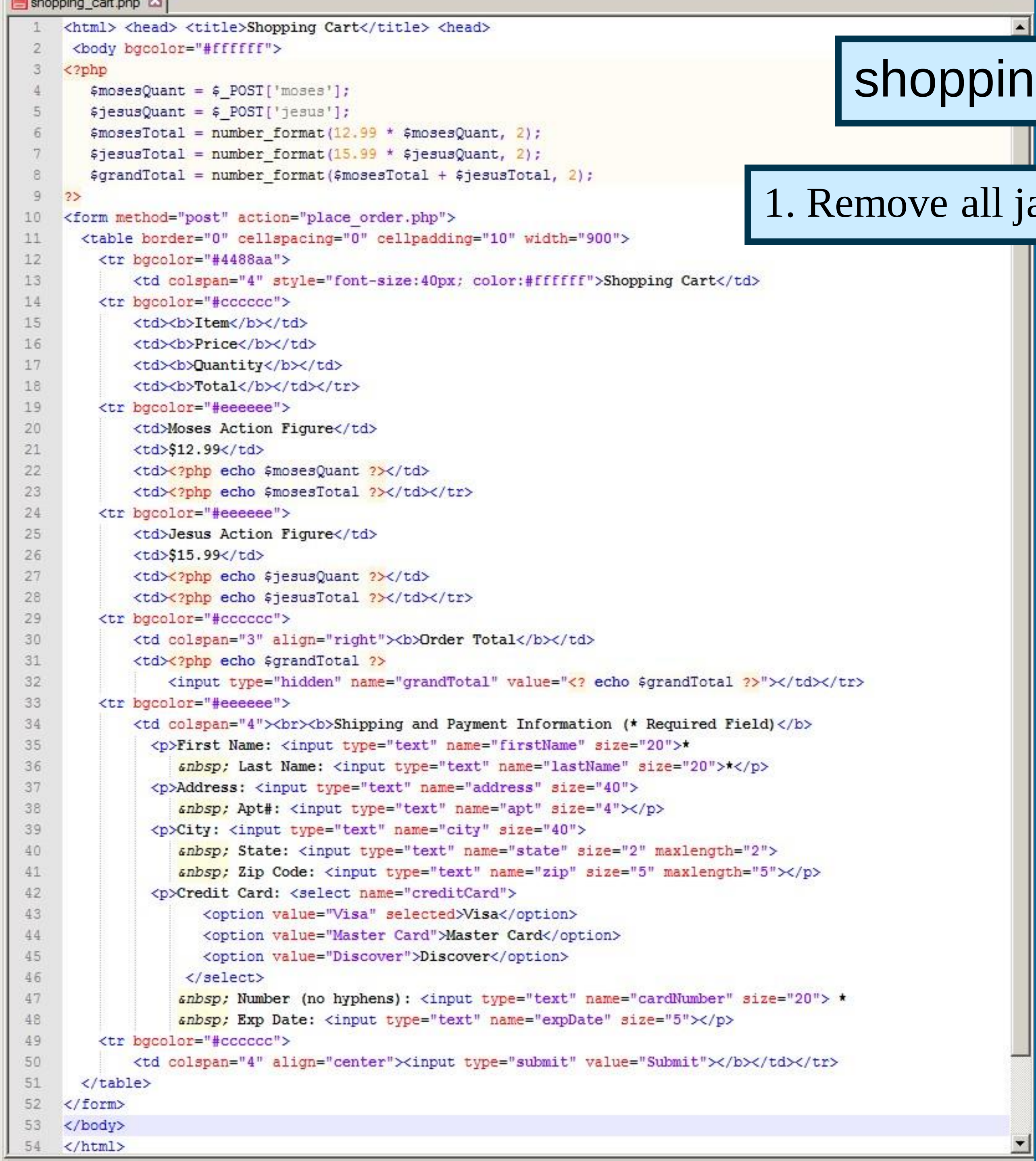
```
<html>
  <head>
    <title>Religious Action Figures</title>
  </head>
<body bgcolor="#ffffff" link="#ffffff" vlink="#ffffff">
<form method="post" action="shopping_cart.php">
  <table border="0" cellspacing="0" cellpadding="10" width="900">
    <tr bgcolor="#4488aa">
        <td colspan="2" style="font-size:40px; color:#ffffff">Action Figures</td>
        <td align="right"><input type="submit" value="My Cart"></td></tr>
   <tr bgcolor="#cccccc">
       <td width="200"><img src="images/moses.jpg" style="margin:10px"></td>
       <td width="200"> $12.99</td>
       <td width="200">
          <select name="moses">
            <option value="0" selected>0</option>
            <option value="1">1</option>
            <option value="2">2</option>
            <option value="3">3</option>
            <option value="4">4</option>
            <option value="5">5</option>
          </select></td></tr>
        <tr bgcolor="#eeeeee">
        <td width="200"><img src="images/jesus.jpg" style="margin:10px"></td>
        <td width="200">$15.99</td>
        <td width="200">
           <select name="jesus">
             <option value="0" selected>0</option>
             <option value="1">1</option>
             <option value="2">2</option>
             <option value="3">3</option>
             <option value="4">4</option>
             <option value="5">5</option>
           </select></td>
        <tr bgcolor="#cccccc">
        <td colspan="3" align="right"> </td></tr>
  </table>
</form>
</body>
</html>
```

products.html

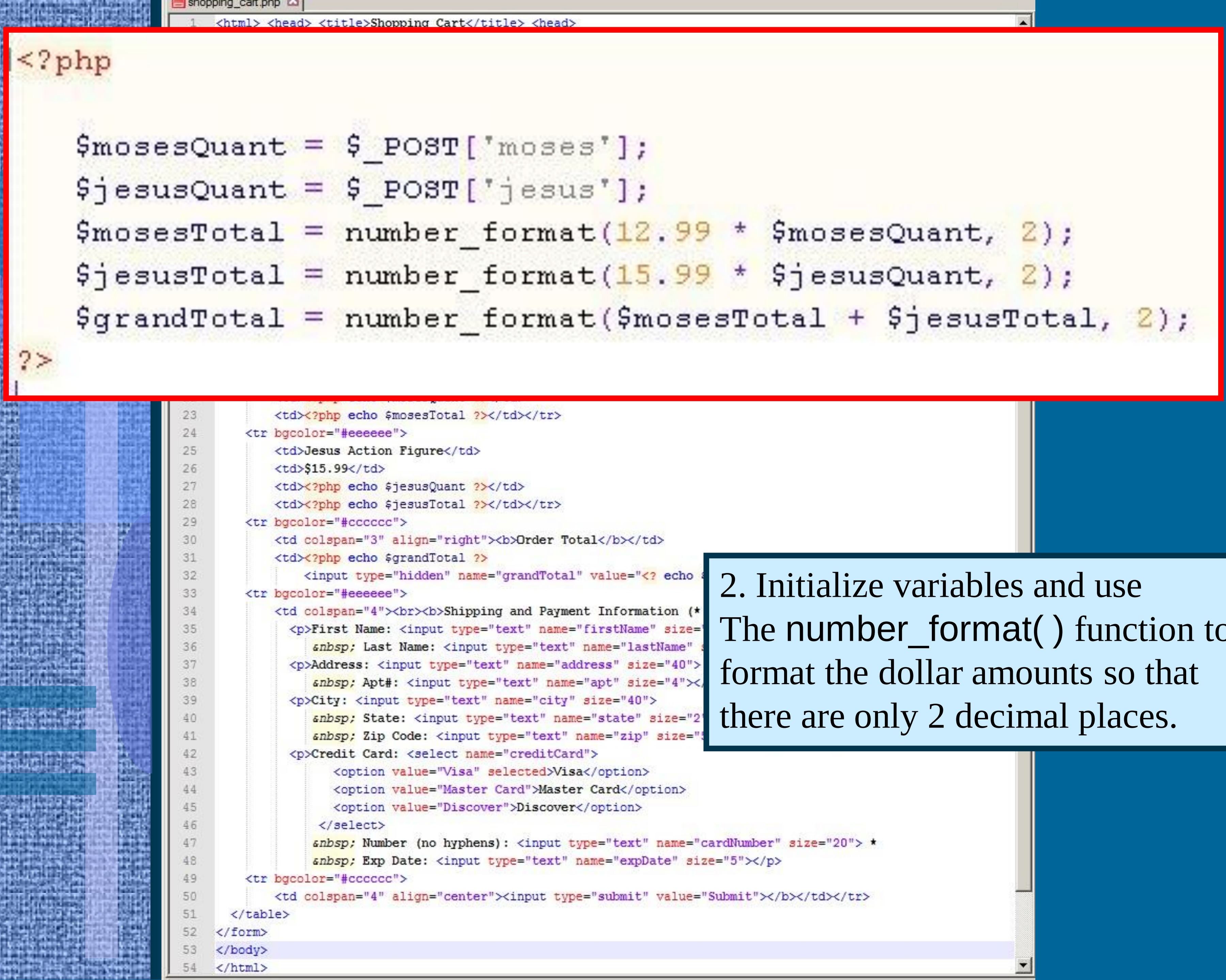
Same as the javascript version with all the javascript code (including event handlers) removed.

shopping_cart.php

1. Remove all javascript code



```
<html> <head> <title>Shopping Cart</title> <head>
 <body bgcolor="#ffffff">
<?php
   $mosesQuant = $_POST['moses'];
   $jesusQuant = $_POST['jesus'];
   $mosesTotal = number_format(12.99 * $mosesQuant, 2);
   $jesusTotal = number_format(15.99 * $jesusQuant, 2);
   $grandTotal = number_format($mosesTotal + $jesusTotal, 2);
?>
<form method="post" action="place_order.php">
  <table border="0" cellspacing="0" cellpadding="10" width="900">
    <tr bgcolor="#4488aa">
        <td colspan="4" style="font-size:40px; color:#ffffff">Shopping Cart</td>
    <tr bgcolor="#cccccc">
        <td><b>Item</b></td>
        <td><b>Price</b></td>
        <td><b>Quantity</b></td>
        <td><b>Total</b></td></tr>
    <tr bgcolor="#eeeeee">
        <td>Moses Action Figure</td>
        <td>$12.99</td>
        <td><?php echo $mosesQuant ?></td>
        <td><?php echo $mosesTotal ?></td></tr>
    <tr bgcolor="#eeeeee">
        <td>Jesus Action Figure</td>
        <td>$15.99</td>
        <td><?php echo $jesusQuant ?></td>
        <td><?php echo $jesusTotal ?></td></tr>
    <tr bgcolor="#cccccc">
        <td colspan="3" align="right"><b>Order Total</b></td>
        <td><?php echo $grandTotal ?>
            <input type="hidden" name="grandTotal" value="<? echo $grandTotal ?>"></td></tr>
    <tr bgcolor="#eeeeee">
        <td colspan="4"><br><b>Shipping and Payment Information (* Required Field)</b>
          <p>First Name: <input type="text" name="firstName" size="20">*
             &nbsp; Last Name: <input type="text" name="lastName" size="20">*</p>
          <p>Address: <input type="text" name="address" size="40">
             &nbsp; Apt#: <input type="text" name="apt" size="4"></p>
          <p>City: <input type="text" name="city" size="40">
             &nbsp; State: <input type="text" name="state" size="2" maxlength="2">
             &nbsp; Zip Code: <input type="text" name="zip" size="5" maxlength="5"></p>
          <p>Credit Card: <select name="creditCard">
                <option value="Visa" selected>Visa</option>
                <option value="Master Card">Master Card</option>
                <option value="Discover">Discover</option>
              </select>
             &nbsp; Number (no hyphens): <input type="text" name="cardNumber" size="20"> *
             &nbsp; Exp Date: <input type="text" name="expDate" size="5"></p>
    <tr bgcolor="#cccccc">
        <td colspan="4" align="center"><input type="submit" value="Submit"></b></td></tr>
  </table>
</form>
</body>
</html>
```



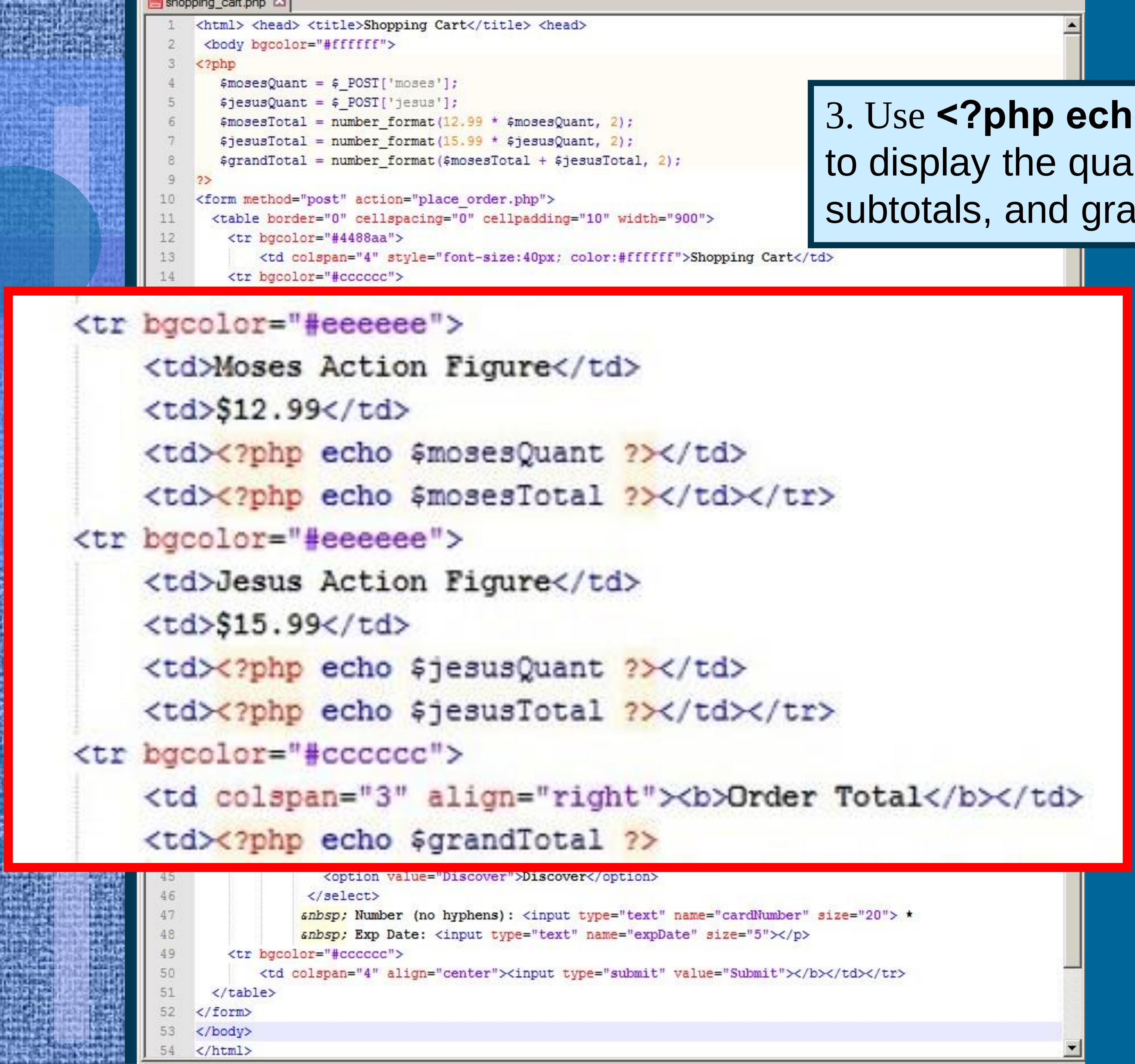
```
<html> <head> <title>Shopping Cart</title> <head>
```

```php
<?php

    $mosesQuant = $_POST['moses'];
    $jesusQuant = $_POST['jesus'];
    $mosesTotal = number_format(12.99 * $mosesQuant, 2);
    $jesusTotal = number_format(15.99 * $jesusQuant, 2);
    $grandTotal = number_format($mosesTotal + $jesusTotal, 2);
?>
```

```
            <td><?php echo $mosesTotal ?></td></tr>
        <tr bgcolor="#eeeeee">
            <td>Jesus Action Figure</td>
            <td>$15.99</td>
            <td><?php echo $jesusQuant ?></td>
            <td><?php echo $jesusTotal ?></td></tr>
        <tr bgcolor="#cccccc">
            <td colspan="3" align="right"><b>Order Total</b></td>
            <td><?php echo $grandTotal ?>
                <input type="hidden" name="grandTotal" value="<? echo $
        <tr bgcolor="#eeeeee">
            <td colspan="4"><br><b>Shipping and Payment Information (*
              <p>First Name: <input type="text" name="firstName" size="
                 &nbsp; Last Name: <input type="text" name="lastName" s
              <p>Address: <input type="text" name="address" size="40">
                 &nbsp; Apt#: <input type="text" name="apt" size="4"><
              <p>City: <input type="text" name="city" size="40">
                 &nbsp; State: <input type="text" name="state" size="2
                 &nbsp; Zip Code: <input type="text" name="zip" size="
              <p>Credit Card: <select name="creditCard">
                    <option value="Visa" selected>Visa</option>
                    <option value="Master Card">Master Card</option>
                    <option value="Discover">Discover</option>
                  </select>
                 &nbsp; Number (no hyphens): <input type="text" name="cardNumber" size="20"> *
                 &nbsp; Exp Date: <input type="text" name="expDate" size="5"></p>
        <tr bgcolor="#cccccc">
            <td colspan="4" align="center"><input type="submit" value="Submit"></b></td></tr>
      </table>
    </form>
    </body>
    </html>
```

2. Initialize variables and use The number_format( ) function to format the dollar amounts so that there are only 2 decimal places.

3. Use **<?php echo … ?>** to display the quanities, subtotals, and grandTotal

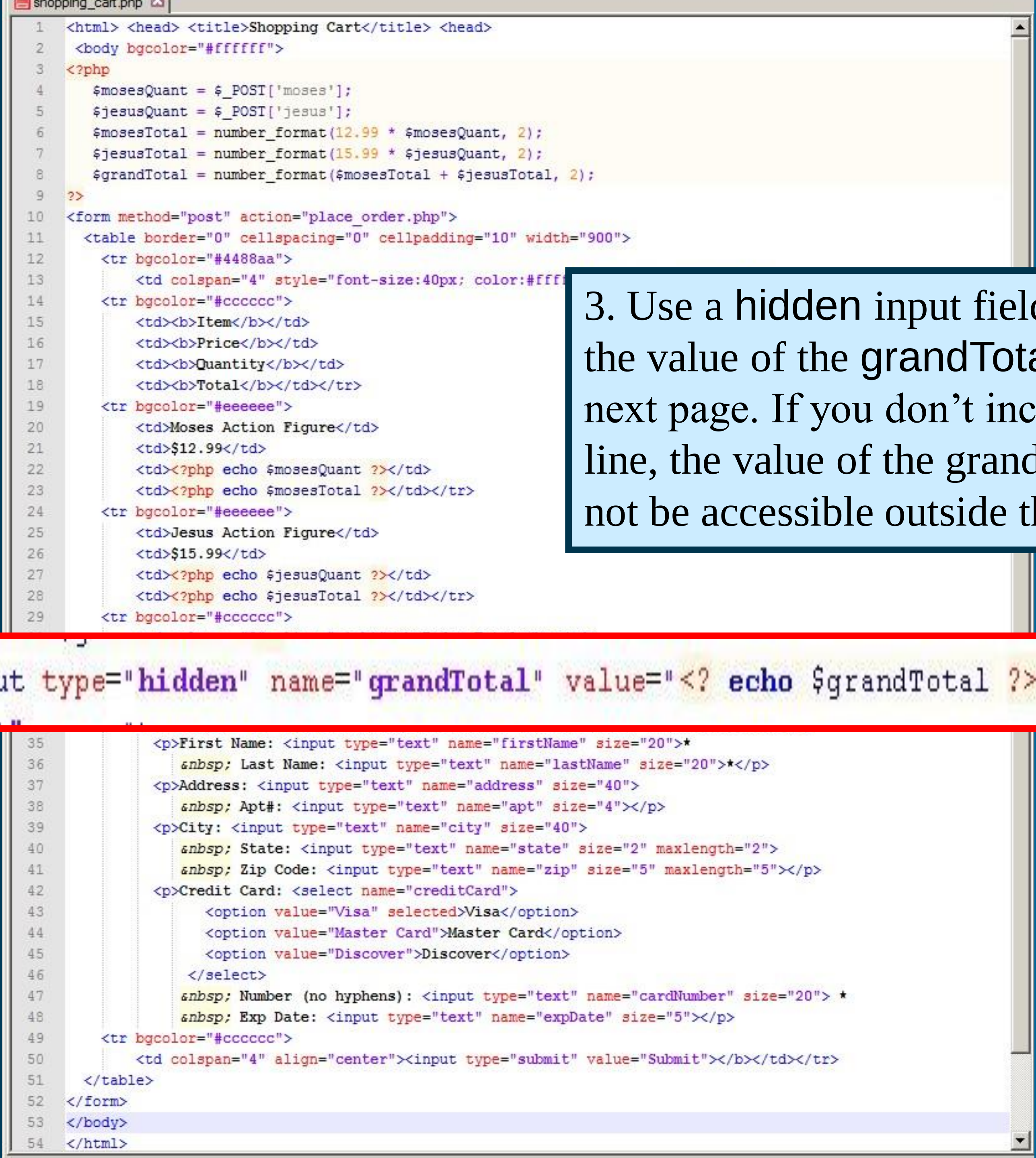


```
<html> <head> <title>Shopping Cart</title> <head>
 <body bgcolor="#ffffff">
<?php
   $mosesQuant = $_POST['moses'];
   $jesusQuant = $_POST['jesus'];
   $mosesTotal = number_format(12.99 * $mosesQuant, 2);
   $jesusTotal = number_format(15.99 * $jesusQuant, 2);
   $grandTotal = number_format($mosesTotal + $jesusTotal, 2);
?>
<form method="post" action="place_order.php">
  <table border="0" cellspacing="0" cellpadding="10" width="900">
    <tr bgcolor="#4488aa">
        <td colspan="4" style="font-size:40px; color:#ffffff">Shopping Cart</td>
    <tr bgcolor="#cccccc">
```

```
<tr bgcolor="#eeeeee">
    <td>Moses Action Figure</td>
    <td>$12.99</td>
    <td><?php echo $mosesQuant ?></td>
    <td><?php echo $mosesTotal ?></td></tr>
<tr bgcolor="#eeeeee">
    <td>Jesus Action Figure</td>
    <td>$15.99</td>
    <td><?php echo $jesusQuant ?></td>
    <td><?php echo $jesusTotal ?></td></tr>
<tr bgcolor="#cccccc">
    <td colspan="3" align="right"><b>Order Total</b></td>
    <td><?php echo $grandTotal ?>
```

```
                <option value="Discover">Discover</option>
              </select>
             &nbsp; Number (no hyphens): <input type="text" name="cardNumber" size="20"> *
             &nbsp; Exp Date: <input type="text" name="expDate" size="5"></p>
    <tr bgcolor="#cccccc">
        <td colspan="4" align="center"><input type="submit" value="Submit"></b></td></tr>
  </table>
</form>
</body>
</html>
```

3. Use a hidden input field to pass the value of the grandTotal to the next page. If you don’t include this line, the value of the grandTotal will not be accessible outside this page.

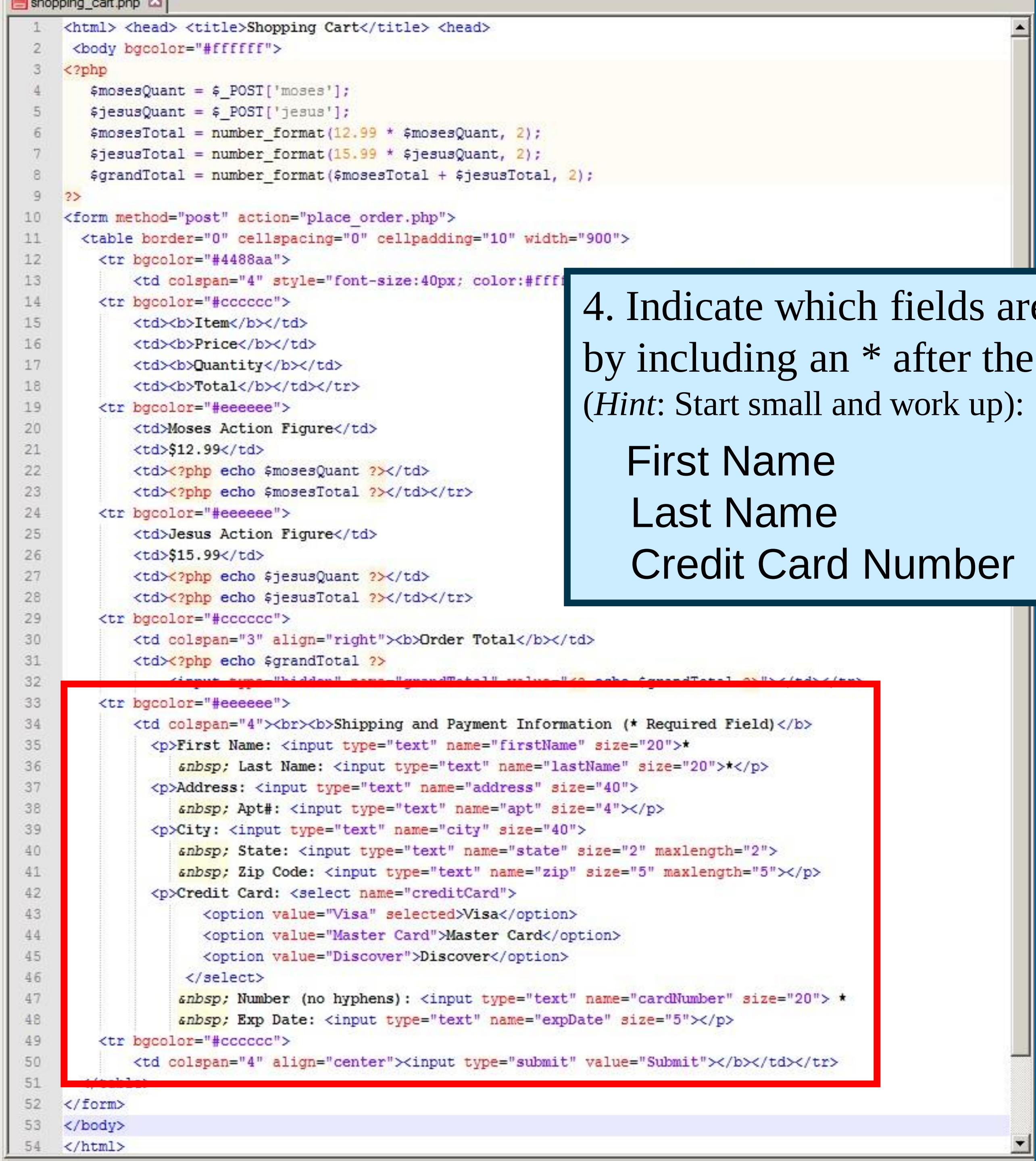


shopping_cart.php

```
<html> <head> <title>Shopping Cart</title> <head>
 <body bgcolor="#ffffff">
<?php
   $mosesQuant = $_POST['moses'];
   $jesusQuant = $_POST['jesus'];
   $mosesTotal = number_format(12.99 * $mosesQuant, 2);
   $jesusTotal = number_format(15.99 * $jesusQuant, 2);
   $grandTotal = number_format($mosesTotal + $jesusTotal, 2);
?>
<form method="post" action="place_order.php">
  <table border="0" cellspacing="0" cellpadding="10" width="900">
    <tr bgcolor="#4488aa">
        <td colspan="4" style="font-size:40px; color:#fff
    <tr bgcolor="#cccccc">
        <td><b>Item</b></td>
        <td><b>Price</b></td>
        <td><b>Quantity</b></td>
        <td><b>Total</b></td></tr>
    <tr bgcolor="#eeeeee">
        <td>Moses Action Figure</td>
        <td>$12.99</td>
        <td><?php echo $mosesQuant ?></td>
        <td><?php echo $mosesTotal ?></td></tr>
    <tr bgcolor="#eeeeee">
        <td>Jesus Action Figure</td>
        <td>$15.99</td>
        <td><?php echo $jesusQuant ?></td>
        <td><?php echo $jesusTotal ?></td></tr>
    <tr bgcolor="#cccccc">
```

```
<input type="hidden" name="grandTotal" value="<? echo $grandTotal ?>"></td></tr>
```

```
          <p>First Name: <input type="text" name="firstName" size="20">*
             &nbsp; Last Name: <input type="text" name="lastName" size="20">*</p>
          <p>Address: <input type="text" name="address" size="40">
             &nbsp; Apt#: <input type="text" name="apt" size="4"></p>
          <p>City: <input type="text" name="city" size="40">
             &nbsp; State: <input type="text" name="state" size="2" maxlength="2">
             &nbsp; Zip Code: <input type="text" name="zip" size="5" maxlength="5"></p>
          <p>Credit Card: <select name="creditCard">
                <option value="Visa" selected>Visa</option>
                <option value="Master Card">Master Card</option>
                <option value="Discover">Discover</option>
            </select>
             &nbsp; Number (no hyphens): <input type="text" name="cardNumber" size="20"> *
             &nbsp; Exp Date: <input type="text" name="expDate" size="5"></p>
    <tr bgcolor="#cccccc">
        <td colspan="4" align="center"><input type="submit" value="Submit"></b></td></tr>
  </table>
</form>
</body>
</html>
```



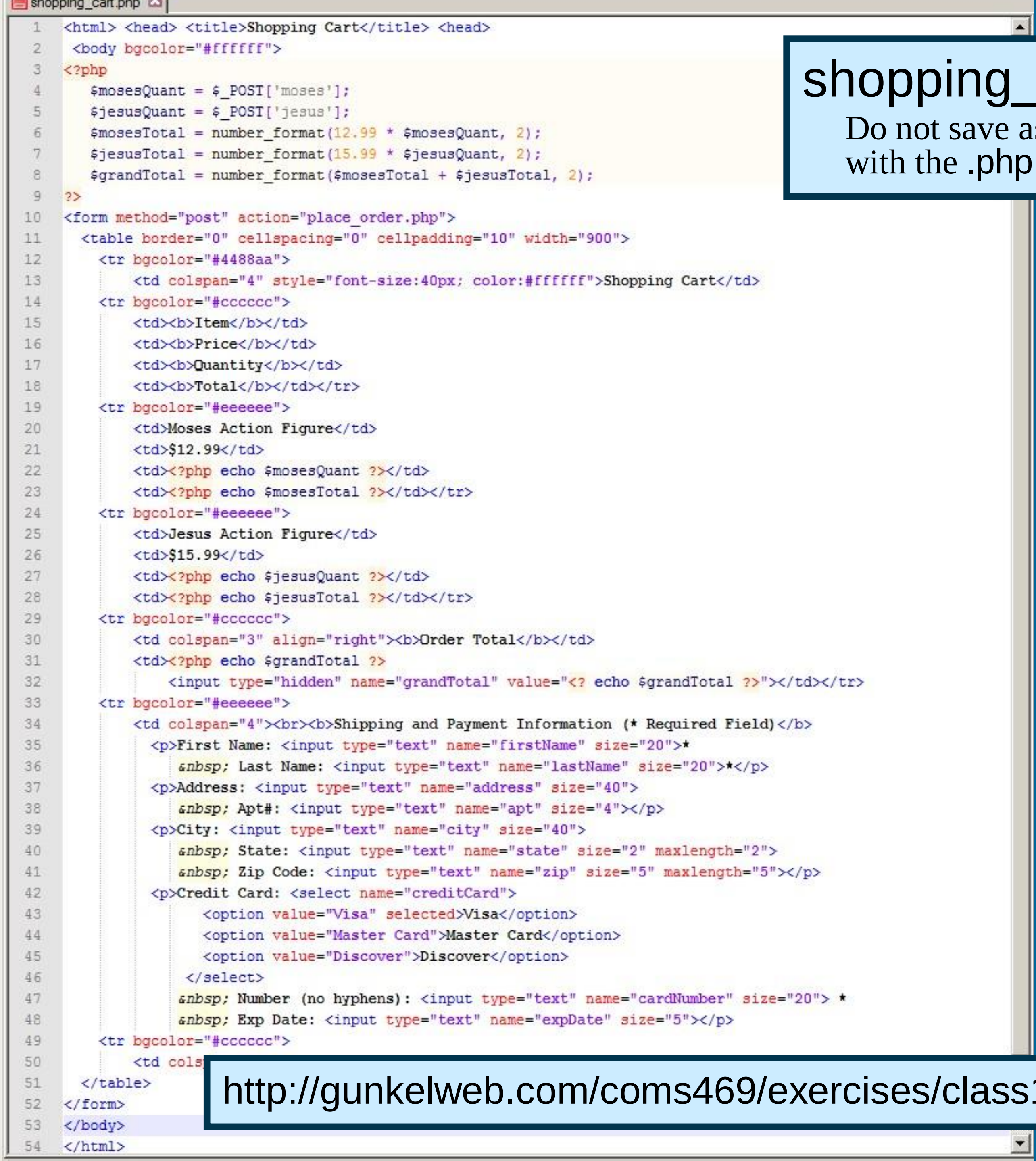
```
<html> <head> <title>Shopping Cart</title> <head>
 <body bgcolor="#ffffff">
<?php
   $mosesQuant = $_POST['moses'];
   $jesusQuant = $_POST['jesus'];
   $mosesTotal = number_format(12.99 * $mosesQuant, 2);
   $jesusTotal = number_format(15.99 * $jesusQuant, 2);
   $grandTotal = number_format($mosesTotal + $jesusTotal, 2);
?>
<form method="post" action="place_order.php">
  <table border="0" cellspacing="0" cellpadding="10" width="900">
    <tr bgcolor="#4488aa">
        <td colspan="4" style="font-size:40px; color:#fff
    <tr bgcolor="#cccccc">
        <td><b>Item</b></td>
        <td><b>Price</b></td>
        <td><b>Quantity</b></td>
        <td><b>Total</b></td></tr>
    <tr bgcolor="#eeeeee">
        <td>Moses Action Figure</td>
        <td>$12.99</td>
        <td><?php echo $mosesQuant ?></td>
        <td><?php echo $mosesTotal ?></td></tr>
    <tr bgcolor="#eeeeee">
        <td>Jesus Action Figure</td>
        <td>$15.99</td>
        <td><?php echo $jesusQuant ?></td>
        <td><?php echo $jesusTotal ?></td></tr>
    <tr bgcolor="#cccccc">
        <td colspan="3" align="right"><b>Order Total</b></td>
        <td><?php echo $grandTotal ?>
            <input type="hidden" name="grandTotal" value="<? echo $grandTotal ?>"></td></tr>
    <tr bgcolor="#eeeeee">
        <td colspan="4"><br><b>Shipping and Payment Information (* Required Field)</b>
          <p>First Name: <input type="text" name="firstName" size="20">*
             &nbsp; Last Name: <input type="text" name="lastName" size="20">*</p>
          <p>Address: <input type="text" name="address" size="40">
             &nbsp; Apt#: <input type="text" name="apt" size="4"></p>
          <p>City: <input type="text" name="city" size="40">
             &nbsp; State: <input type="text" name="state" size="2" maxlength="2">
             &nbsp; Zip Code: <input type="text" name="zip" size="5" maxlength="5"></p>
          <p>Credit Card: <select name="creditCard">
                <option value="Visa" selected>Visa</option>
                <option value="Master Card">Master Card</option>
                <option value="Discover">Discover</option>
              </select>
             &nbsp; Number (no hyphens): <input type="text" name="cardNumber" size="20"> *
             &nbsp; Exp Date: <input type="text" name="expDate" size="5"></p>
    <tr bgcolor="#cccccc">
        <td colspan="4" align="center"><input type="submit" value="Submit"></b></td></tr>
  </table>
</form>
</body>
</html>
```

4. Indicate which fields are required by including an * after the field (*Hint*: Start small and work up):

- First Name
- Last Name
- Credit Card Number

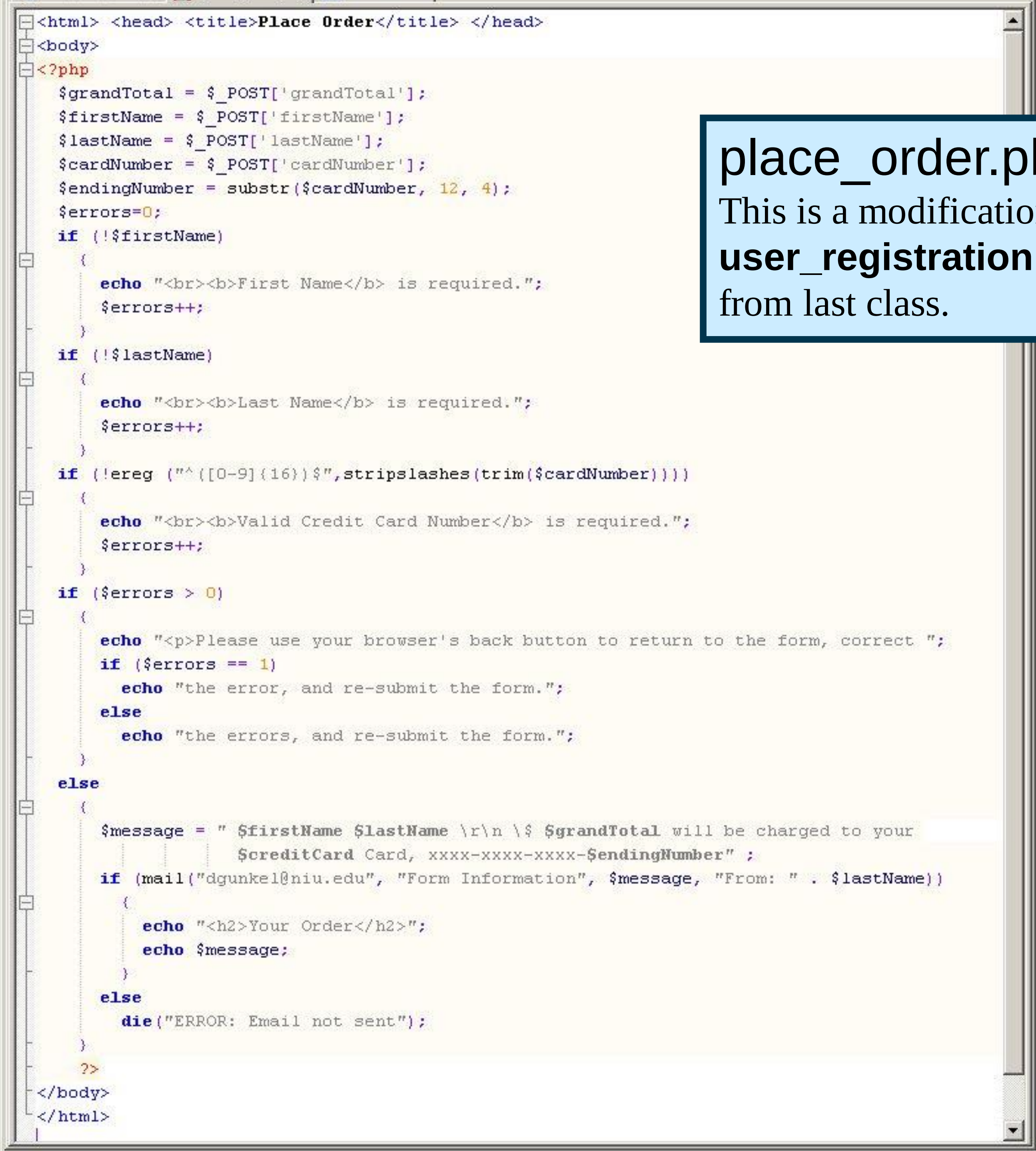
shopping_cart.php

Do not save as .html; save with the .php extention



```
<html> <head> <title>Shopping Cart</title> <head>
 <body bgcolor="#ffffff">
<?php
   $mosesQuant = $_POST['moses'];
   $jesusQuant = $_POST['jesus'];
   $mosesTotal = number_format(12.99 * $mosesQuant, 2);
   $jesusTotal = number_format(15.99 * $jesusQuant, 2);
   $grandTotal = number_format($mosesTotal + $jesusTotal, 2);
?>
<form method="post" action="place_order.php">
  <table border="0" cellspacing="0" cellpadding="10" width="900">
    <tr bgcolor="#4488aa">
        <td colspan="4" style="font-size:40px; color:#ffffff">Shopping Cart</td>
    <tr bgcolor="#cccccc">
        <td><b>Item</b></td>
        <td><b>Price</b></td>
        <td><b>Quantity</b></td>
        <td><b>Total</b></td></tr>
    <tr bgcolor="#eeeeee">
        <td>Moses Action Figure</td>
        <td>$12.99</td>
        <td><?php echo $mosesQuant ?></td>
        <td><?php echo $mosesTotal ?></td></tr>
    <tr bgcolor="#eeeeee">
        <td>Jesus Action Figure</td>
        <td>$15.99</td>
        <td><?php echo $jesusQuant ?></td>
        <td><?php echo $jesusTotal ?></td></tr>
    <tr bgcolor="#cccccc">
        <td colspan="3" align="right"><b>Order Total</b></td>
        <td><?php echo $grandTotal ?>
            <input type="hidden" name="grandTotal" value="<? echo $grandTotal ?>"></td></tr>
    <tr bgcolor="#eeeeee">
        <td colspan="4"><br><b>Shipping and Payment Information (* Required Field)</b>
          <p>First Name: <input type="text" name="firstName" size="20">*
             &nbsp; Last Name: <input type="text" name="lastName" size="20">*</p>
          <p>Address: <input type="text" name="address" size="40">
             &nbsp; Apt#: <input type="text" name="apt" size="4"></p>
          <p>City: <input type="text" name="city" size="40">
             &nbsp; State: <input type="text" name="state" size="2" maxlength="2">
             &nbsp; Zip Code: <input type="text" name="zip" size="5" maxlength="5"></p>
          <p>Credit Card: <select name="creditCard">
                <option value="Visa" selected>Visa</option>
                <option value="Master Card">Master Card</option>
                <option value="Discover">Discover</option>
              </select>
             &nbsp; Number (no hyphens): <input type="text" name="cardNumber" size="20"> *
             &nbsp; Exp Date: <input type="text" name="expDate" size="5"></p>
    <tr bgcolor="#cccccc">
        <td cols
  </table>
</form>
</body>
</html>
```

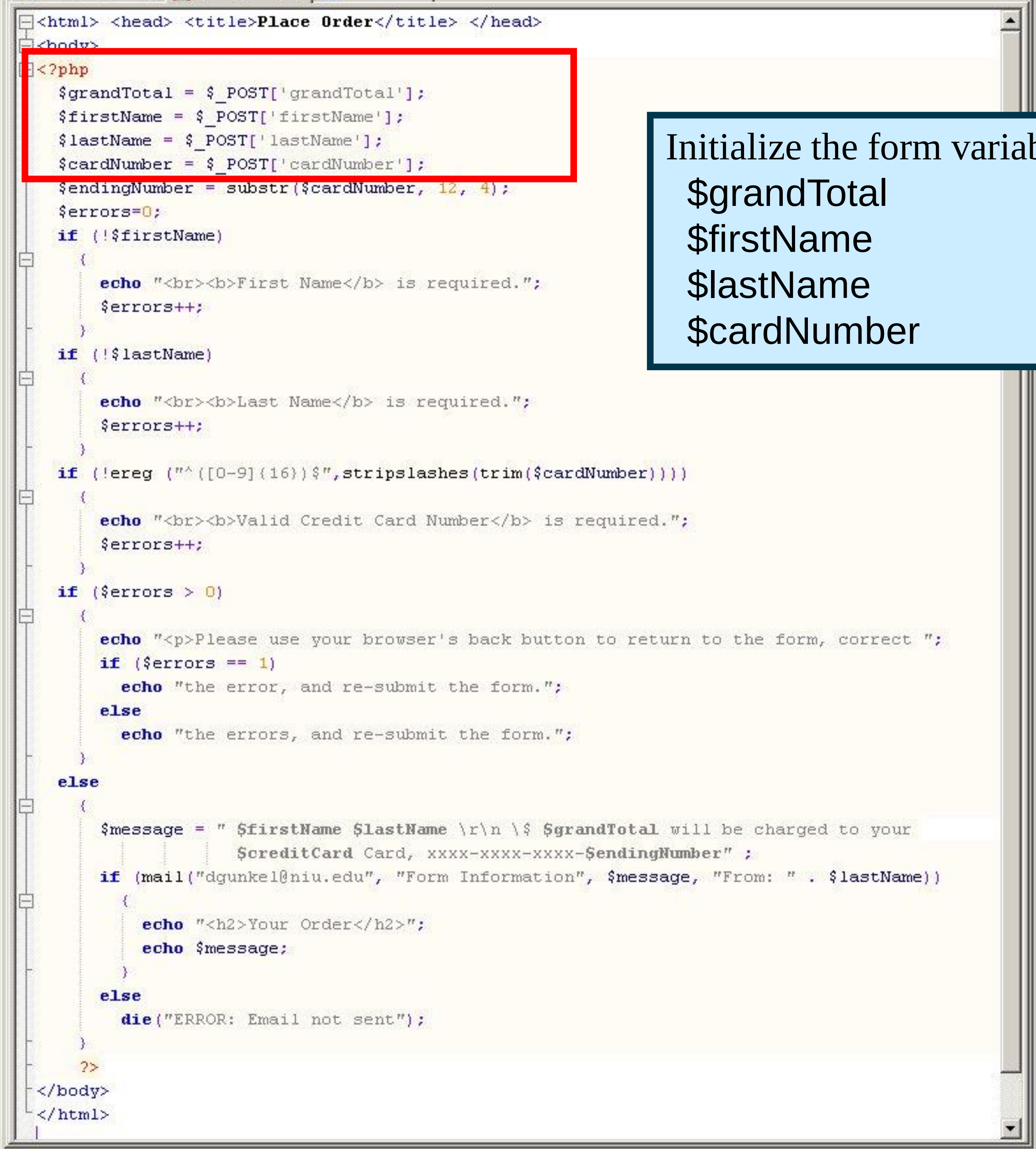
http://gunkelweb.com/coms469/exercises/class10_code.pdf



```
<html> <head> <title>Place Order</title> </head>
<body>
<?php
 $grandTotal = $_POST['grandTotal'];
 $firstName = $_POST['firstName'];
 $lastName = $_POST['lastName'];
 $cardNumber = $_POST['cardNumber'];
 $endingNumber = substr($cardNumber, 12, 4);
 $errors=0;
 if (!$firstName)
  {
   echo "<br><b>First Name</b> is required.";
   $errors++;
  }
 if (!$lastName)
  {
   echo "<br><b>Last Name</b> is required.";
   $errors++;
  }
 if (!ereg ("^([0-9]{16})$",stripslashes(trim($cardNumber))))
  {
   echo "<br><b>Valid Credit Card Number</b> is required.";
   $errors++;
  }
 if ($errors > 0)
  {
   echo "<p>Please use your browser's back button to return to the form, correct ";
   if ($errors == 1)
    echo "the error, and re-submit the form.";
   else
    echo "the errors, and re-submit the form.";
  }
 else
  {
   $message = " $firstName $lastName \r\n \$ $grandTotal will be charged to your
         $creditCard Card, xxxx-xxxx-xxxx-$endingNumber" ;
   if (mail("dgunkel@niu.edu", "Form Information", $message, "From: " . $lastName))
    {
     echo "<h2>Your Order</h2>";
     echo $message;
    }
   else
    die("ERROR: Email not sent");
  }
  ?>
</body>
</html>
```

place_order.php

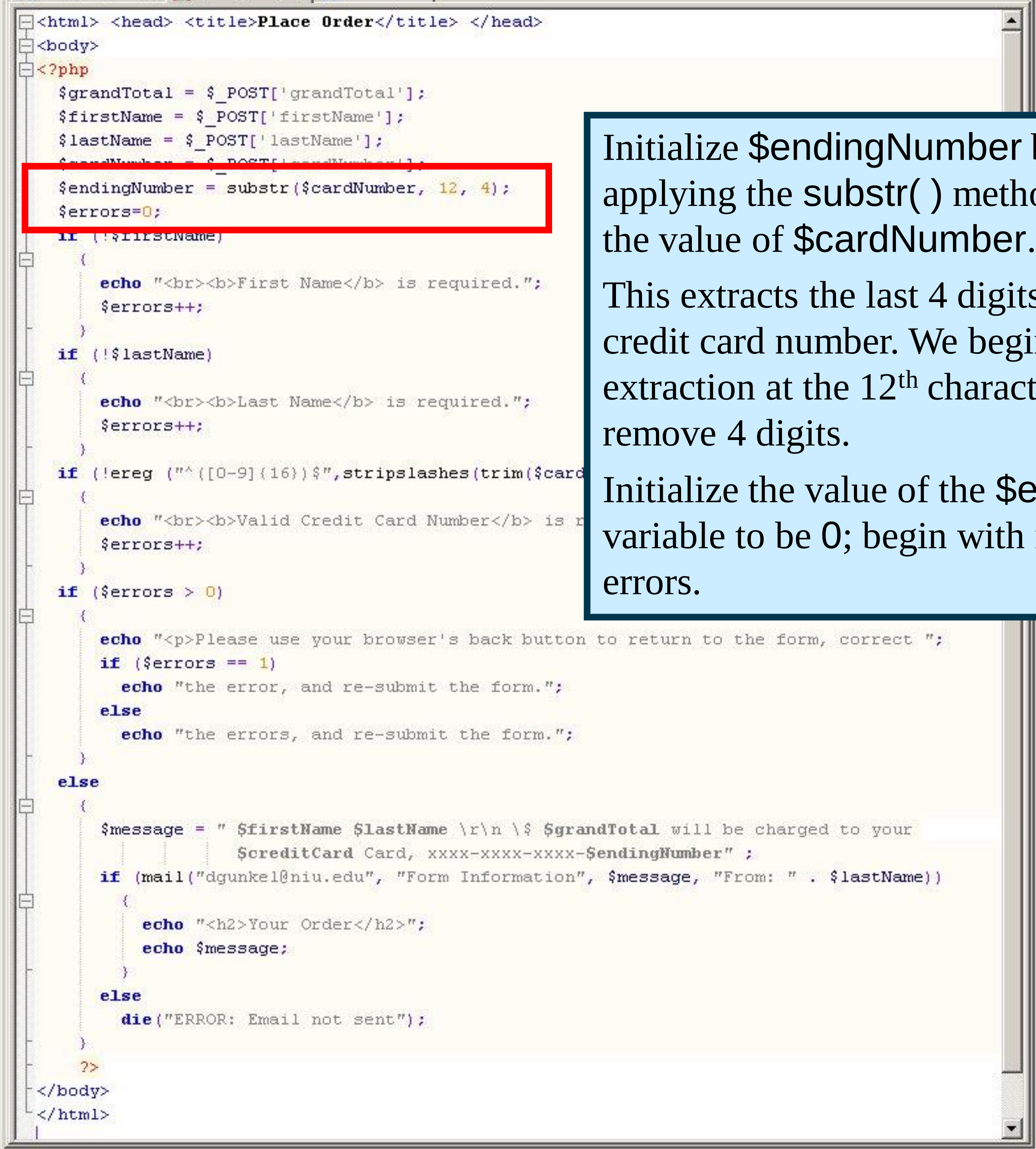
This is a modification of the **user_registration.php** from last class.



```
<html> <head> <title>Place Order</title> </head>
<body>
<?php
  $grandTotal = $_POST['grandTotal'];
  $firstName = $_POST['firstName'];
  $lastName = $_POST['lastName'];
  $cardNumber = $_POST['cardNumber'];
  $endingNumber = substr($cardNumber, 12, 4);
  $errors=0;
  if (!$firstName)
    {
      echo "<br><b>First Name</b> is required.";
      $errors++;
    }
  if (!$lastName)
    {
      echo "<br><b>Last Name</b> is required.";
      $errors++;
    }
  if (!ereg ("^([0-9]{16})$",stripslashes(trim($cardNumber))))
    {
      echo "<br><b>Valid Credit Card Number</b> is required.";
      $errors++;
    }
  if ($errors > 0)
    {
      echo "<p>Please use your browser's back button to return to the form, correct ";
      if ($errors == 1)
        echo "the error, and re-submit the form.";
      else
        echo "the errors, and re-submit the form.";
    }
  else
    {
      $message = " $firstName $lastName \r\n \$ $grandTotal will be charged to your
                 $creditCard Card, xxxx-xxxx-xxxx-$endingNumber" ;
      if (mail("dgunkel@niu.edu", "Form Information", $message, "From: " . $lastName))
        {
          echo "<h2>Your Order</h2>";
          echo $message;
        }
      else
        die("ERROR: Email not sent");
    }
    ?>
</body>
</html>
```

Initialize the form variables

- $grandTotal
- $firstName
- $lastName
- $cardNumber

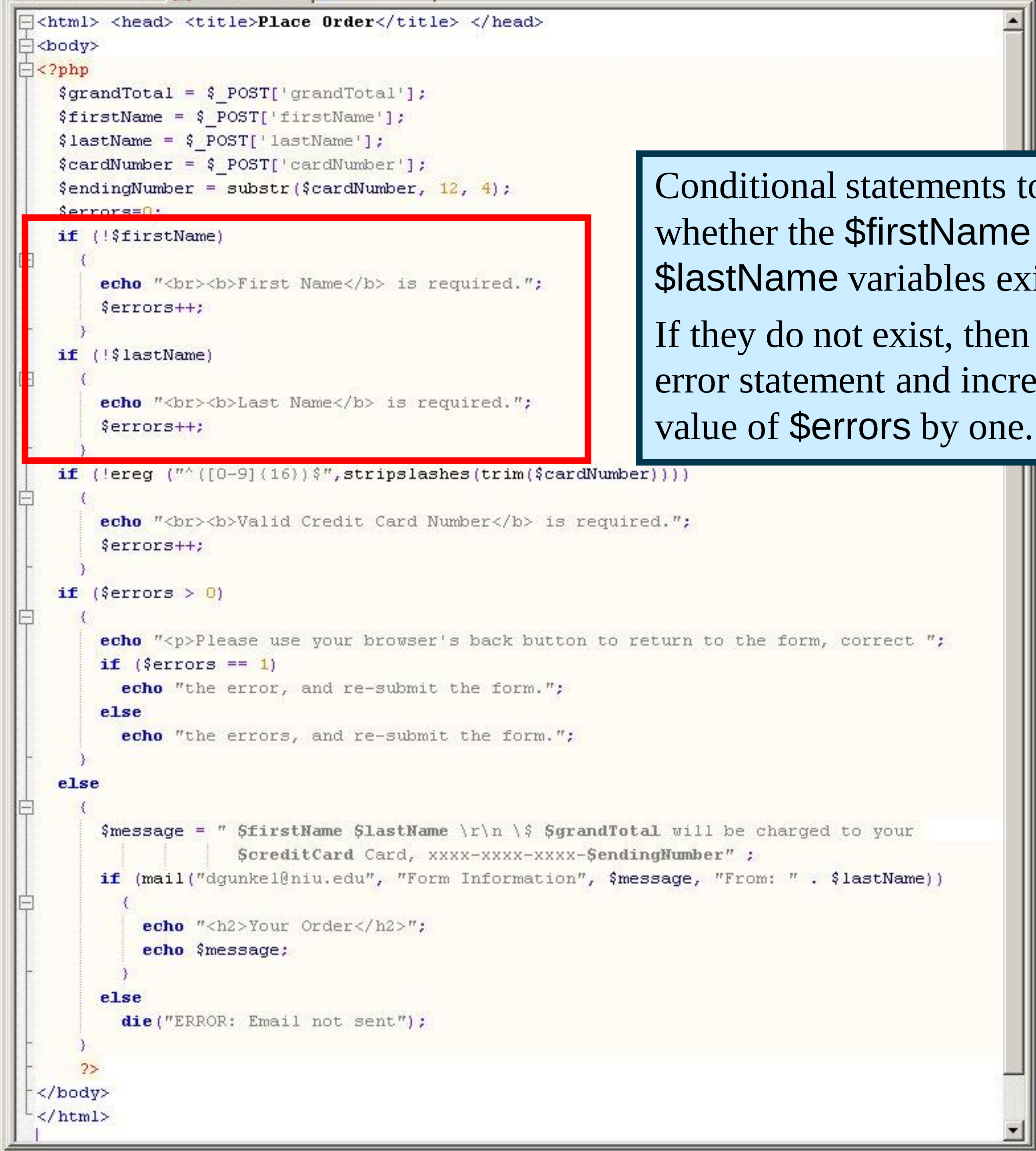


```
<html> <head> <title>Place Order</title> </head>
<body>
<?php
  $grandTotal = $_POST['grandTotal'];
  $firstName = $_POST['firstName'];
  $lastName = $_POST['lastName'];
  $cardNumber = $_POST['cardNumber'];
  $endingNumber = substr($cardNumber, 12, 4);
  $errors=0;
  if (!$firstName)
     {
      echo "<br><b>First Name</b> is required.";
      $errors++;
     }
  if (!$lastName)
     {
      echo "<br><b>Last Name</b> is required.";
      $errors++;
     }
  if (!ereg ("^([0-9]{16})$",stripslashes(trim($card
     {
      echo "<br><b>Valid Credit Card Number</b> is r
      $errors++;
     }
  if ($errors > 0)
     {
      echo "<p>Please use your browser's back button to return to the form, correct ";
      if ($errors == 1)
        echo "the error, and re-submit the form.";
      else
        echo "the errors, and re-submit the form.";
     }
  else
     {
      $message = " $firstName $lastName \r\n \$ $grandTotal will be charged to your
                          $creditCard Card, xxxx-xxxx-xxxx-$endingNumber" ;
      if (mail("dgunkel@niu.edu", "Form Information", $message, "From: " . $lastName))
        {
          echo "<h2>Your Order</h2>";
          echo $message;
        }
      else
        die("ERROR: Email not sent");
     }
    ?>
</body>
</html>
```

Initialize $endingNumber by applying the substr( ) method to the value of $cardNumber.

This extracts the last 4 digits of the credit card number. We begin the extraction at the 12th character and remove 4 digits.

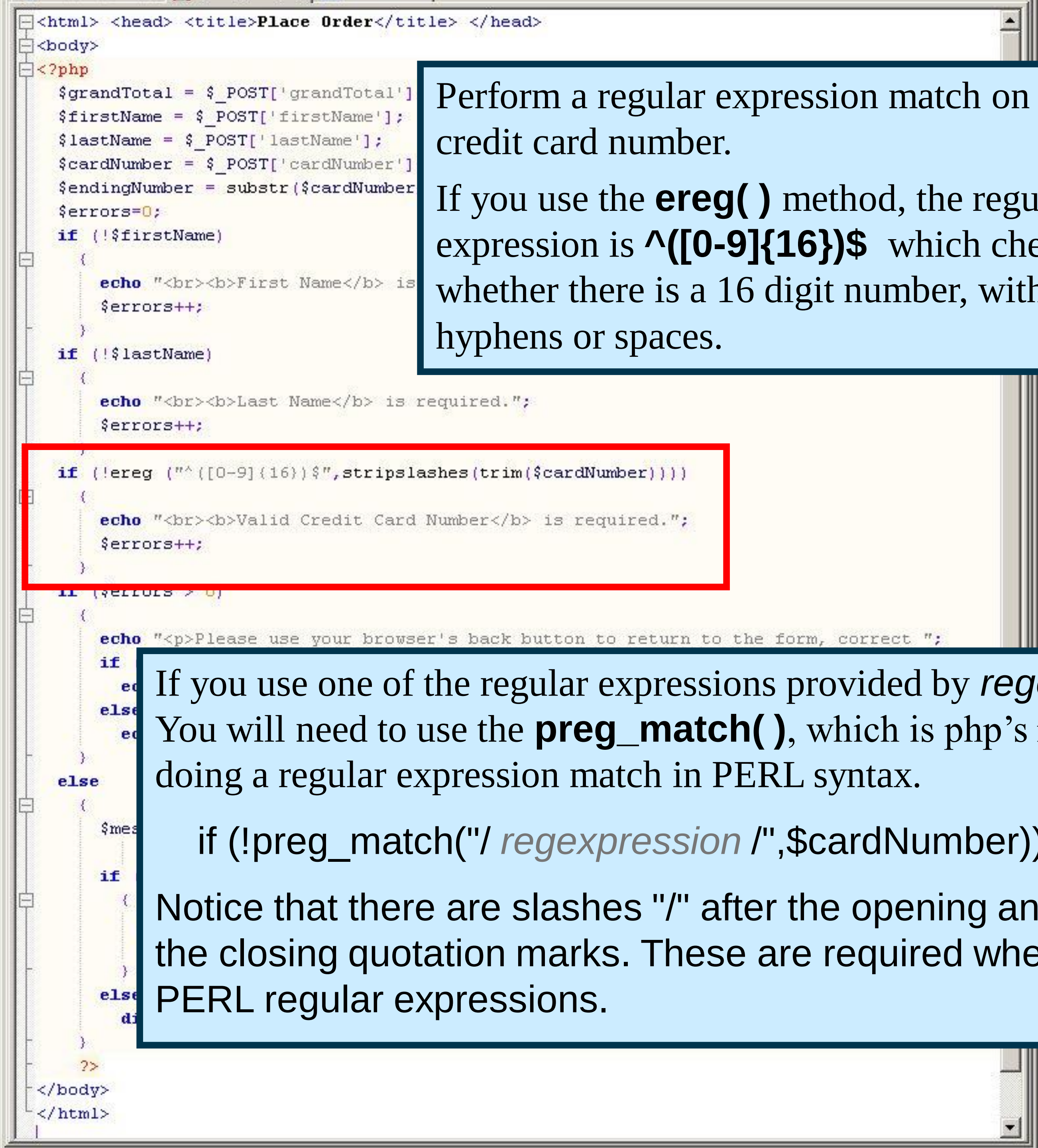
Initialize the value of the $errors variable to be 0; begin with no errors.



```
<html> <head> <title>Place Order</title> </head>
<body>
<?php
  $grandTotal = $_POST['grandTotal'];
  $firstName = $_POST['firstName'];
  $lastName = $_POST['lastName'];
  $cardNumber = $_POST['cardNumber'];
  $endingNumber = substr($cardNumber, 12, 4);
  $errors=0;
  if (!$firstName)
    {
      echo "<br><b>First Name</b> is required.";
      $errors++;
    }
  if (!$lastName)
    {
      echo "<br><b>Last Name</b> is required.";
      $errors++;
    }
  if (!ereg ("^([0-9]{16})$",stripslashes(trim($cardNumber))))
    {
      echo "<br><b>Valid Credit Card Number</b> is required.";
      $errors++;
    }
  if ($errors > 0)
    {
      echo "<p>Please use your browser's back button to return to the form, correct ";
      if ($errors == 1)
        echo "the error, and re-submit the form.";
      else
        echo "the errors, and re-submit the form.";
    }
  else
    {
      $message = " $firstName $lastName \r\n \$ $grandTotal will be charged to your
                 $creditCard Card, xxxx-xxxx-xxxx-$endingNumber" ;
      if (mail("dgunkel@niu.edu", "Form Information", $message, "From: " . $lastName))
        {
          echo "<h2>Your Order</h2>";
          echo $message;
        }
      else
        die("ERROR: Email not sent");
    }
    ?>
</body>
</html>
```

Conditional statements to check whether the $firstName and $lastName variables exist or not.

If they do not exist, then echo an error statement and increment the value of $errors by one.



```
<html> <head> <title>Place Order</title> </head>
<body>
<?php
  $grandTotal = $_POST['grandTotal']
  $firstName = $_POST['firstName'];
  $lastName = $_POST['lastName'];
  $cardNumber = $_POST['cardNumber']
  $endingNumber = substr($cardNumber
  $errors=0;
  if (!$firstName)
    {
      echo "<br><b>First Name</b> is
      $errors++;
    }
  if (!$lastName)
    {
      echo "<br><b>Last Name</b> is required.";
      $errors++;
    }
  if (!ereg ("^([0-9]{16})$",stripslashes(trim($cardNumber))))
    {
      echo "<br><b>Valid Credit Card Number</b> is required.";
      $errors++;
    }
  if ($errors > 0)
    {
      echo "<p>Please use your browser's back button to return to the form, correct ";
      if
        ec
      else
        ec
    }
  else
    {
      $mes

      if
        {

        }
      else
        di
    }
  ?>
</body>
</html>
```

Perform a regular expression match on the credit card number.

If you use the **ereg( )** method, the regular expression is **^([0-9]{16})$** which checks whether there is a 16 digit number, without hyphens or spaces.

If you use one of the regular expressions provided by *regexlib.com*, You will need to use the **preg_match( )**, which is php’s method for doing a regular expression match in PERL syntax.

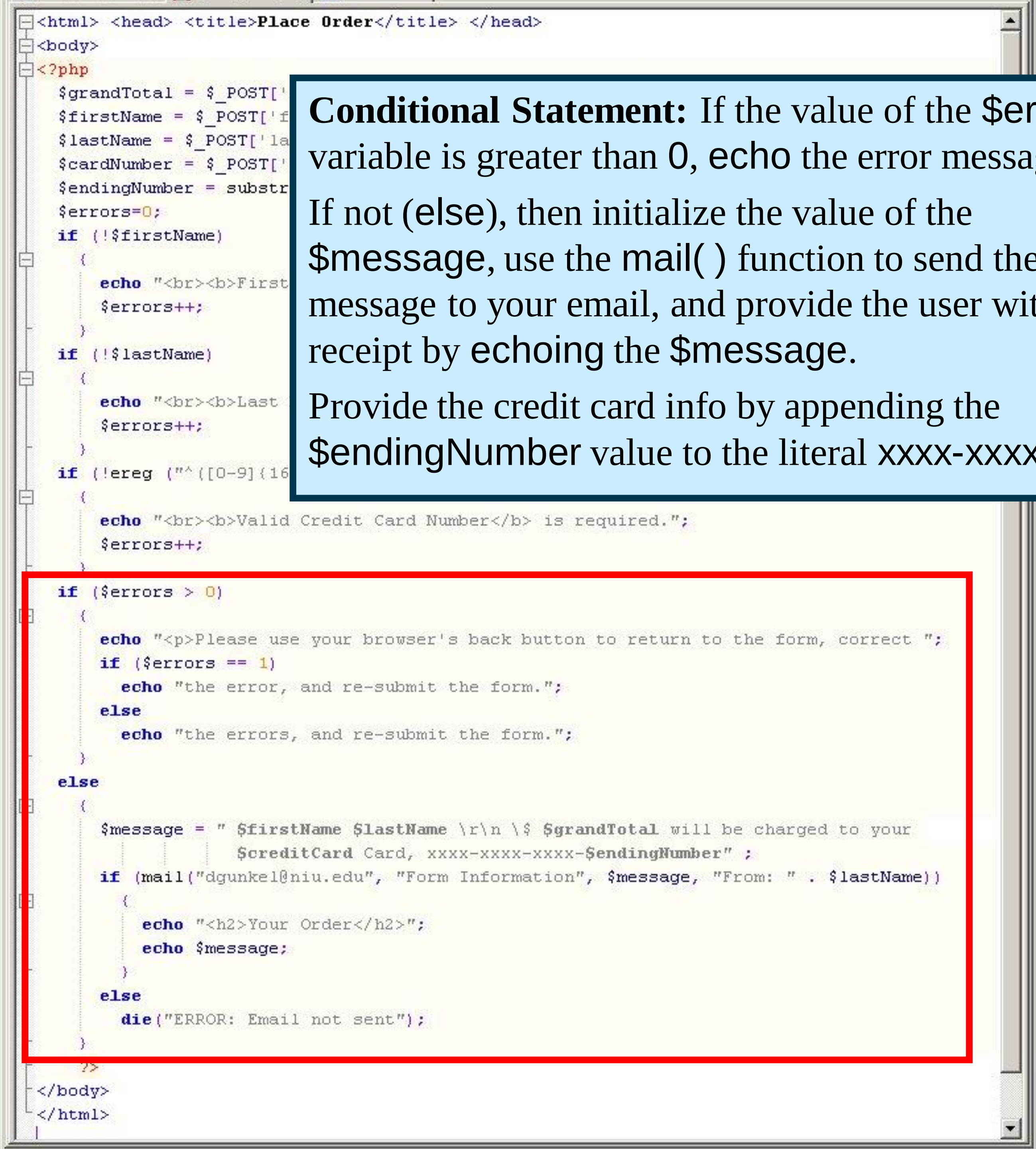
if (!preg_match("/ *regexpression* /",$cardNumber))

Notice that there are slashes "/" after the opening and before the closing quotation marks. These are required when using PERL regular expressions.

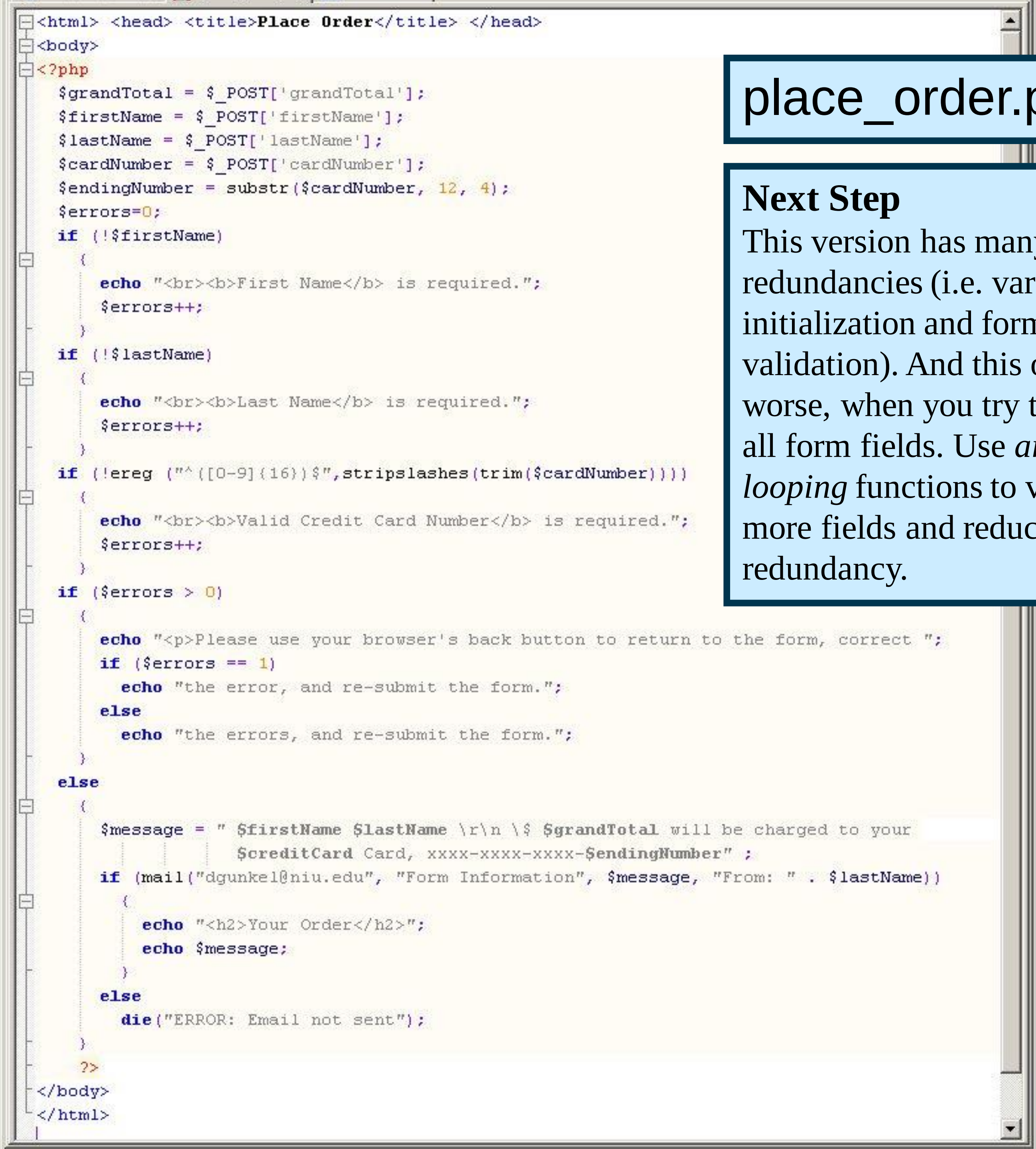
Conditional Statement: If the value of the $errors variable is greater than 0, echo the error message.

If not (else), then initialize the value of the $message, use the mail( ) function to send the message to your email, and provide the user with a receipt by echoing the $message.

Provide the credit card info by appending the $endingNumber value to the literal xxxx-xxxx-xxxx-



```
<html> <head> <title>Place Order</title> </head>
<body>
<?php
  $grandTotal = $_POST['
  $firstName = $_POST['f
  $lastName = $_POST['la
  $cardNumber = $_POST['
  $endingNumber = substr
  $errors=0;
  if (!$firstName)
     {
       echo "<br><b>First
       $errors++;
     }
  if (!$lastName)
     {
       echo "<br><b>Last
       $errors++;
     }
  if (!ereg ("^([0-9]{16
     {
       echo "<br><b>Valid Credit Card Number</b> is required.";
       $errors++;
     }
  if ($errors > 0)
     {
       echo "<p>Please use your browser's back button to return to the form, correct ";
       if ($errors == 1)
         echo "the error, and re-submit the form.";
       else
         echo "the errors, and re-submit the form.";
     }
  else
     {
       $message = " $firstName $lastName \r\n \$ $grandTotal will be charged to your
                    $creditCard Card, xxxx-xxxx-xxxx-$endingNumber" ;
       if (mail("dgunkel@niu.edu", "Form Information", $message, "From: " . $lastName))
         {
           echo "<h2>Your Order</h2>";
           echo $message;
         }
       else
         die("ERROR: Email not sent");
     }
     ?>
</body>
</html>
```



```
<html> <head> <title>Place Order</title> </head>
<body>
<?php
  $grandTotal = $_POST['grandTotal'];
  $firstName = $_POST['firstName'];
  $lastName = $_POST['lastName'];
  $cardNumber = $_POST['cardNumber'];
  $endingNumber = substr($cardNumber, 12, 4);
  $errors=0;
  if (!$firstName)
    {
      echo "<br><b>First Name</b> is required.";
      $errors++;
    }
  if (!$lastName)
    {
      echo "<br><b>Last Name</b> is required.";
      $errors++;
    }
  if (!ereg ("^([0-9]{16})$",stripslashes(trim($cardNumber))))
    {
      echo "<br><b>Valid Credit Card Number</b> is required.";
      $errors++;
    }
  if ($errors > 0)
    {
      echo "<p>Please use your browser's back button to return to the form, correct ";
      if ($errors == 1)
        echo "the error, and re-submit the form.";
      else
        echo "the errors, and re-submit the form.";
    }
  else
    {
      $message = " $firstName $lastName \r\n \$ $grandTotal will be charged to your
                  $creditCard Card, xxxx-xxxx-xxxx-$endingNumber" ;
      if (mail("dgunkel@niu.edu", "Form Information", $message, "From: " . $lastName))
        {
          echo "<h2>Your Order</h2>";
          echo $message;
        }
      else
        die("ERROR: Email not sent");
    }
    ?>
</body>
</html>
```

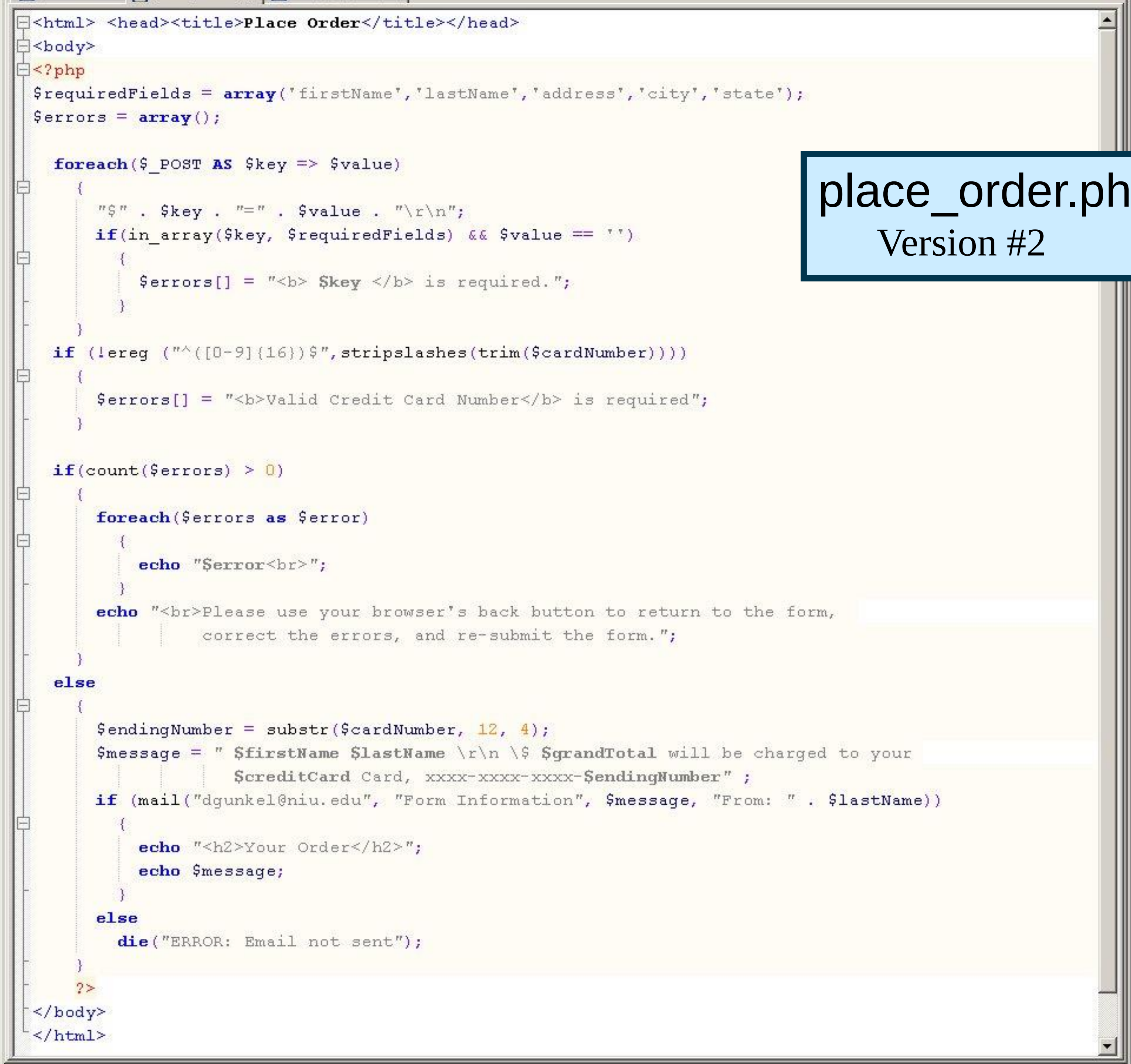
place_order.php

Next Step

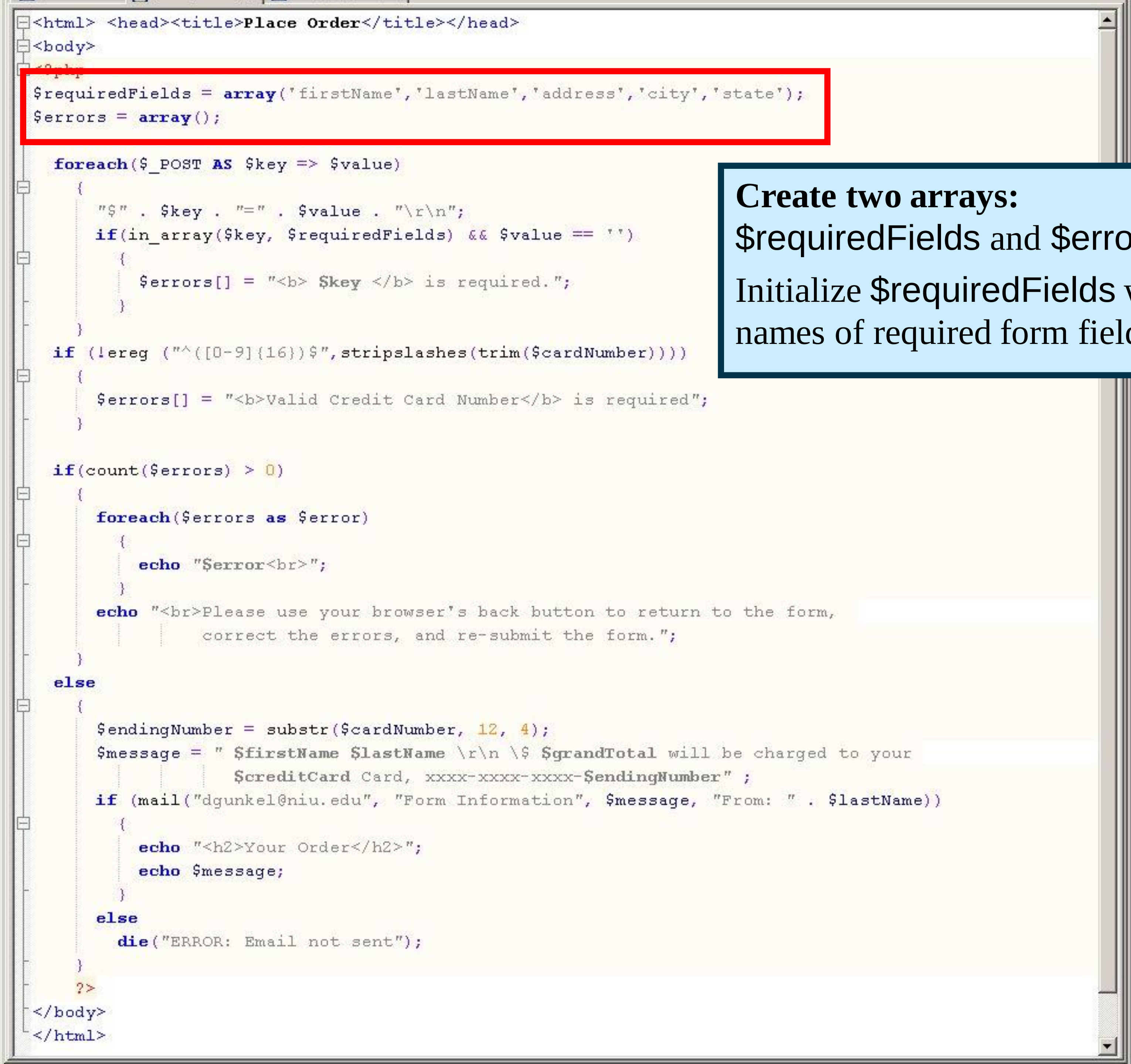
This version has many code redundancies (i.e. variable initialization and form field validation). And this only gets worse, when you try to validate all form fields. Use *arrays* and *looping* functions to validate more fields and reduce redundancy.

place_order.php

Version #2



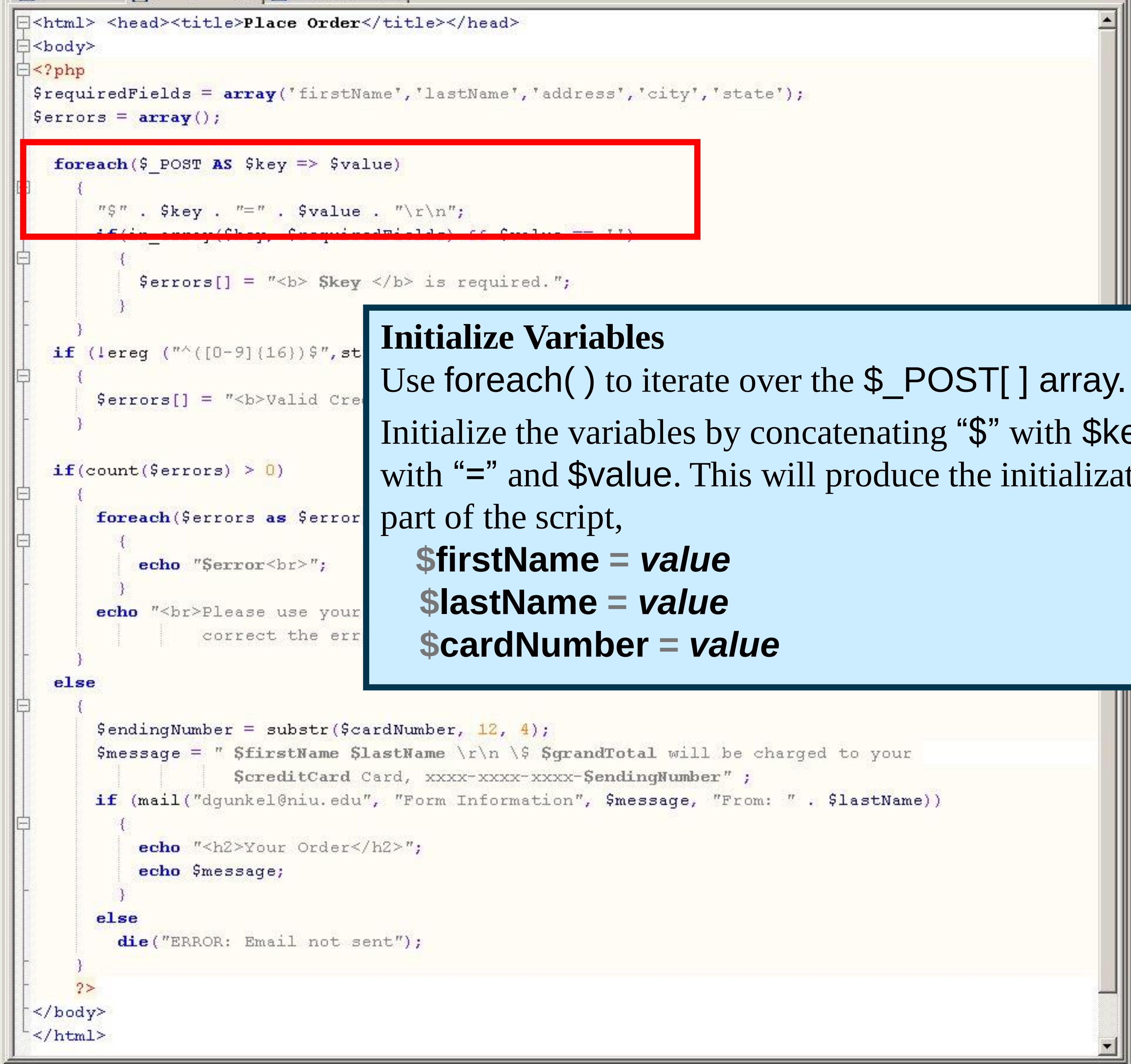
```
<html> <head><title>Place Order</title></head>
<body>
<?php
$requiredFields = array('firstName','lastName','address','city','state');
$errors = array();

  foreach($_POST AS $key => $value)
    {
      "$" . $key . "=" . $value . "\r\n";
      if(in_array($key, $requiredFields) && $value == '')
        {
          $errors[] = "<b> $key </b> is required.";
        }
    }
  if (!ereg ("^([0-9]{16})$",stripslashes(trim($cardNumber))))
    {
      $errors[] = "<b>Valid Credit Card Number</b> is required";
    }

  if(count($errors) > 0)
    {
      foreach($errors as $error)
        {
          echo "$error<br>";
        }
      echo "<br>Please use your browser's back button to return to the form,
                correct the errors, and re-submit the form.";
    }
  else
    {
      $endingNumber = substr($cardNumber, 12, 4);
      $message = " $firstName $lastName \r\n \$ $grandTotal will be charged to your
                   $creditCard Card, xxxx-xxxx-xxxx-$endingNumber" ;
      if (mail("dgunkel@niu.edu", "Form Information", $message, "From: " . $lastName))
        {
          echo "<h2>Your Order</h2>";
          echo $message;
        }
      else
        die("ERROR: Email not sent");
    }
    ?>
</body>
</html>
```



```
<html> <head><title>Place Order</title></head>
<body>
<?php
$requiredFields = array('firstName','lastName','address','city','state');
$errors = array();

  foreach($_POST AS $key => $value)
    {
      "$" . $key . "=" . $value . "\r\n";
      if(in_array($key, $requiredFields) && $value == '')
        {
          $errors[] = "<b> $key </b> is required.";
        }
    }
  if (!ereg ("^([0-9]{16})$",stripslashes(trim($cardNumber))))
    {
      $errors[] = "<b>Valid Credit Card Number</b> is required";
    }

  if(count($errors) > 0)
    {
      foreach($errors as $error)
        {
          echo "$error<br>";
        }
      echo "<br>Please use your browser's back button to return to the form,
              correct the errors, and re-submit the form.";
    }
  else
    {
      $endingNumber = substr($cardNumber, 12, 4);
      $message = " $firstName $lastName \r\n \$ $grandTotal will be charged to your
                 $creditCard Card, xxxx-xxxx-xxxx-$endingNumber" ;
      if (mail("dgunkel@niu.edu", "Form Information", $message, "From: " . $lastName))
        {
          echo "<h2>Your Order</h2>";
          echo $message;
        }
      else
        die("ERROR: Email not sent");
    }
    ?>
</body>
</html>
```

Create two arrays: $requiredFields and $errors

Initialize $requiredFields with the names of required form fields



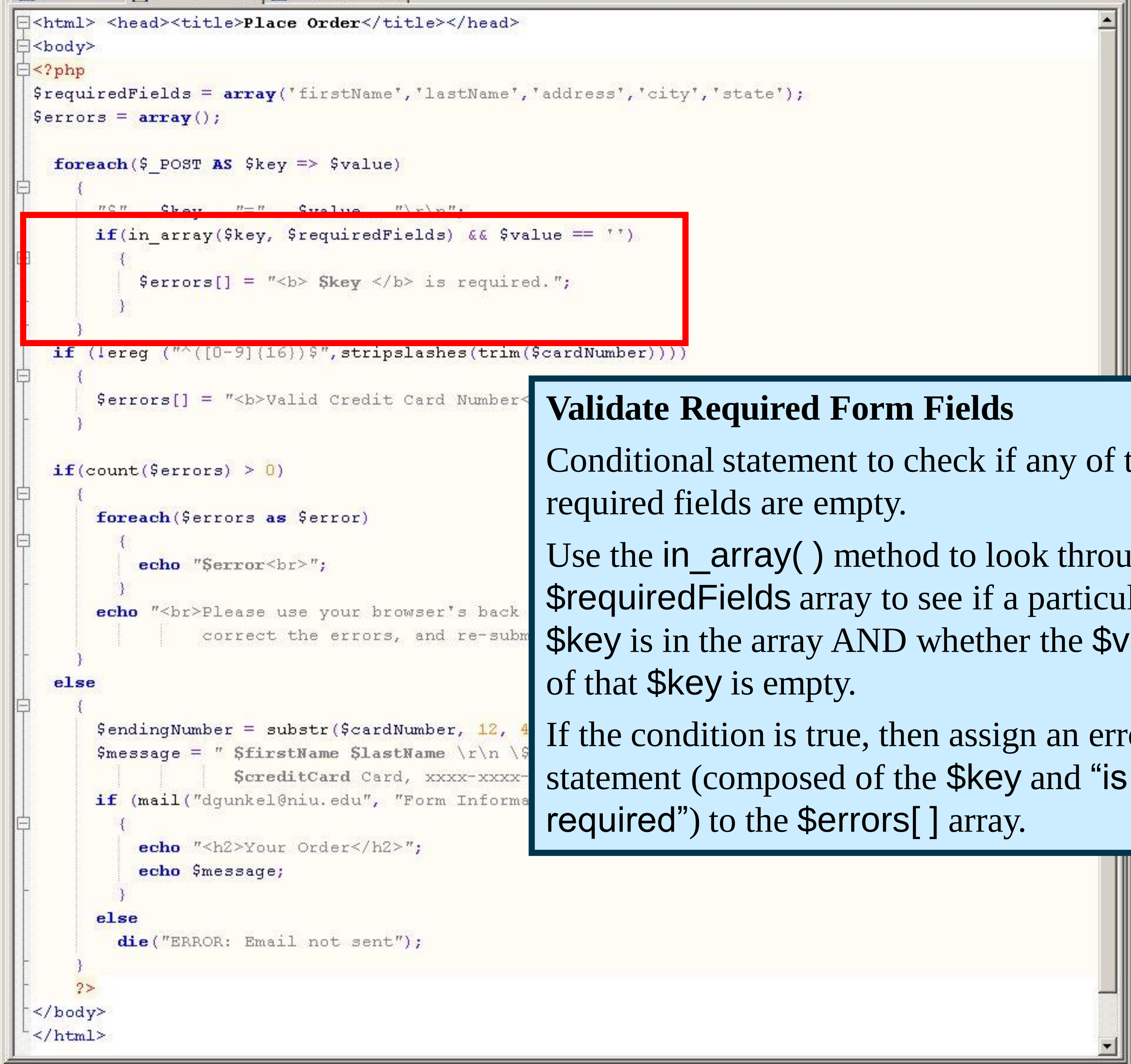
```
<html> <head><title>Place Order</title></head>
<body>
<?php
$requiredFields = array('firstName','lastName','address','city','state');
$errors = array();

  foreach($_POST AS $key => $value)
    {
      "$" . $key . "=" . $value . "\r\n";
      if(in_array($key, $requiredFields) && $value == '')
        {
          $errors[] = "<b> $key </b> is required.";
        }
    }
  if (!ereg ("^([0-9]{16})$",st
    {
      $errors[] = "<b>Valid Cre
    }

  if(count($errors) > 0)
    {
      foreach($errors as $error
        {
          echo "$error<br>";
        }
      echo "<br>Please use your
                  correct the err
    }
  else
    {
      $endingNumber = substr($cardNumber, 12, 4);
      $message = " $firstName $lastName \r\n \$ $grandTotal will be charged to your
                  $creditCard Card, xxxx-xxxx-xxxx-$endingNumber" ;
      if (mail("dgunkel@niu.edu", "Form Information", $message, "From: " . $lastName))
        {
          echo "<h2>Your Order</h2>";
          echo $message;
        }
      else
        die("ERROR: Email not sent");
    }
    ?>
</body>
</html>
```

Initialize Variables

Use foreach( ) to iterate over the $_POST[ ] array.

Initialize the variables by concatenating "$" with $key with "=" and $value. This will produce the initialization part of the script,

$firstName = *value*
$lastName = *value*
$cardNumber = *value*



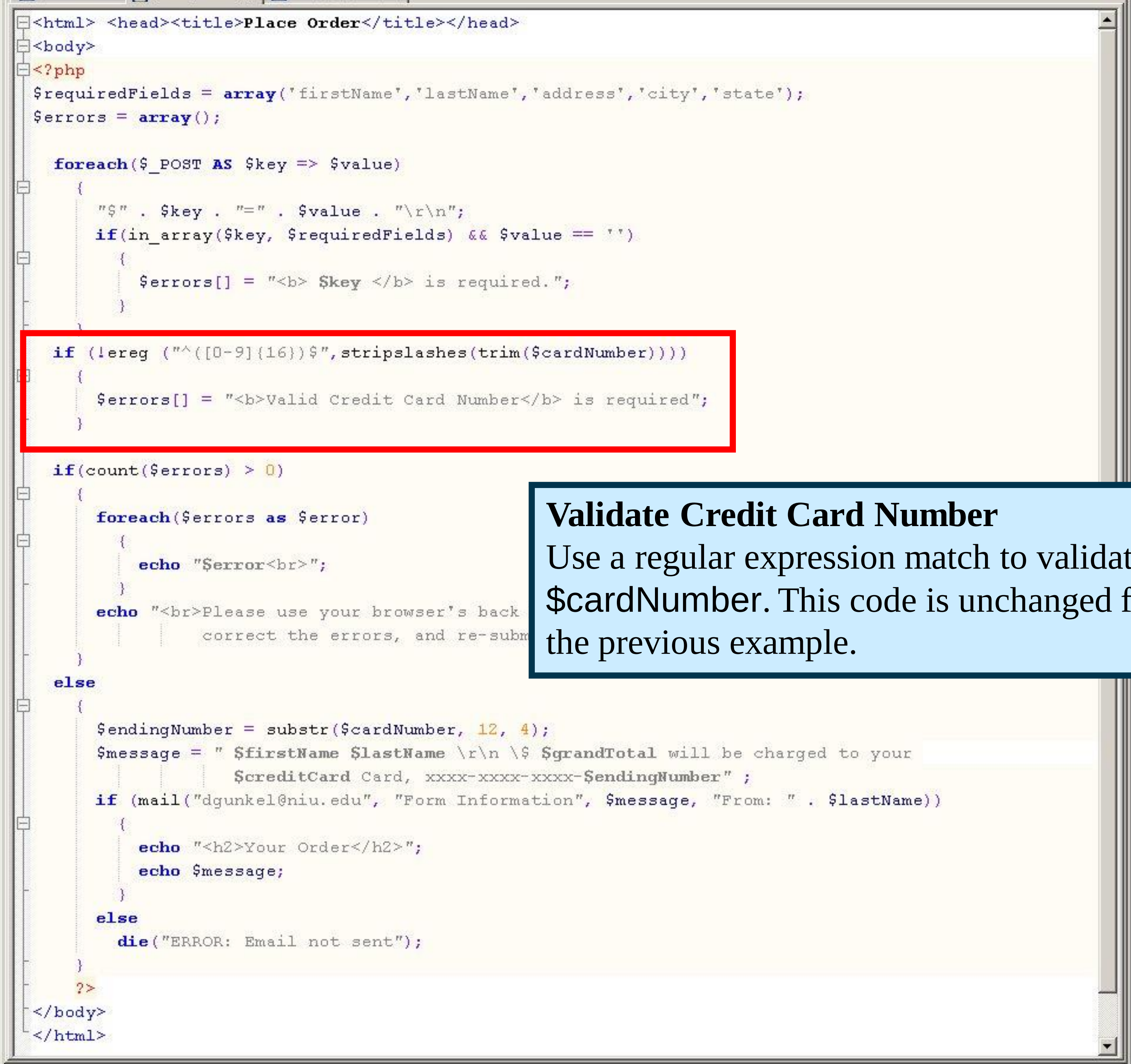
```
<html> <head><title>Place Order</title></head>
<body>
<?php
$requiredFields = array('firstName','lastName','address','city','state');
$errors = array();

  foreach($_POST AS $key => $value)
    {
      "$"   $key   "="   $value   "\r\n";
      if(in_array($key, $requiredFields) && $value == '')
        {
          $errors[] = "<b> $key </b> is required.";
        }
    }
  if (!ereg ("^([0-9]{16})$",stripslashes(trim($cardNumber))))
    {
      $errors[] = "<b>Valid Credit Card Number<
    }

  if(count($errors) > 0)
    {
      foreach($errors as $error)
        {
          echo "$error<br>";
        }
      echo "<br>Please use your browser's back
                  correct the errors, and re-subm
    }
  else
    {
      $endingNumber = substr($cardNumber, 12, 4
      $message = " $firstName $lastName \r\n \$
                        $creditCard Card, xxxx-xxxx-
      if (mail("dgunkel@niu.edu", "Form Informa
        {
          echo "<h2>Your Order</h2>";
          echo $message;
        }
      else
        die("ERROR: Email not sent");
    }
    ?>
</body>
</html>
```

Validate Required Form Fields

Conditional statement to check if any of the required fields are empty.

Use the in_array( ) method to look through the $requiredFields array to see if a particular $key is in the array AND whether the $value of that $key is empty.

If the condition is true, then assign an error statement (composed of the $key and “is required”) to the $errors[ ] array.



```
<html> <head><title>Place Order</title></head>
<body>
<?php
$requiredFields = array('firstName','lastName','address','city','state');
$errors = array();

  foreach($_POST AS $key => $value)
    {
      "$" . $key . "=" . $value . "\r\n";
      if(in_array($key, $requiredFields) && $value == '')
        {
          $errors[] = "<b> $key </b> is required.";
        }
    }
  if (!ereg ("^([0-9]{16})$",stripslashes(trim($cardNumber))))
    {
      $errors[] = "<b>Valid Credit Card Number</b> is required";
    }
  if(count($errors) > 0)
    {
      foreach($errors as $error)
        {
          echo "$error<br>";
        }
      echo "<br>Please use your browser's back
                correct the errors, and re-subm
    }
  else
    {
      $endingNumber = substr($cardNumber, 12, 4);
      $message = " $firstName $lastName \r\n \$ $grandTotal will be charged to your
                   $creditCard Card, xxxx-xxxx-xxxx-$endingNumber" ;
      if (mail("dgunkel@niu.edu", "Form Information", $message, "From: " . $lastName))
        {
          echo "<h2>Your Order</h2>";
          echo $message;
        }
      else
        die("ERROR: Email not sent");
    }
    ?>
</body>
</html>
```

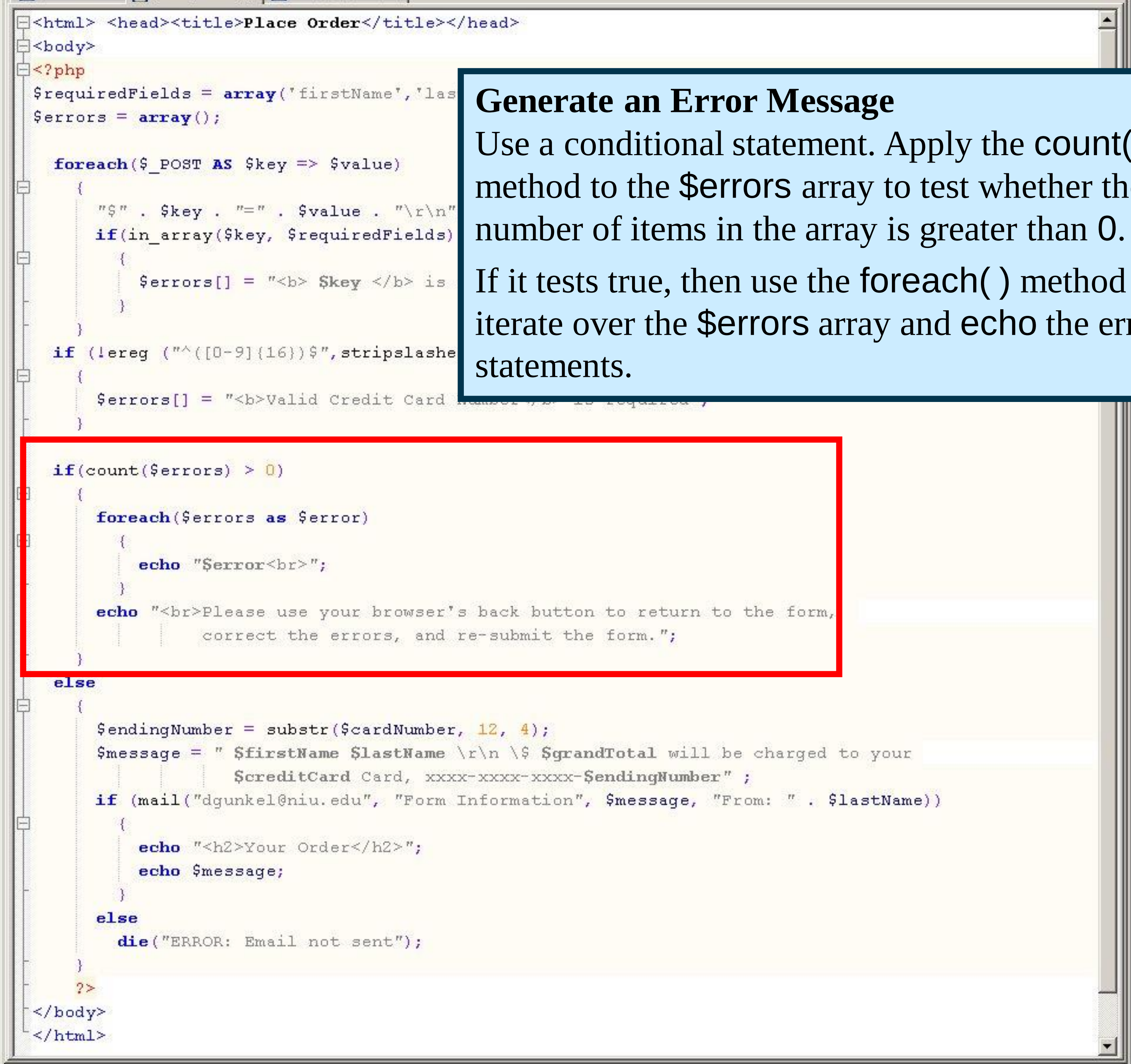
Validate Credit Card Number

Use a regular expression match to validate $cardNumber. This code is unchanged from the previous example.

Generate an Error Message

Use a conditional statement. Apply the count( ) method to the $errors array to test whether the number of items in the array is greater than 0.

If it tests true, then use the foreach( ) method to iterate over the $errors array and echo the error statements.

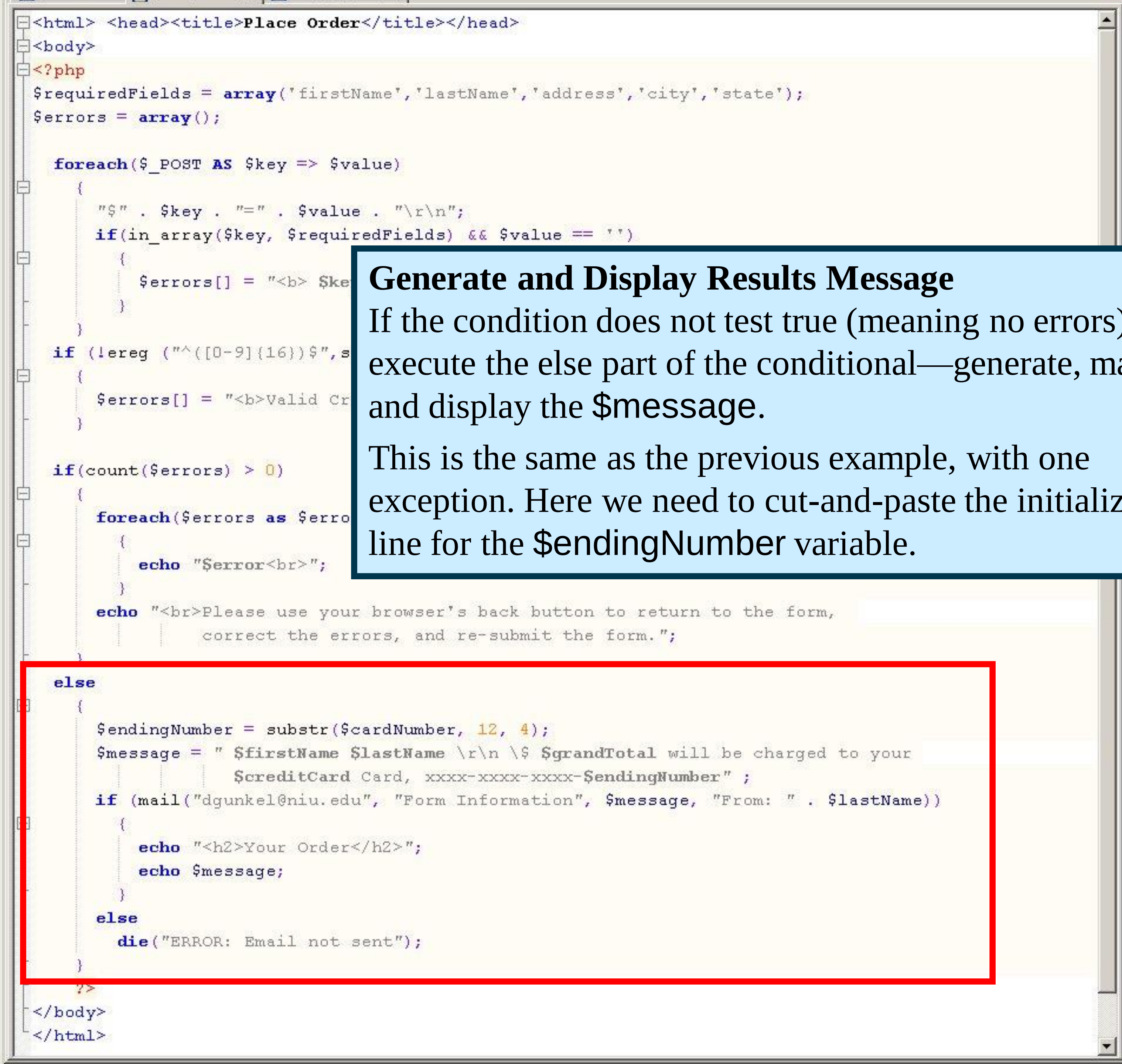


```
<html> <head><title>Place Order</title></head>
<body>
<?php
$requiredFields = array('firstName','las
$errors = array();

  foreach($_POST AS $key => $value)
    {
      "$" . $key . "=" . $value . "\r\n"
      if(in_array($key, $requiredFields)
        {
          $errors[] = "<b> $key </b> is
        }
    }
  if (!ereg ("^([0-9]{16})$",stripslashe
    {
      $errors[] = "<b>Valid Credit Card Number</b> is required";
    }

  if(count($errors) > 0)
    {
      foreach($errors as $error)
        {
          echo "$error<br>";
        }
      echo "<br>Please use your browser's back button to return to the form,
                correct the errors, and re-submit the form.";
    }
  else
    {
      $endingNumber = substr($cardNumber, 12, 4);
      $message = " $firstName $lastName \r\n \$ $grandTotal will be charged to your
                   $creditCard Card, xxxx-xxxx-xxxx-$endingNumber" ;
      if (mail("dgunkel@niu.edu", "Form Information", $message, "From: " . $lastName))
        {
          echo "<h2>Your Order</h2>";
          echo $message;
        }
      else
        die("ERROR: Email not sent");
    }
    ?>
</body>
</html>
```

Generate and Display Results Message

If the condition does not test true (meaning no errors), then execute the else part of the conditional—generate, mail, and display the $message.

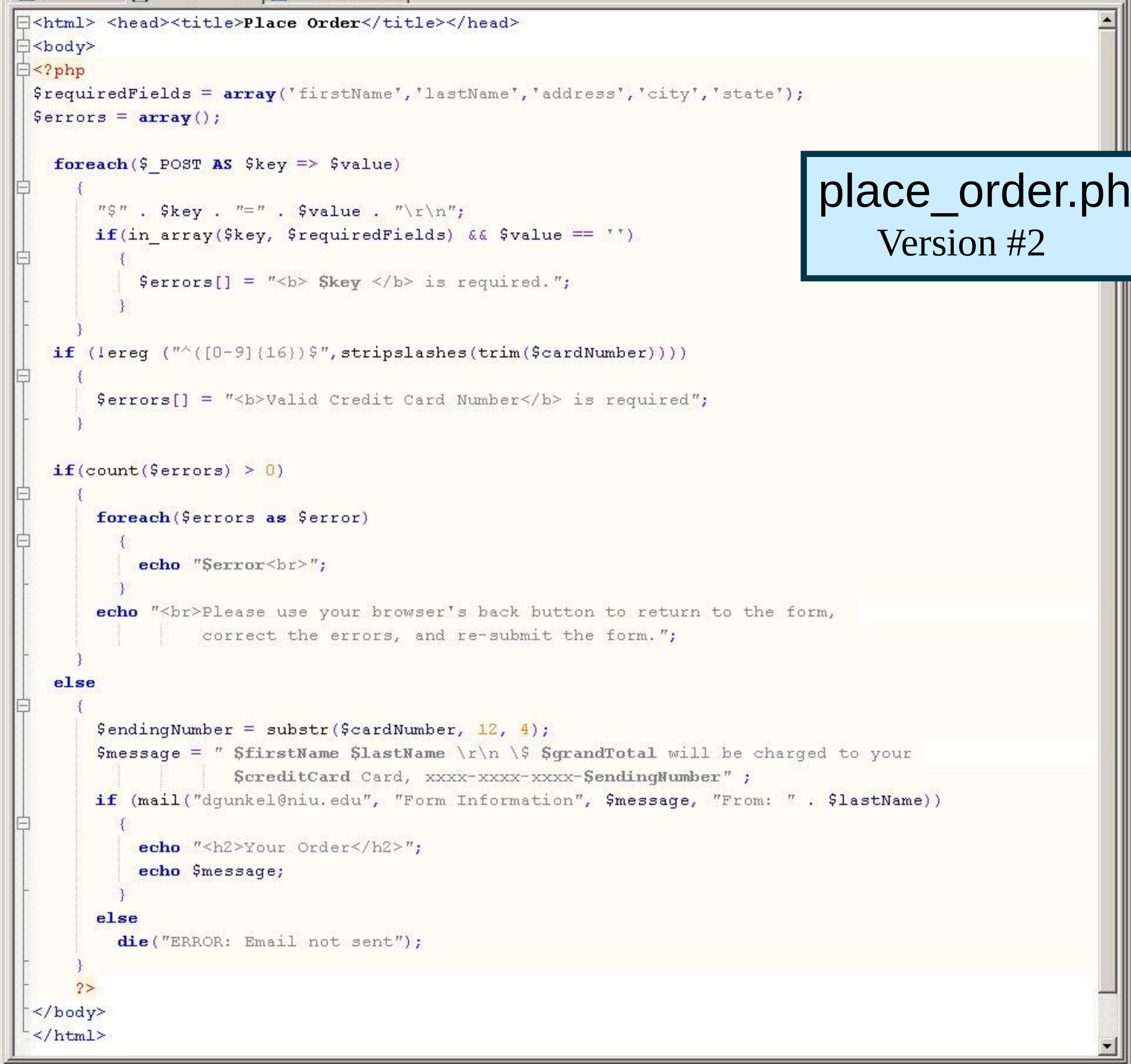
This is the same as the previous example, with one exception. Here we need to cut-and-paste the initialization line for the $endingNumber variable.



```
<html> <head><title>Place Order</title></head>
<body>
<?php
$requiredFields = array('firstName','lastName','address','city','state');
$errors = array();

  foreach($_POST AS $key => $value)
    {
      "$" . $key . "=" . $value . "\r\n";
      if(in_array($key, $requiredFields) && $value == '')
        {
          $errors[] = "<b> $ke
        }
    }
  if (!ereg ("^([0-9]{16})$",s
    {
      $errors[] = "<b>Valid Cr
    }

  if(count($errors) > 0)
    {
      foreach($errors as $erro
        {
          echo "$error<br>";
        }
      echo "<br>Please use your browser's back button to return to the form,
                correct the errors, and re-submit the form.";
    }
  else
    {
      $endingNumber = substr($cardNumber, 12, 4);
      $message = " $firstName $lastName \r\n \$ $grandTotal will be charged to your
                    $creditCard Card, xxxx-xxxx-xxxx-$endingNumber" ;
      if (mail("dgunkel@niu.edu", "Form Information", $message, "From: " . $lastName))
        {
          echo "<h2>Your Order</h2>";
          echo $message;
        }
      else
        die("ERROR: Email not sent");
    }
  ?>
</body>
</html>
```

place_order.php

Version #2



```
<html> <head><title>Place Order</title></head>
<body>
<?php
$requiredFields = array('firstName','lastName','address','city','state');
$errors = array();

  foreach($_POST AS $key => $value)
    {
      "$" . $key . "=" . $value . "\r\n";
      if(in_array($key, $requiredFields) && $value == '')
        {
          $errors[] = "<b> $key </b> is required.";
        }
    }
  if (!ereg ("^([0-9]{16})$",stripslashes(trim($cardNumber))))
    {
      $errors[] = "<b>Valid Credit Card Number</b> is required";
    }

  if(count($errors) > 0)
    {
      foreach($errors as $error)
        {
          echo "$error<br>";
        }
      echo "<br>Please use your browser's back button to return to the form,
                correct the errors, and re-submit the form.";
    }
  else
    {
      $endingNumber = substr($cardNumber, 12, 4);
      $message = " $firstName $lastName \r\n \$ $grandTotal will be charged to your
                     $creditCard Card, xxxx-xxxx-xxxx-$endingNumber" ;
      if (mail("dgunkel@niu.edu", "Form Information", $message, "From: " . $lastName))
        {
          echo "<h2>Your Order</h2>";
          echo $message;
        }
      else
        die("ERROR: Email not sent");
    }
    ?>
</body>
</html>
```

Next Step

- Methods for Reducing Code Redundancy
  - Arrays with looping function
  - User Defined Functions*
  - Object Orient Programming – Classes

Functions

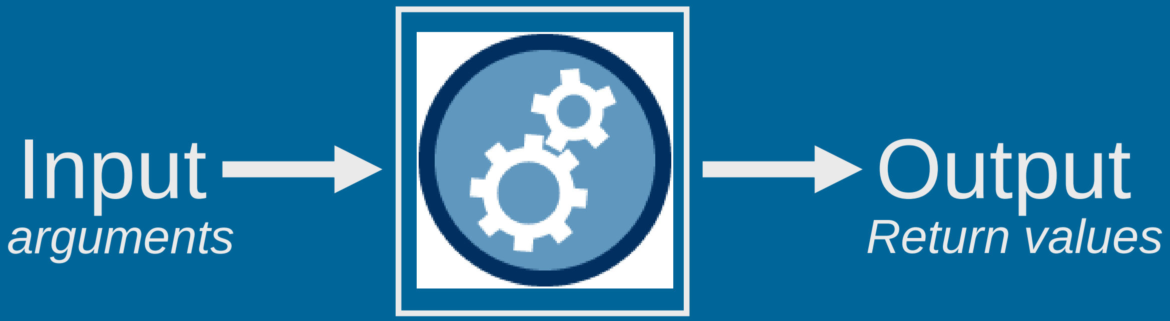
- Two kinds
  - PHP built-in Functions
    - rand( )
    - strlen( )
    - array_slice( )
  - User Defined Functions
    - Customized Function
    - Independent, reusable code packages

Functions

- Purpose
  - Reduce Code Redundancy
  - Reusability – write once, use many times
  - Easier to debug
  - Code abstraction

Functions

- Terminology



Input

arguments

Output

Return values

Function

Functions

- *Defining* a Function

Basic Structure

```
function  name(arguments)
  {
   statements you want to execute
  }
```

Example

```
function  compute_area($height, $width)
  {
    return $height * $width;
  }
```

Functions

- *Invoking* or *Calling* a Function
  - Both pre-defined and user-defined functions are called in the same way
    - Provide function name
    - Provide arguments, if necessary
  - Example

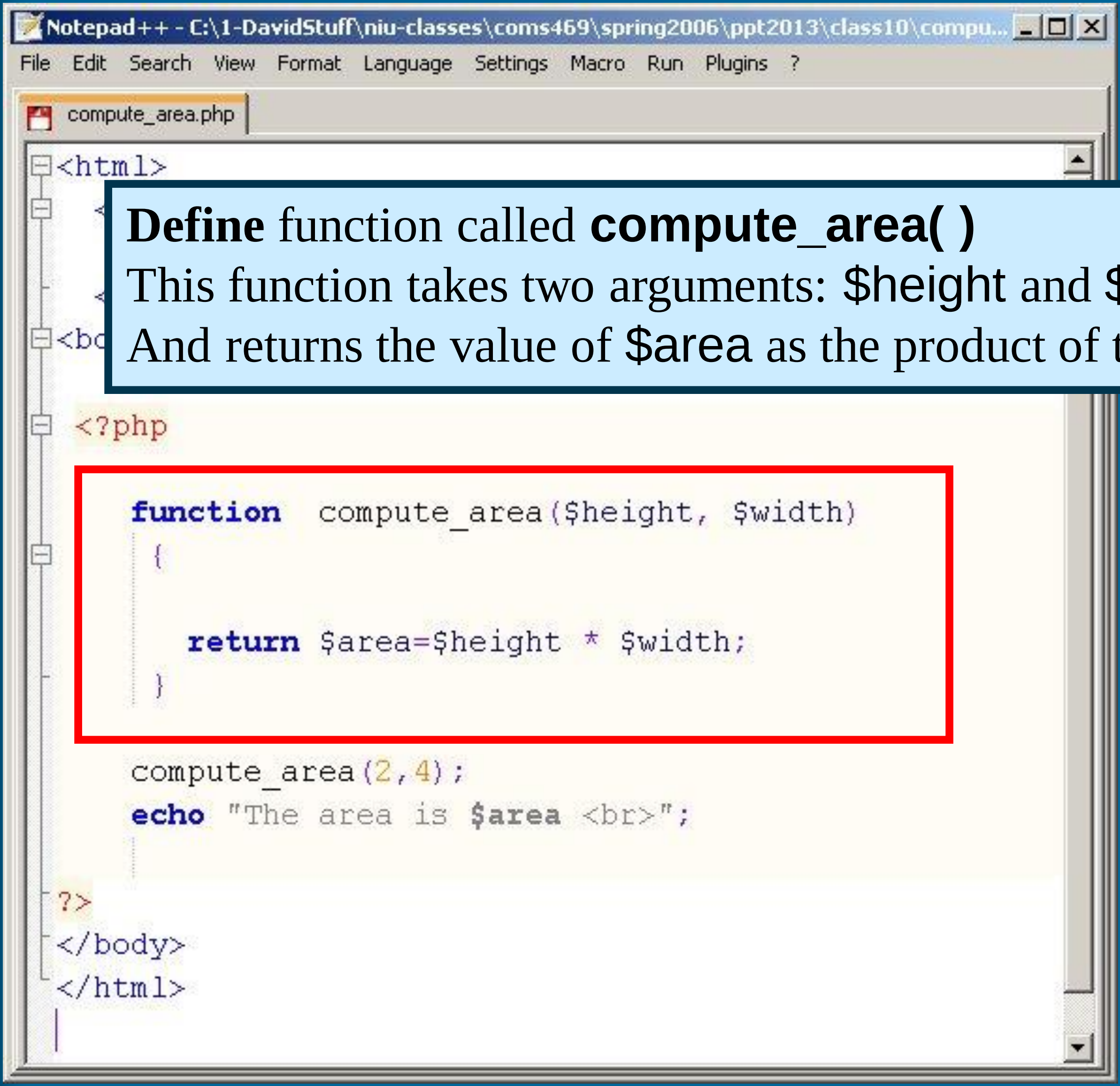
```
compute_area(2, 4);
```

Invoke the `compute_area` function, which is passed the arguments 2 and 4.

Functions

- Variables and Scope
  - Scope = the range of a variable’s visibility within the space of a php program
  - Two types:
    - *Global variables* – available across entire program
    - *Local variables* – only available inside a function
  - With User Defined Functions
    - All variables are *local* by default; this bounding of variables is deliberate because it maintains program separation
    - Change this by using the global keyword inside the function

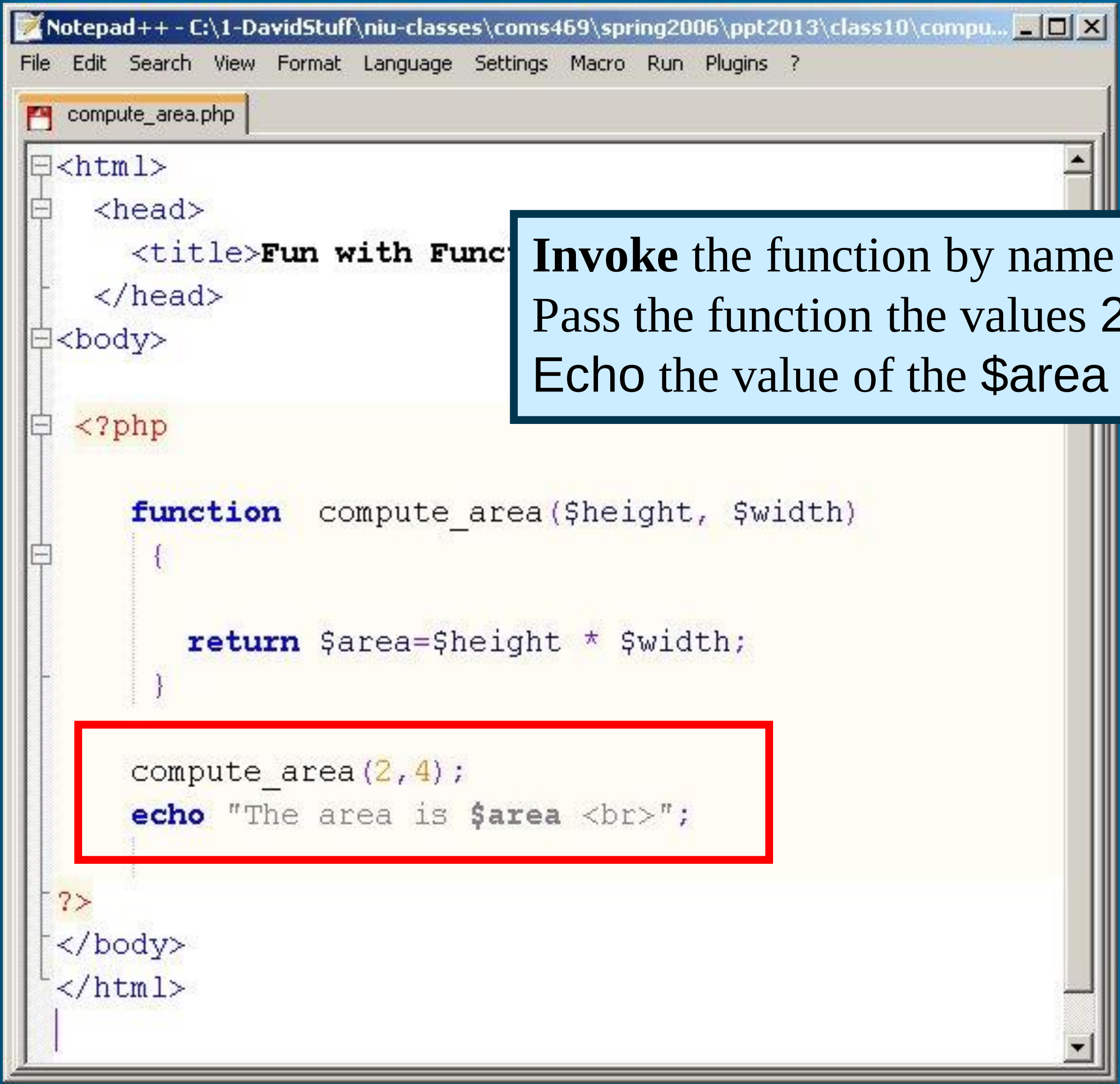
```
global  $name, $email, $age
```


Notepad++ - C:\1-DavidStuff\niu-classes\coms469\spring2006\ppt2013\class10\compu...
File Edit Search View Format Language Settings Macro Run Plugins ?
compute_area.php

```
<html>
  <
  <
<bo

 <?php

   function  compute_area($height, $width)
    {

      return $area=$height * $width;
    }

   compute_area(2,4);
   echo "The area is $area <br>";

?>
</body>
</html>
```

Define function called **compute_area( )**
This function takes two arguments: $height and $width
And returns the value of $area as the product of these two values

Example – function definition and invocation
demonstrate scope (global)
demonstrate reusability


Notepad++ - C:\1-DavidStuff\niu-classes\coms469\spring2006\ppt2013\class10\compu...
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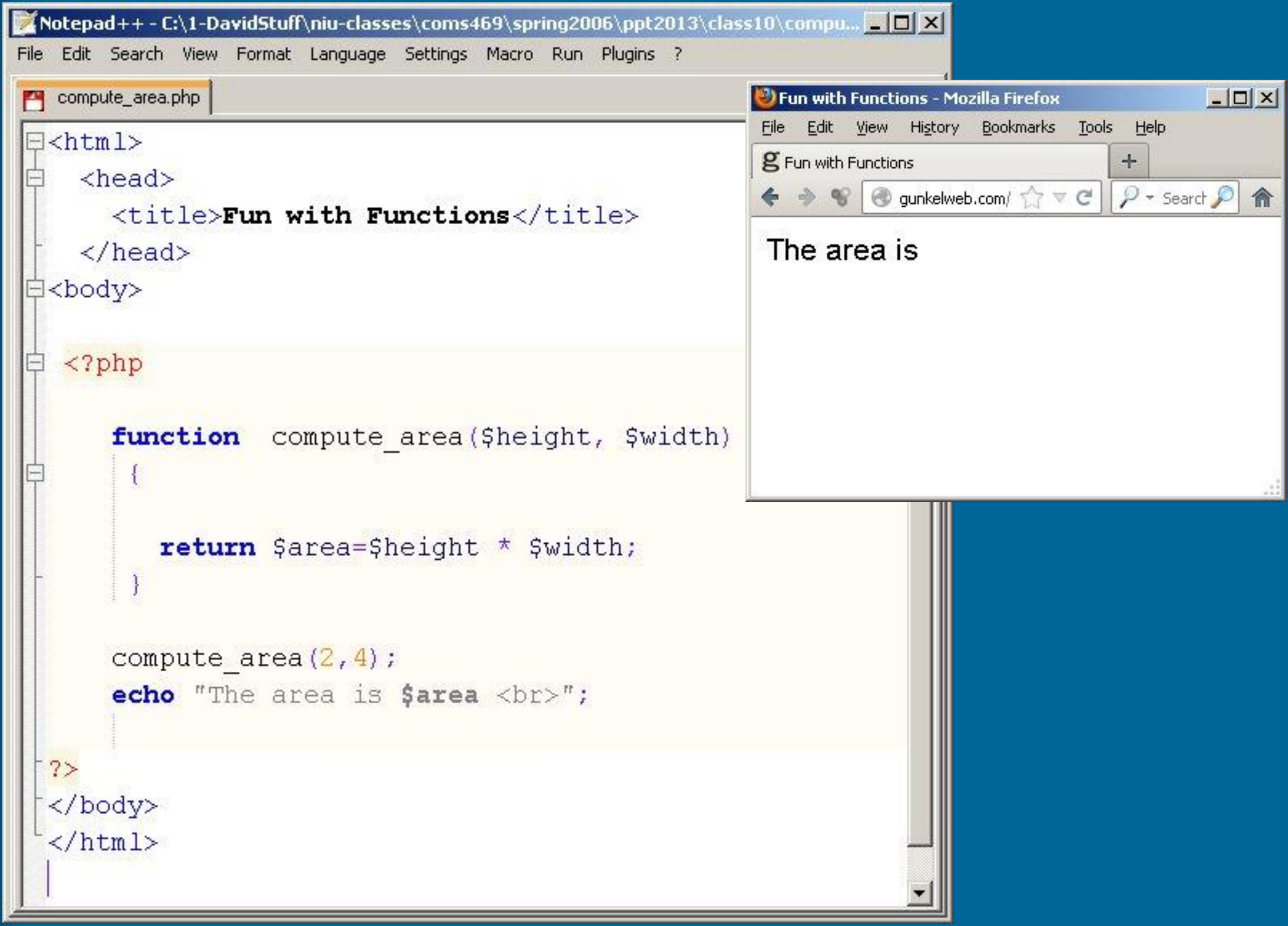
Run
Plugins
?
compute_area.php

```
<html>
  <head>
    <title>Fun with Func
  </head>
<body>

 <?php

    function  compute_area($height, $width)
    {

      return $area=$height * $width;
    }

    compute_area(2,4);
    echo "The area is $area <br>";

?>
</body>
</html>
```

Invoke the function by name

Pass the function the values 2 and 4

Echo the value of the $area



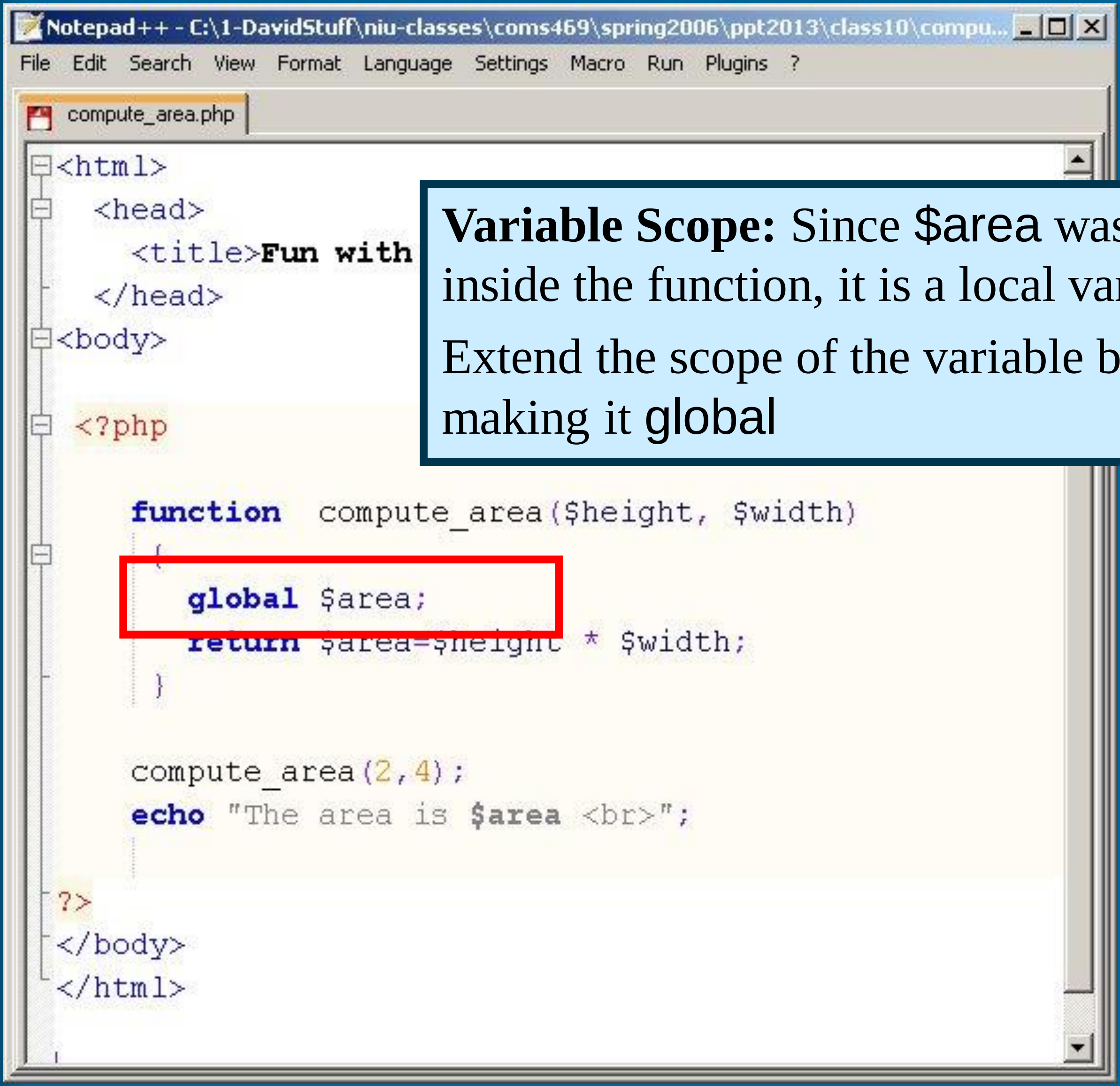
Notepad++ - C:\1-DavidStuff\niu-classes\coms469\spring2006\ppt2013\class10\compu...
File Edit Search View Format Language Settings Macro Run Plugins ?
compute_area.php
Fun with Functions - Mozilla Firefox
File Edit View History Bookmarks Tools Help
Fun with Functions
gunkelweb.com/
Search

```
<html>
  <head>
    <title>Fun with Functions</title>
  </head>
<body>

 <?php

    function  compute_area($height, $width)
     {

       return $area=$height * $width;
     }

    compute_area(2,4);
    echo "The area is $area <br>";

?>
</body>
</html>
```

```
The area is
```

Variable Scope: Since $area was defined inside the function, it is a local variable.

Extend the scope of the variable by making it global


Notepad++ - C:\1-DavidStuff\niu-classes\coms469\spring2006\ppt2013\class10\compu...
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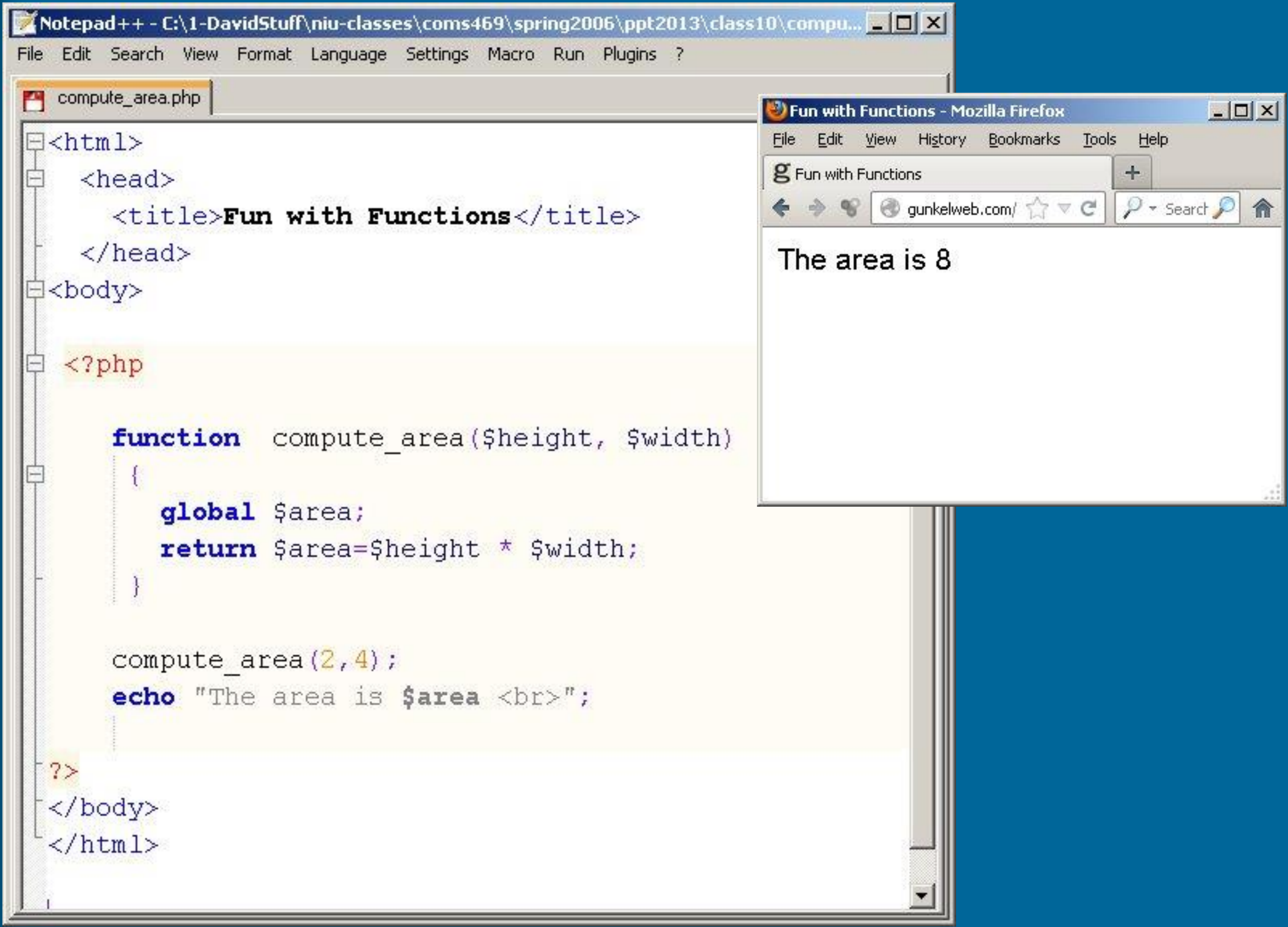
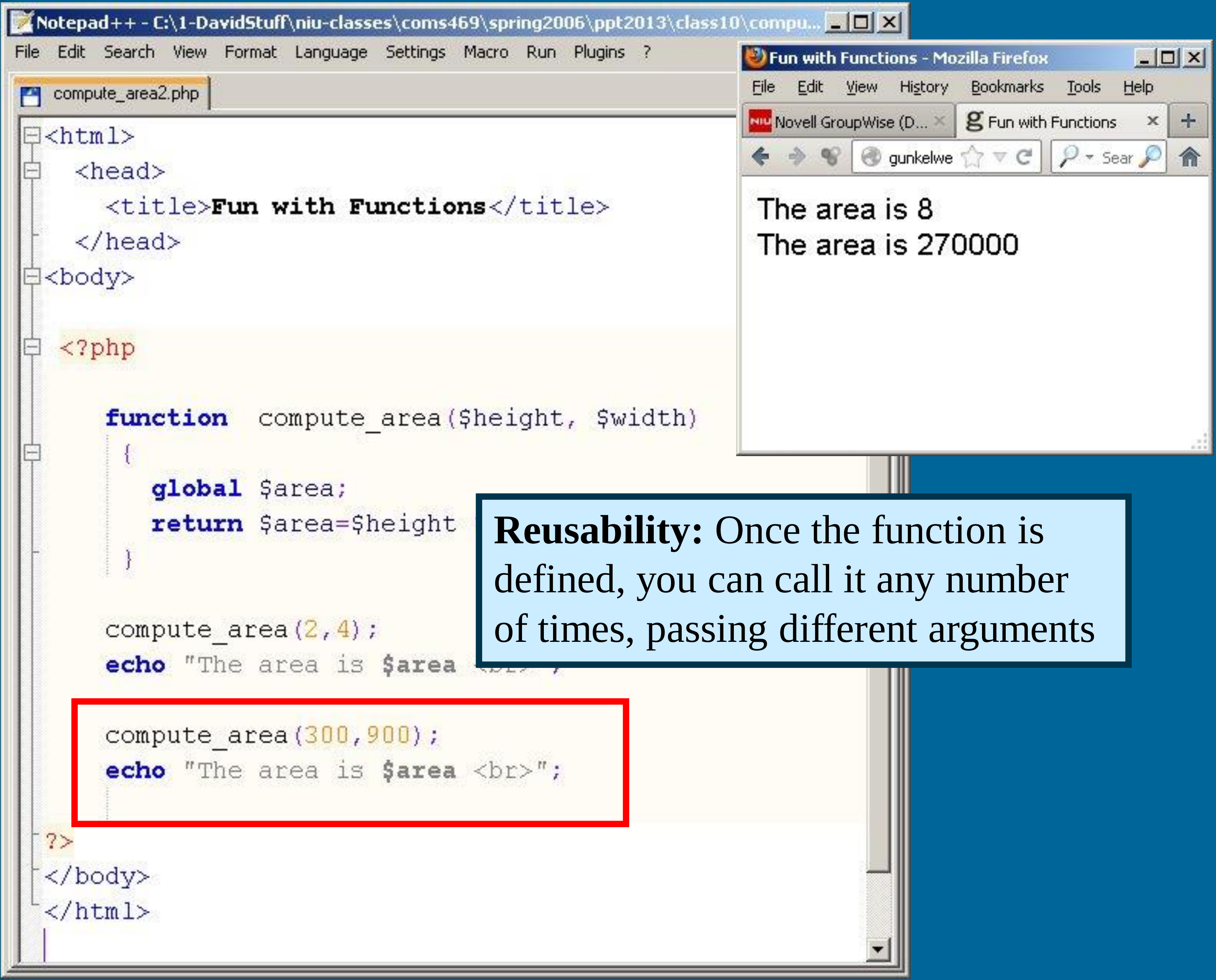
Search
View
Format
Language
Settings
Macro
Run
Plugins
?
compute_area.php

```
<html>
  <head>
    <title>Fun with
  </head>
<body>

 <?php

    function  compute_area($height, $width)
     {
       global $area;
       return $area=$height * $width;
     }

    compute_area(2,4);
    echo "The area is $area <br>";

?>
</body>
</html>
```


Notepad++ - C:\1-DavidStuff\niu-classes\coms469\spring2006\ppt2013\class10\compu...
File Edit Search View Format Language Settings Macro Run Plugins ?
compute_area.php
Fun with Functions - Mozilla Firefox
File Edit View History Bookmarks Tools Help
Fun with Functions
gunkelweb.com/
Search

```
<html>
  <head>
    <title>Fun with Functions</title>
  </head>
<body>

 <?php

    function  compute_area($height, $width)
     {
       global $area;
       return $area=$height * $width;
     }

    compute_area(2,4);
    echo "The area is $area <br>";

?>
</body>
</html>
```

```
The area is 8
```


Notepad++ - C:\1-DavidStuff\niu-classes\coms469\spring2006\ppt2013\class10\compu...
File Edit Search View Format Language Settings Macro Run Plugins ?
compute_area2.php
Fun with Functions - Mozilla Firefox
File Edit View History Bookmarks Tools Help
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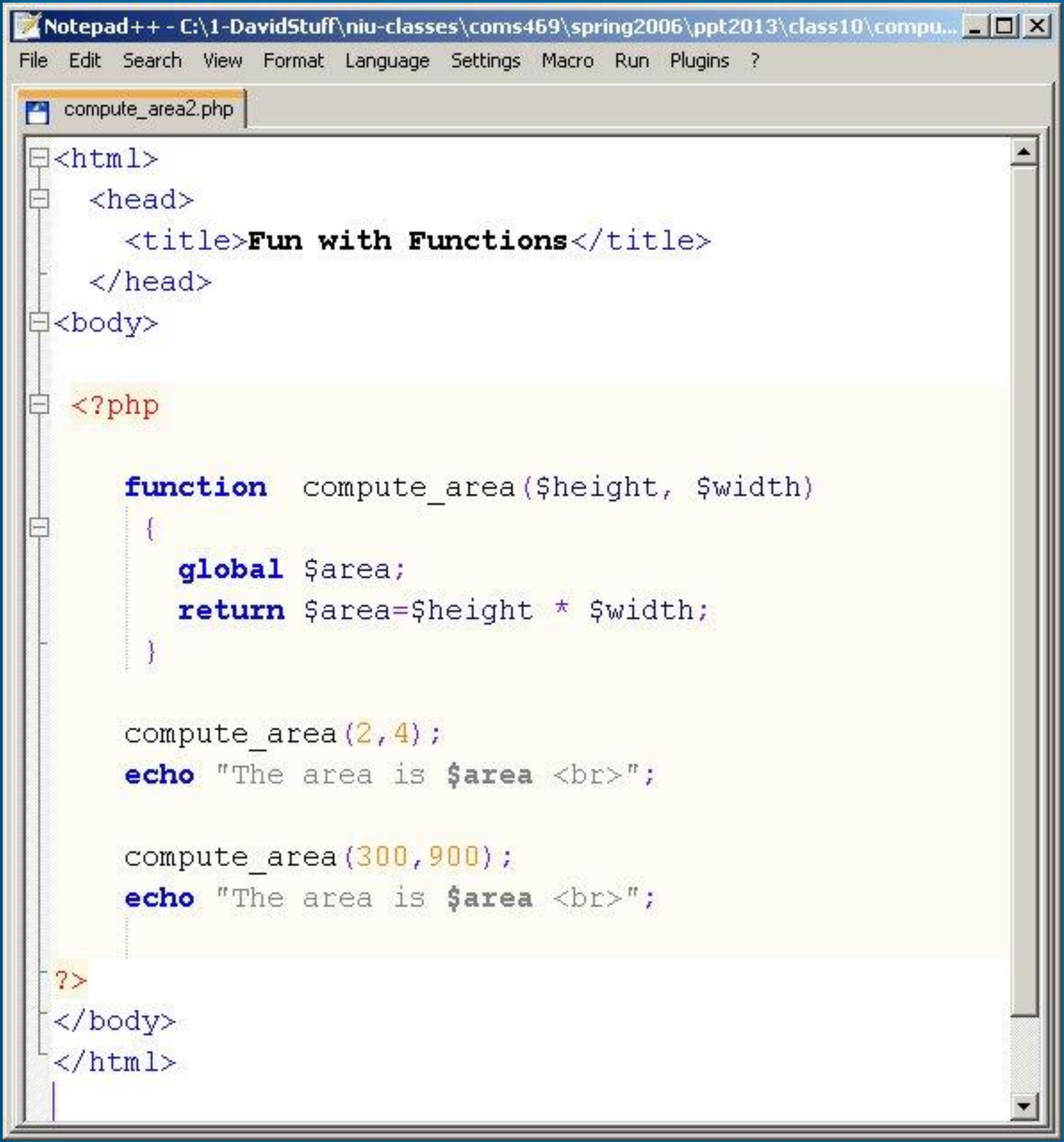
Sear

```
<html>
  <head>
    <title>Fun with Functions</title>
  </head>
<body>

 <?php

    function  compute_area($height, $width)
     {
       global $area;
       return $area=$height
     }

    compute_area(2,4);
    echo "The area is $area <br>";

    compute_area(300,900);
    echo "The area is $area <br>";

?>
</body>
</html>
```

```
The area is 8
The area is 270000
```

Reusability: Once the function is defined, you can call it any number of times, passing different arguments



Notepad++ - C:\1-DavidStuff\niu-classes\coms469\spring2006\ppt2013\class10\compu...
File Edit Search View Format Language Settings Macro Run Plugins ?
compute_area2.php

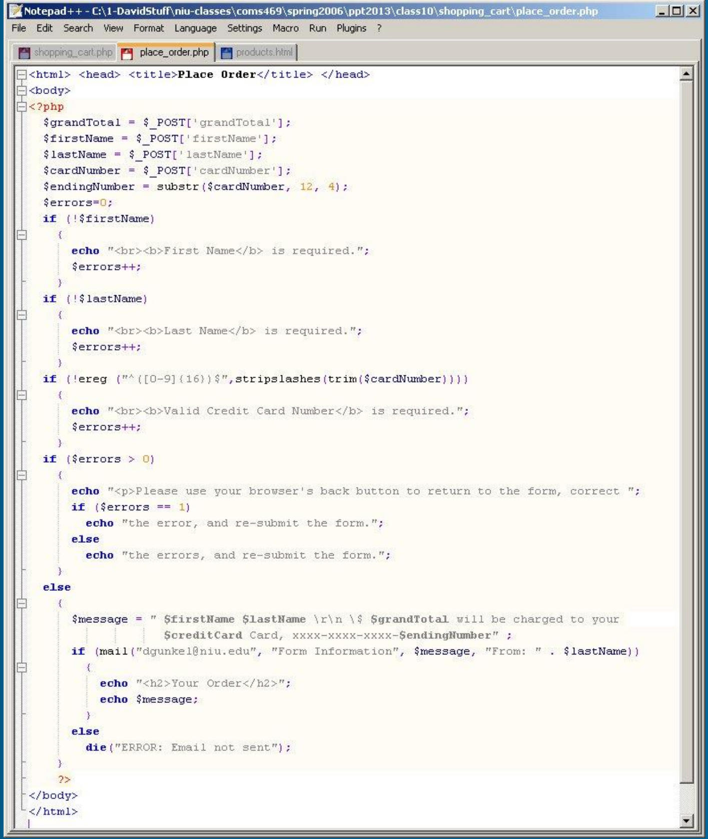
```
<html>
  <head>
    <title>Fun with Functions</title>
  </head>
<body>

 <?php

    function  compute_area($height, $width)
     {
       global $area;
       return $area=$height * $width;
     }

    compute_area(2,4);
    echo "The area is $area <br>";

    compute_area(300,900);
    echo "The area is $area <br>";

?>
</body>
</html>
```

Function

- Exercise – Form Validation Redux

Basic Validation

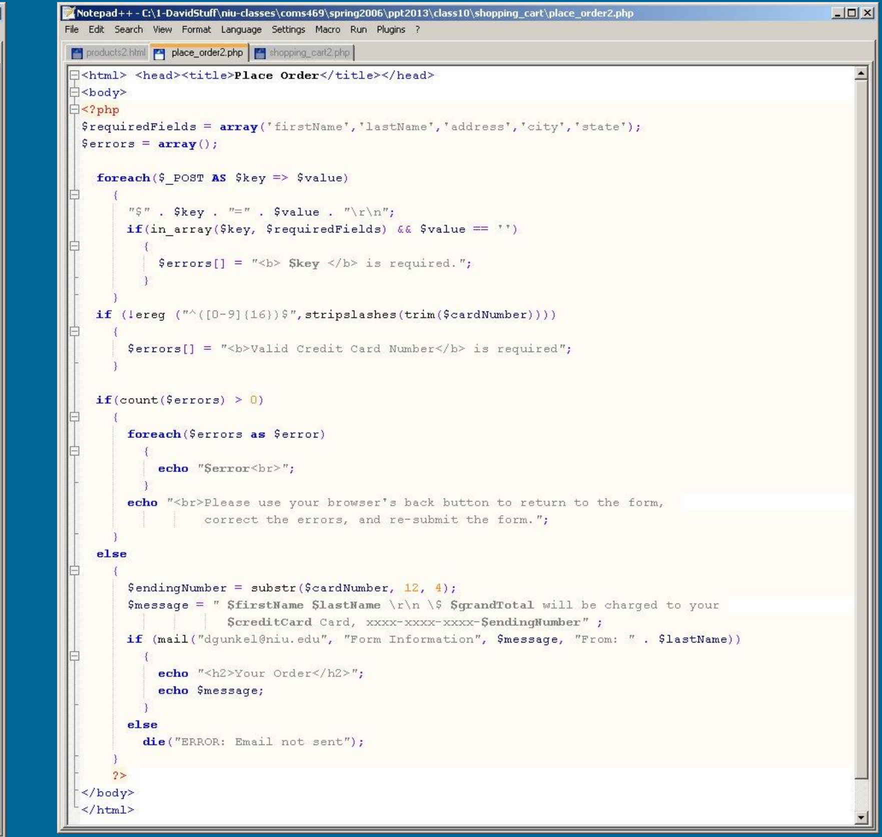
Redundant Conditionals


Notepad++ - C:\1-DavidStuff\niu-classes\coms469\spring2006\ppt2013\class10\shopping_cart\place_order.php
File Edit Search View Format Language Settings Macro Run Plugins ?
shopping_cart.php
place_order.php
products.html

```php
<html> <head> <title>Place Order</title> </head>
<body>
<?php
  $grandTotal = $_POST['grandTotal'];
  $firstName = $_POST['firstName'];
  $lastName = $_POST['lastName'];
  $cardNumber = $_POST['cardNumber'];
  $endingNumber = substr($cardNumber, 12, 4);
  $errors=0;
  if (!$firstName)
    {
      echo "<br><b>First Name</b> is required.";
      $errors++;
    }
  if (!$lastName)
    {
      echo "<br><b>Last Name</b> is required.";
      $errors++;
    }
  if (!ereg ("^([0-9]{16})$",stripslashes(trim($cardNumber))))
    {
      echo "<br><b>Valid Credit Card Number</b> is required.";
      $errors++;
    }
  if ($errors > 0)
    {
      echo "<p>Please use your browser's back button to return to the form, correct ";
      if ($errors == 1)
        echo "the error, and re-submit the form.";
      else
        echo "the errors, and re-submit the form.";
    }
  else
    {
      $message = " $firstName $lastName \r\n \$ $grandTotal will be charged to your
                   $creditCard Card, xxxx-xxxx-xxxx-$endingNumber" ;
      if (mail("dgunkel@niu.edu", "Form Information", $message, "From: " . $lastName))
        {
          echo "<h2>Your Order</h2>";
          echo $message;
        }
      else
        die("ERROR: Email not sent");
    }
    ?>
</body>
</html>
```

Validation – version #2

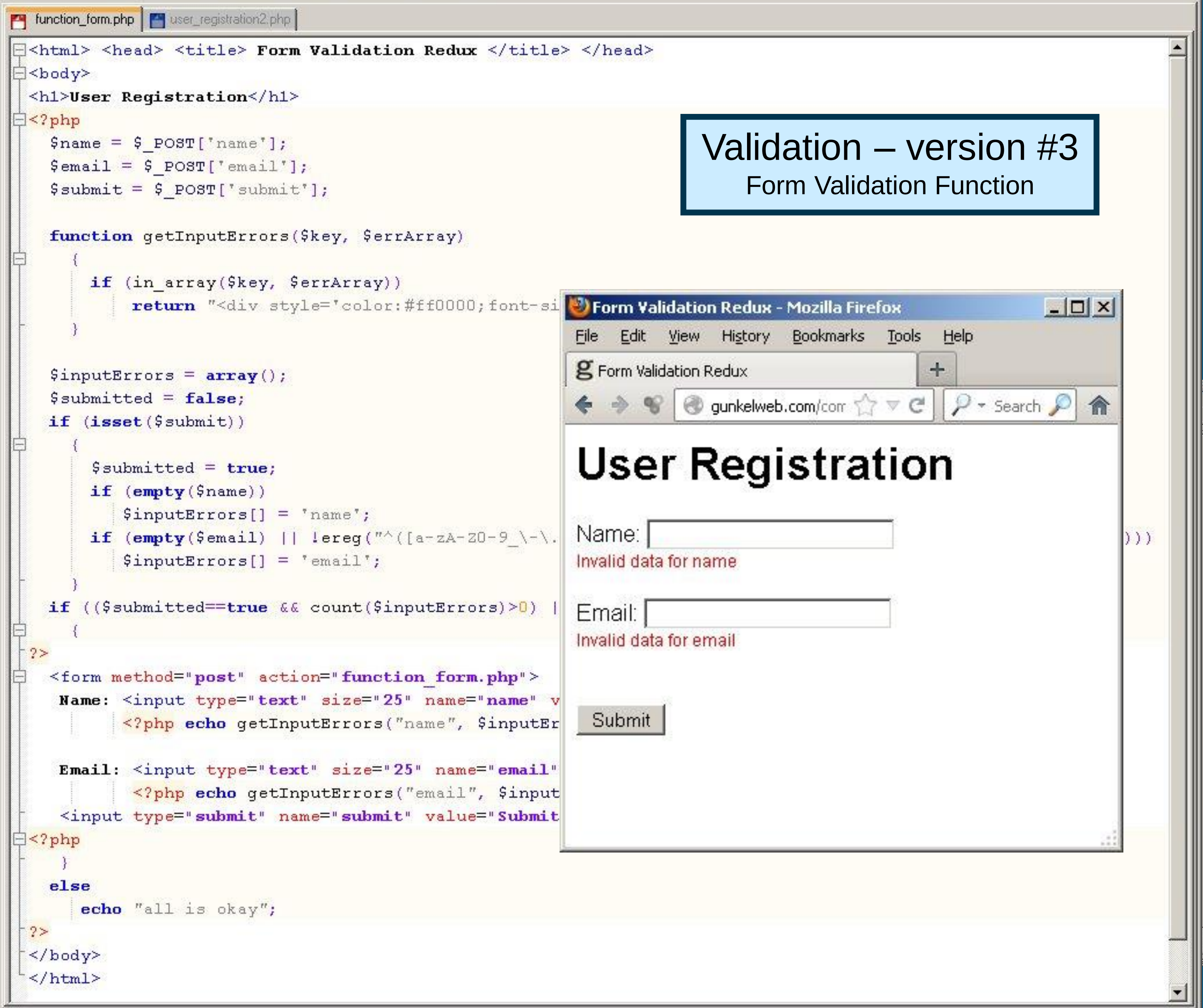
Arrays and Looping Conditionals


Notepad++ - C:\1-DavidStuff\niu-classes\coms469\spring2006\ppt2013\class10\shopping_cart\place_order2.php
File Edit Search View Format Language Settings Macro Run Plugins ?
products2.html
place_order2.php
shopping_cart2.php

```php
<html> <head><title>Place Order</title></head>
<body>
<?php
$requiredFields = array('firstName','lastName','address','city','state');
$errors = array();

  foreach($_POST AS $key => $value)
    {
      "$" . $key . "=" . $value . "\r\n";
      if(in_array($key, $requiredFields) && $value == '')
        {
          $errors[] = "<b> $key </b> is required.";
        }
    }
  if (!ereg ("^([0-9]{16})$",stripslashes(trim($cardNumber))))
    {
      $errors[] = "<b>Valid Credit Card Number</b> is required";
    }

  if(count($errors) > 0)
    {
      foreach($errors as $error)
        {
          echo "$error<br>";
        }
      echo "<br>Please use your browser's back button to return to the form,
                 correct the errors, and re-submit the form.";
    }
  else
    {
      $endingNumber = substr($cardNumber, 12, 4);
      $message = " $firstName $lastName \r\n \$ $grandTotal will be charged to your
                   $creditCard Card, xxxx-xxxx-xxxx-$endingNumber" ;
      if (mail("dgunkel@niu.edu", "Form Information", $message, "From: " . $lastName))
        {
          echo "<h2>Your Order</h2>";
          echo $message;
        }
      else
        die("ERROR: Email not sent");
    }
    ?>
</body>
</html>
```

Validation – version #3

Form Validation Function



```
<html> <head> <title> Form Validation Redux </title> </head>
<body>
<h1>User Registration</h1>
<?php
  $name = $_POST['name'];
  $email = $_POST['email'];
  $submit = $_POST['submit'];

  function getInputErrors($key, $errArray)
    {
      if (in_array($key, $errArray))
          return "<div style='color:#ff0000;font-si
    }

  $inputErrors = array();
  $submitted = false;
  if (isset($submit))
    {
      $submitted = true;
      if (empty($name))
         $inputErrors[] = 'name';
      if (empty($email) || !ereg("^([a-zA-Z0-9_\-\.                                                 )))
         $inputErrors[] = 'email';
    }
  if (($submitted==true && count($inputErrors)>0) |
    {
?>
  <form method="post" action="function_form.php">
   Name: <input type="text" size="25" name="name" v
         <?php echo getInputErrors("name", $inputEr

   Email: <input type="text" size="25" name="email"
          <?php echo getInputErrors("email", $input
   <input type="submit" name="submit" value="Submit
<?php
   }
  else
     echo "all is okay";
?>
</body>
</html>
```

User Registration

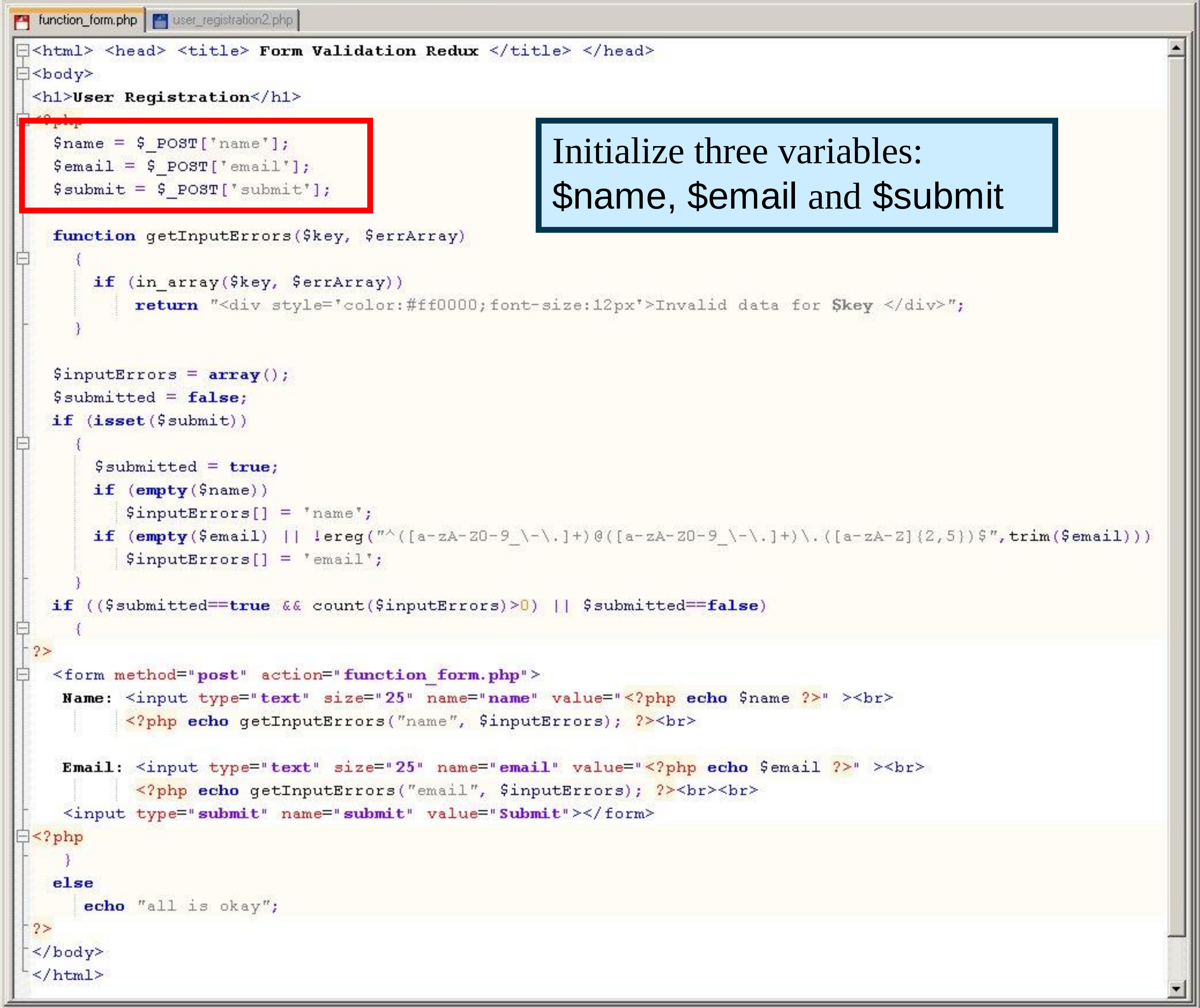
Name:

Invalid data for name

Email:

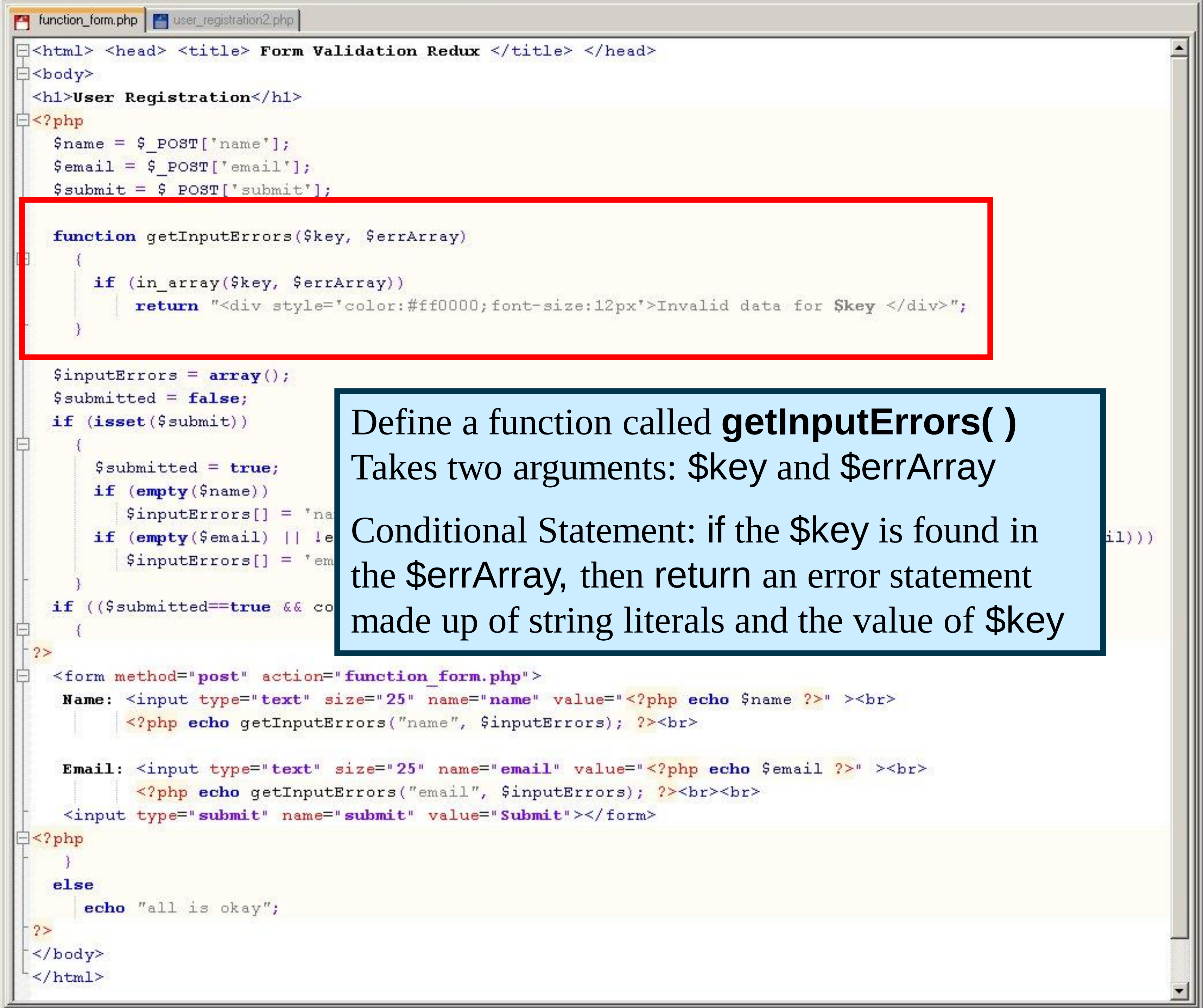
Invalid data for email

Submit



```
<html> <head> <title> Form Validation Redux </title> </head>
<body>
<h1>User Registration</h1>
<?php
  $name = $_POST['name'];
  $email = $_POST['email'];
  $submit = $_POST['submit'];

  function getInputErrors($key, $errArray)
    {
      if (in_array($key, $errArray))
          return "<div style='color:#ff0000;font-size:12px'>Invalid data for $key </div>";
    }

  $inputErrors = array();
  $submitted = false;
  if (isset($submit))
    {
      $submitted = true;
      if (empty($name))
         $inputErrors[] = 'name';
      if (empty($email) || !ereg("^([a-zA-Z0-9_\-\.]+)@([a-zA-Z0-9_\-\.]+)\.([a-zA-Z]{2,5})$",trim($email)))
         $inputErrors[] = 'email';
    }
  if (($submitted==true && count($inputErrors)>0) || $submitted==false)
    {
?>
  <form method="post" action="function_form.php">
   Name: <input type="text" size="25" name="name" value="<?php echo $name ?>" ><br>
         <?php echo getInputErrors("name", $inputErrors); ?><br>

   Email: <input type="text" size="25" name="email" value="<?php echo $email ?>" ><br>
          <?php echo getInputErrors("email", $inputErrors); ?><br><br>
   <input type="submit" name="submit" value="Submit"></form>
<?php
   }
  else
     echo "all is okay";
?>
</body>
</html>
```

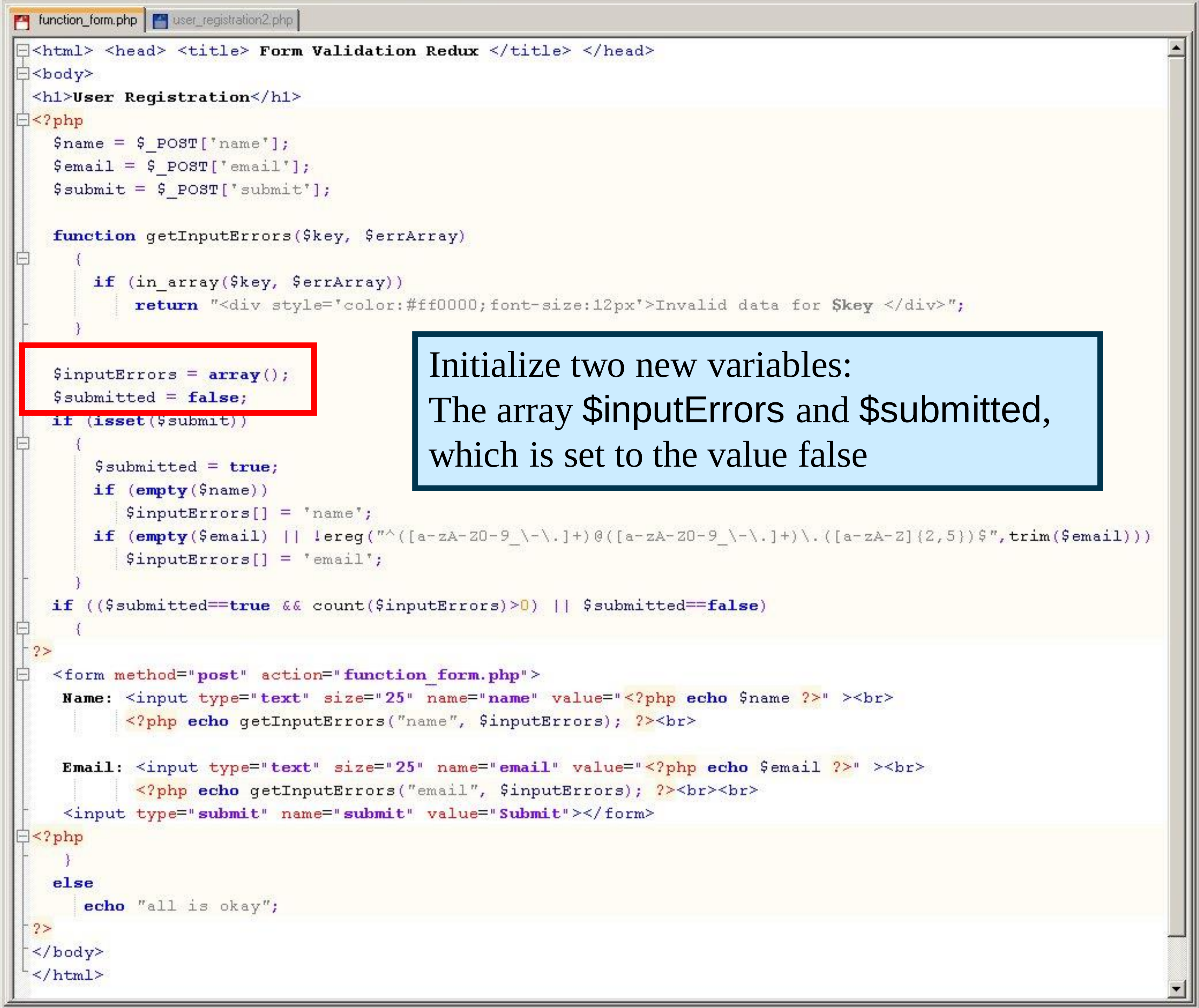
Initialize three variables:
$name, $email and $submit



```
<html> <head> <title> Form Validation Redux </title> </head>
<body>
<h1>User Registration</h1>
<?php
  $name = $_POST['name'];
  $email = $_POST['email'];
  $submit = $_POST['submit'];

  function getInputErrors($key, $errArray)
    {
      if (in_array($key, $errArray))
          return "<div style='color:#ff0000;font-size:12px'>Invalid data for $key </div>";
    }
  $inputErrors = array();
  $submitted = false;
  if (isset($submit))
    {
      $submitted = true;
      if (empty($name))
         $inputErrors[] = 'na
      if (empty($email) || !e                                                          il)))
         $inputErrors[] = 'em
    }
  if (($submitted==true && co
    {
?>
  <form method="post" action="function_form.php">
   Name: <input type="text" size="25" name="name" value="<?php echo $name ?>" ><br>
         <?php echo getInputErrors("name", $inputErrors); ?><br>

   Email: <input type="text" size="25" name="email" value="<?php echo $email ?>" ><br>
          <?php echo getInputErrors("email", $inputErrors); ?><br><br>
   <input type="submit" name="submit" value="Submit"></form>
<?php
   }
  else
     echo "all is okay";
?>
</body>
</html>
```

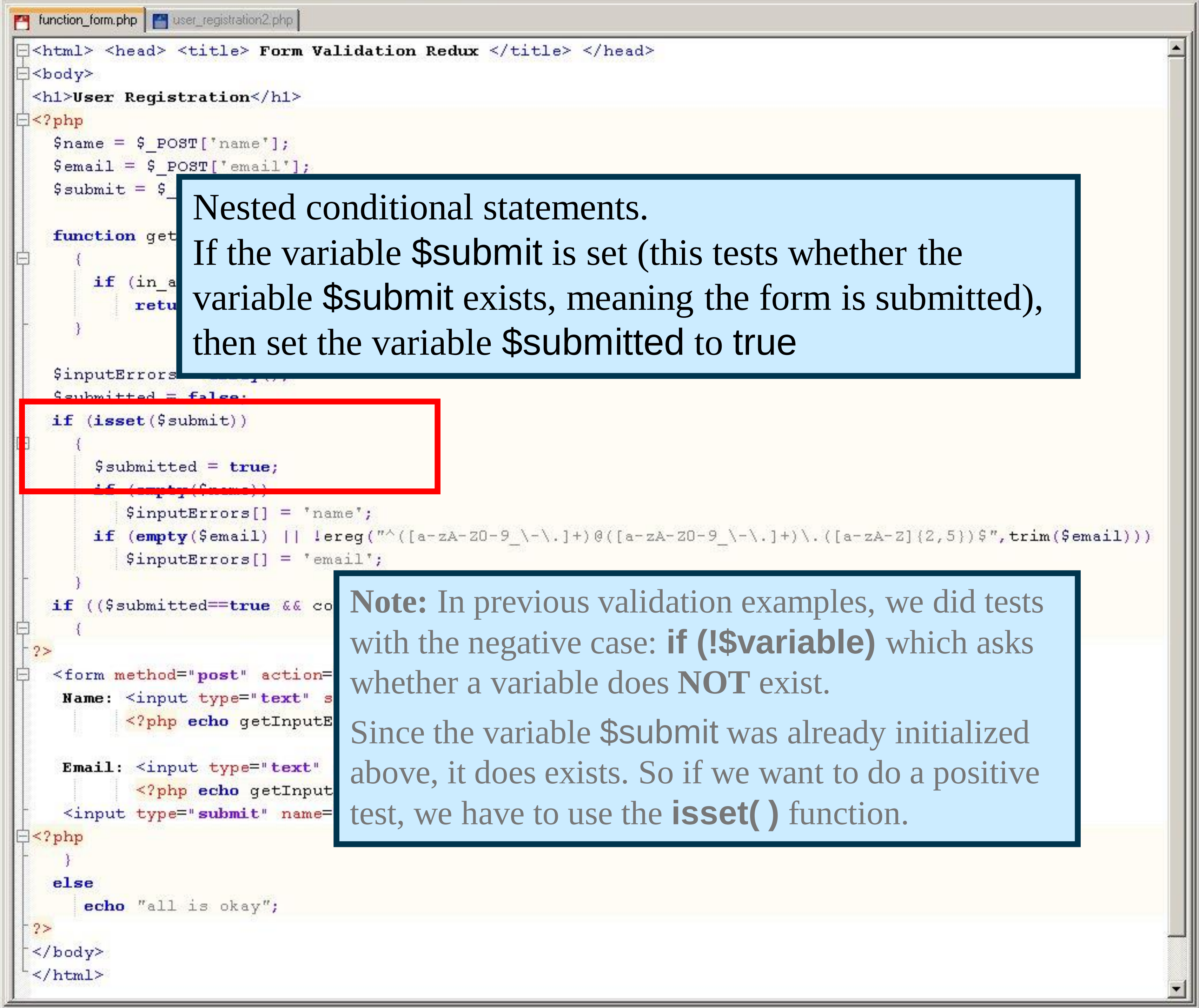
Define a function called **getInputErrors( )**
Takes two arguments: $key and $errArray

Conditional Statement: if the $key is found in the $errArray, then return an error statement made up of string literals and the value of $key



```
<html> <head> <title> Form Validation Redux </title> </head>
<body>
<h1>User Registration</h1>
<?php
  $name = $_POST['name'];
  $email = $_POST['email'];
  $submit = $_POST['submit'];

  function getInputErrors($key, $errArray)
    {
     if (in_array($key, $errArray))
         return "<div style='color:#ff0000;font-size:12px'>Invalid data for $key </div>";
    }

  $inputErrors = array();
  $submitted = false;
  if (isset($submit))
    {
     $submitted = true;
     if (empty($name))
        $inputErrors[] = 'name';
     if (empty($email) || !ereg("^([a-zA-Z0-9_\-\.]+)@([a-zA-Z0-9_\-\.]+)\.([a-zA-Z]{2,5})$",trim($email)))
        $inputErrors[] = 'email';
    }
  if (($submitted==true && count($inputErrors)>0) || $submitted==false)
    {
?>
  <form method="post" action="function_form.php">
   Name: <input type="text" size="25" name="name" value="<?php echo $name ?>" ><br>
         <?php echo getInputErrors("name", $inputErrors); ?><br>

   Email: <input type="text" size="25" name="email" value="<?php echo $email ?>" ><br>
         <?php echo getInputErrors("email", $inputErrors); ?><br><br>
   <input type="submit" name="submit" value="Submit"></form>
<?php
   }
  else
     echo "all is okay";
?>
</body>
</html>
```

Initialize two new variables:
The array $inputErrors and $submitted, which is set to the value false

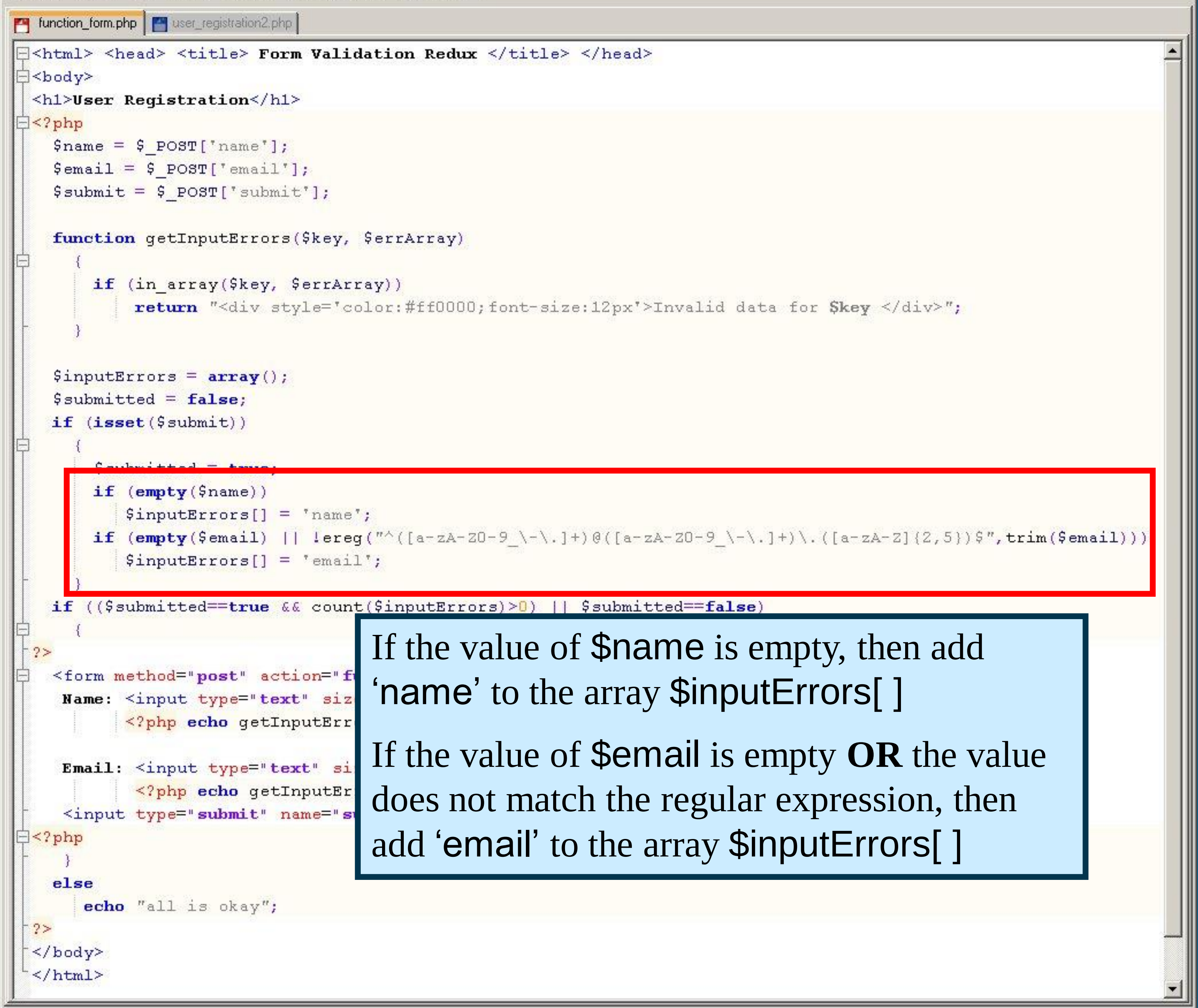


```
<html> <head> <title> Form Validation Redux </title> </head>
<body>
<h1>User Registration</h1>
<?php
  $name = $_POST['name'];
  $email = $_POST['email'];
  $submit = $_

  function get
    {
      if (in_a
          retu
    }

  $inputErrors
  $submitted = false;
  if (isset($submit))
    {
      $submitted = true;
      if (empty($name))
          $inputErrors[] = 'name';
      if (empty($email) || !ereg("^([a-zA-Z0-9_\-\.]+)@([a-zA-Z0-9_\-\.]+)\.([a-zA-Z]{2,5})$",trim($email)))
          $inputErrors[] = 'email';
    }
  if (($submitted==true && co
    {
?>
  <form method="post" action=
   Name: <input type="text" s
         <?php echo getInputE

   Email: <input type="text"
          <?php echo getInput
   <input type="submit" name=
<?php
  }
  else
     echo "all is okay";
?>
</body>
</html>
```

Nested conditional statements.
If the variable $submit is set (this tests whether the variable $submit exists, meaning the form is submitted), then set the variable $submitted to true

Note: In previous validation examples, we did tests with the negative case: **if (!$variable)** which asks whether a variable does **NOT** exist.

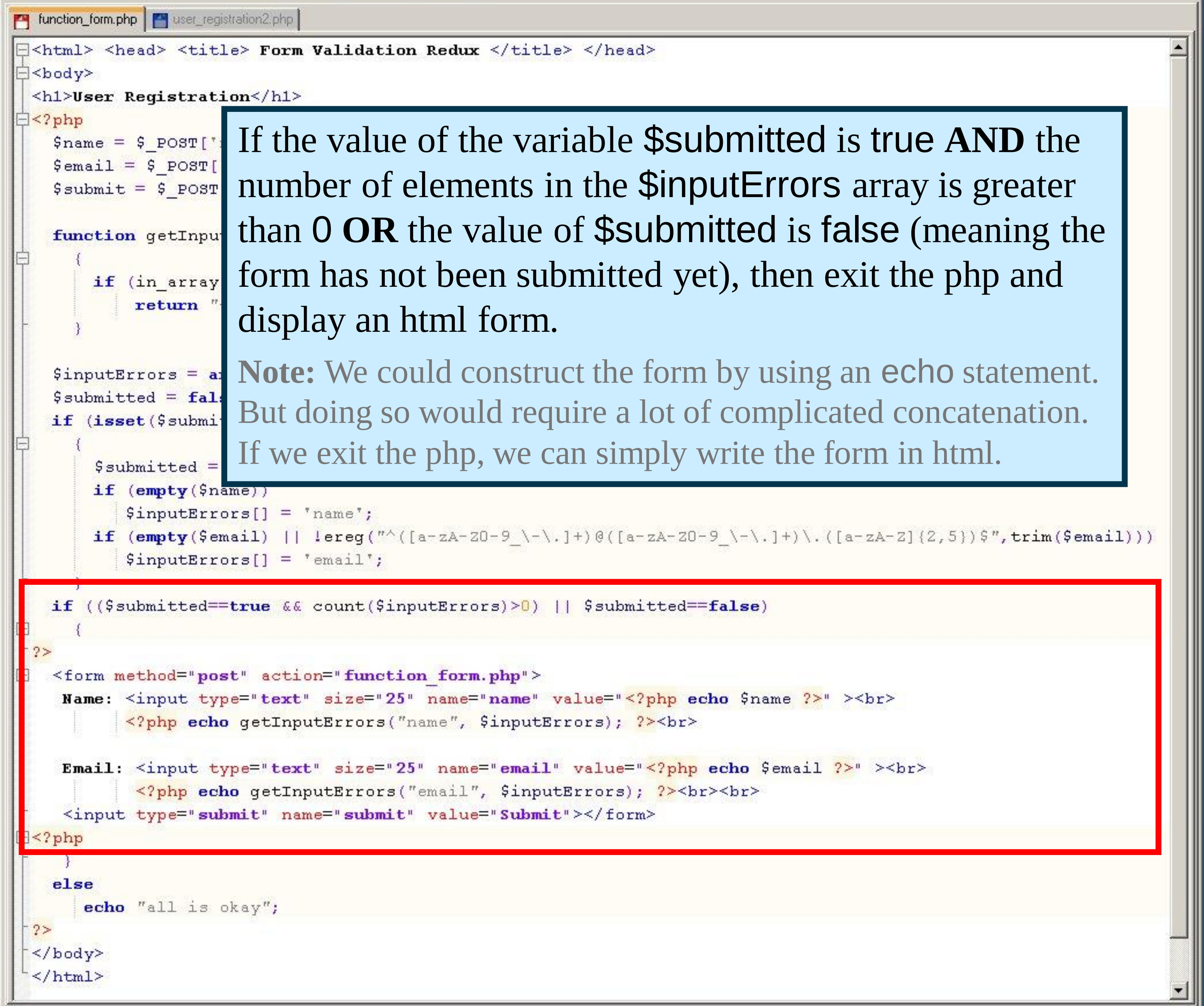
Since the variable $submit was already initialized above, it does exists. So if we want to do a positive test, we have to use the **isset( )** function.



```
<html> <head> <title> Form Validation Redux </title> </head>
<body>
<h1>User Registration</h1>
<?php
  $name = $_POST['name'];
  $email = $_POST['email'];
  $submit = $_POST['submit'];

  function getInputErrors($key, $errArray)
    {
      if (in_array($key, $errArray))
          return "<div style='color:#ff0000;font-size:12px'>Invalid data for $key </div>";
    }

  $inputErrors = array();
  $submitted = false;
  if (isset($submit))
    {
      $submitted = true;
      if (empty($name))
         $inputErrors[] = 'name';
      if (empty($email) || !ereg("^([a-zA-Z0-9_\-\.]+)@([a-zA-Z0-9_\-\.]+)\.([a-zA-Z]{2,5})$",trim($email)))
         $inputErrors[] = 'email';
    }
  if (($submitted==true && count($inputErrors)>0) || $submitted==false)
    {
?>
  <form method="post" action="fu
   Name: <input type="text" siz
          <?php echo getInputErr

   Email: <input type="text" si
           <?php echo getInputEr
   <input type="submit" name="su
<?php
    }
  else
     echo "all is okay";
?>
</body>
</html>
```

If the value of $name is empty, then add ‘name’ to the array $inputErrors[ ]

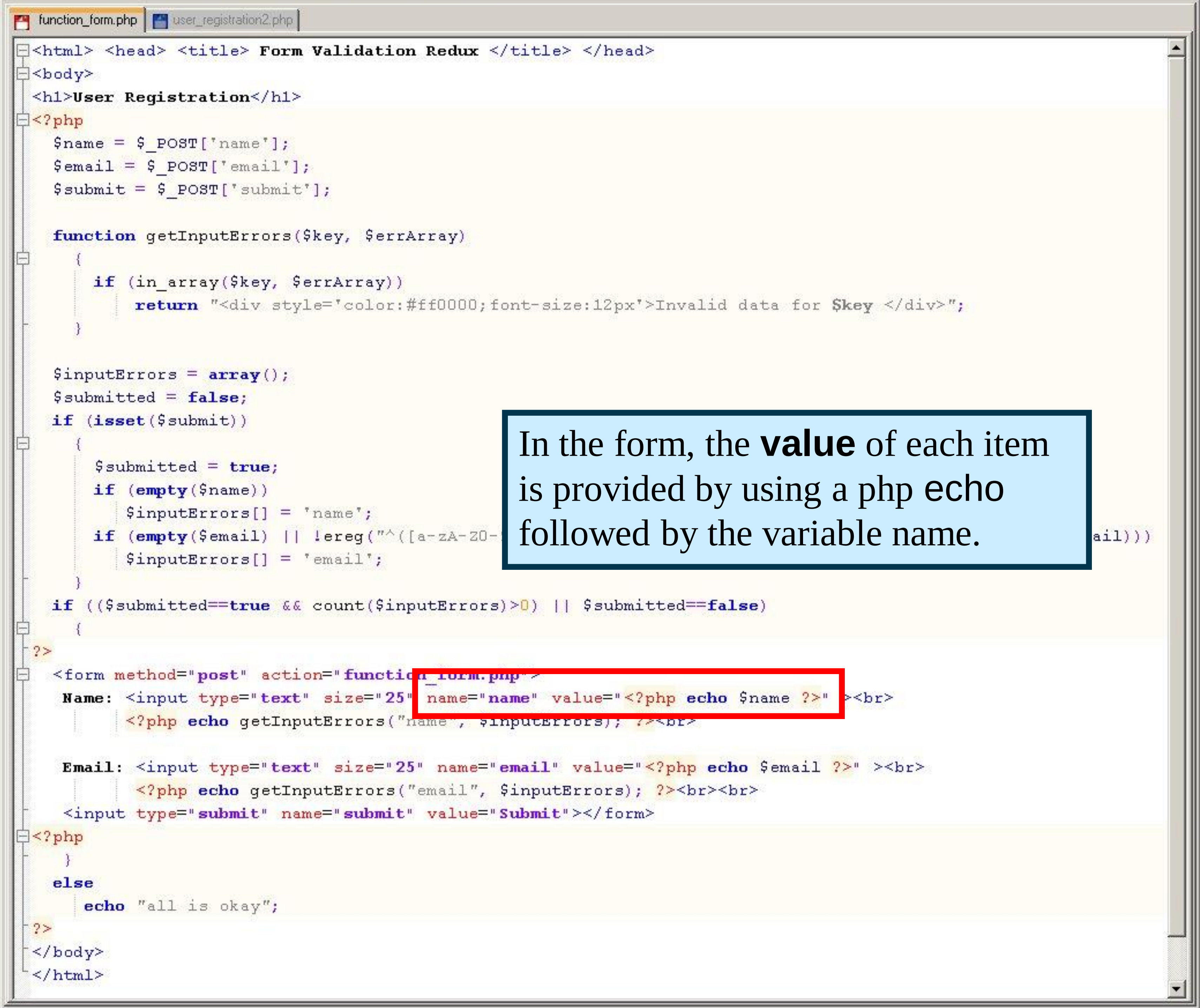
If the value of $email is empty **OR** the value does not match the regular expression, then add ‘email’ to the array $inputErrors[ ]



```
<html> <head> <title> Form Validation Redux </title> </head>
<body>
<h1>User Registration</h1>
<?php
  $name = $_POST['
  $email = $_POST[
  $submit = $_POST

  function getInpu
    {
      if (in_array
          return "
    }

  $inputErrors = a
  $submitted = fal
  if (isset($submi
    {
      $submitted =
      if (empty($name))
         $inputErrors[] = 'name';
      if (empty($email) || !ereg("^([a-zA-Z0-9_\-\.]+)@([a-zA-Z0-9_\-\.]+)\.([a-zA-Z]{2,5})$",trim($email)))
         $inputErrors[] = 'email';
    }
  if (($submitted==true && count($inputErrors)>0) || $submitted==false)
    {
?>
  <form method="post" action="function_form.php">
   Name: <input type="text" size="25" name="name" value="<?php echo $name ?>" ><br>
         <?php echo getInputErrors("name", $inputErrors); ?><br>

   Email: <input type="text" size="25" name="email" value="<?php echo $email ?>" ><br>
          <?php echo getInputErrors("email", $inputErrors); ?><br><br>
   <input type="submit" name="submit" value="Submit"></form>
<?php
   }
  else
     echo "all is okay";
?>
</body>
</html>
```

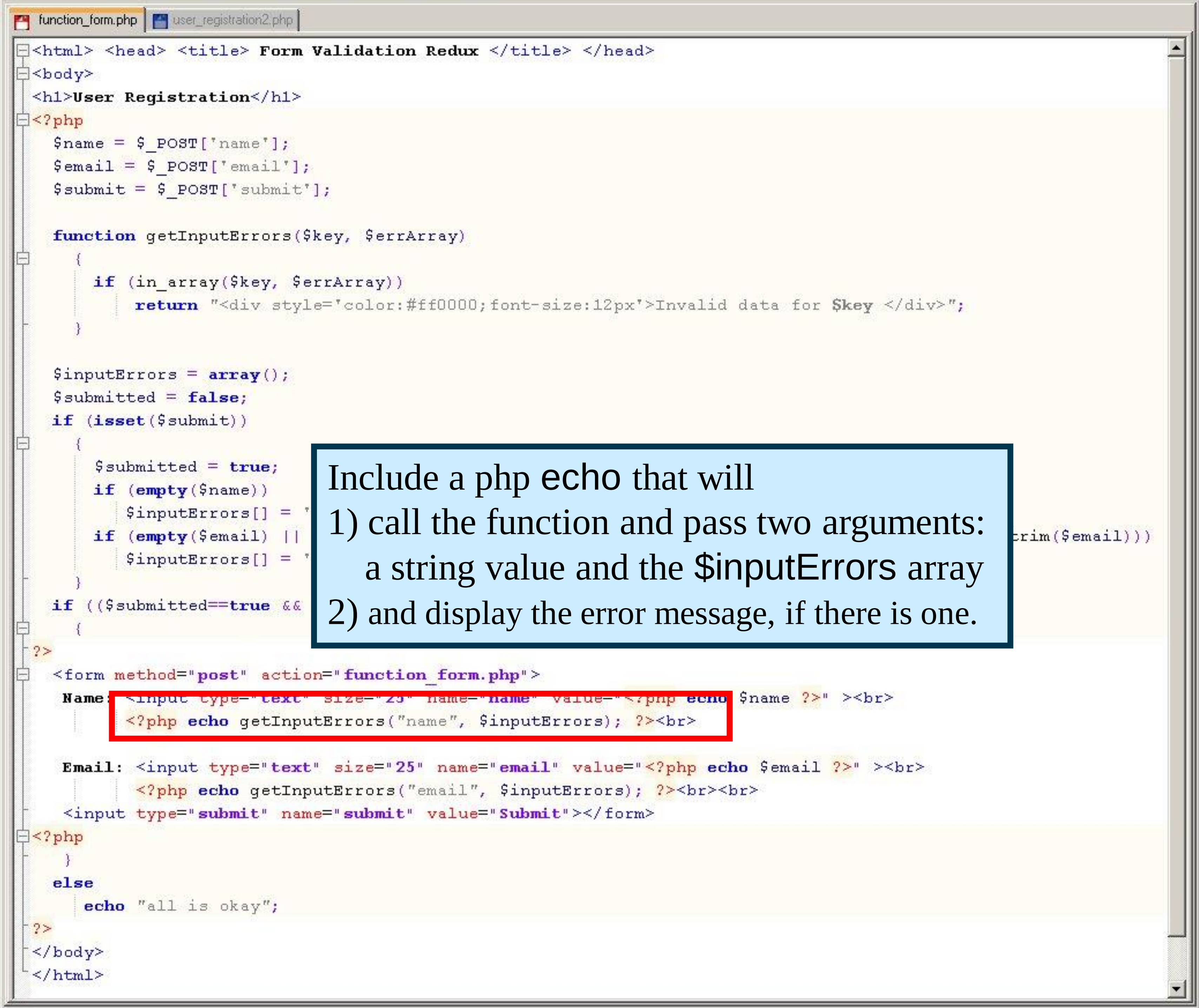
If the value of the variable $submitted is true **AND** the number of elements in the $inputErrors array is greater than 0 **OR** the value of $submitted is false (meaning the form has not been submitted yet), then exit the php and display an html form.

Note: We could construct the form by using an echo statement. But doing so would require a lot of complicated concatenation. If we exit the php, we can simply write the form in html.



```
<html> <head> <title> Form Validation Redux </title> </head>
<body>
<h1>User Registration</h1>
<?php
  $name = $_POST['name'];
  $email = $_POST['email'];
  $submit = $_POST['submit'];

  function getInputErrors($key, $errArray)
     {
       if (in_array($key, $errArray))
           return "<div style='color:#ff0000;font-size:12px'>Invalid data for $key </div>";
     }

  $inputErrors = array();
  $submitted = false;
  if (isset($submit))
     {
       $submitted = true;
       if (empty($name))
          $inputErrors[] = 'name';
       if (empty($email) || !ereg("^([a-zA-Z0-                                                          ail)))
          $inputErrors[] = 'email';
     }
  if (($submitted==true && count($inputErrors)>0) || $submitted==false)
     {
?>
  <form method="post" action="function_form.php">
   Name: <input type="text" size="25" name="name" value="<?php echo $name ?>" ><br>
         <?php echo getInputErrors("name", $inputErrors); ?><br>

   Email: <input type="text" size="25" name="email" value="<?php echo $email ?>" ><br>
          <?php echo getInputErrors("email", $inputErrors); ?><br><br>
   <input type="submit" name="submit" value="Submit"></form>
<?php
   }
  else
     echo "all is okay";
?>
</body>
</html>
```

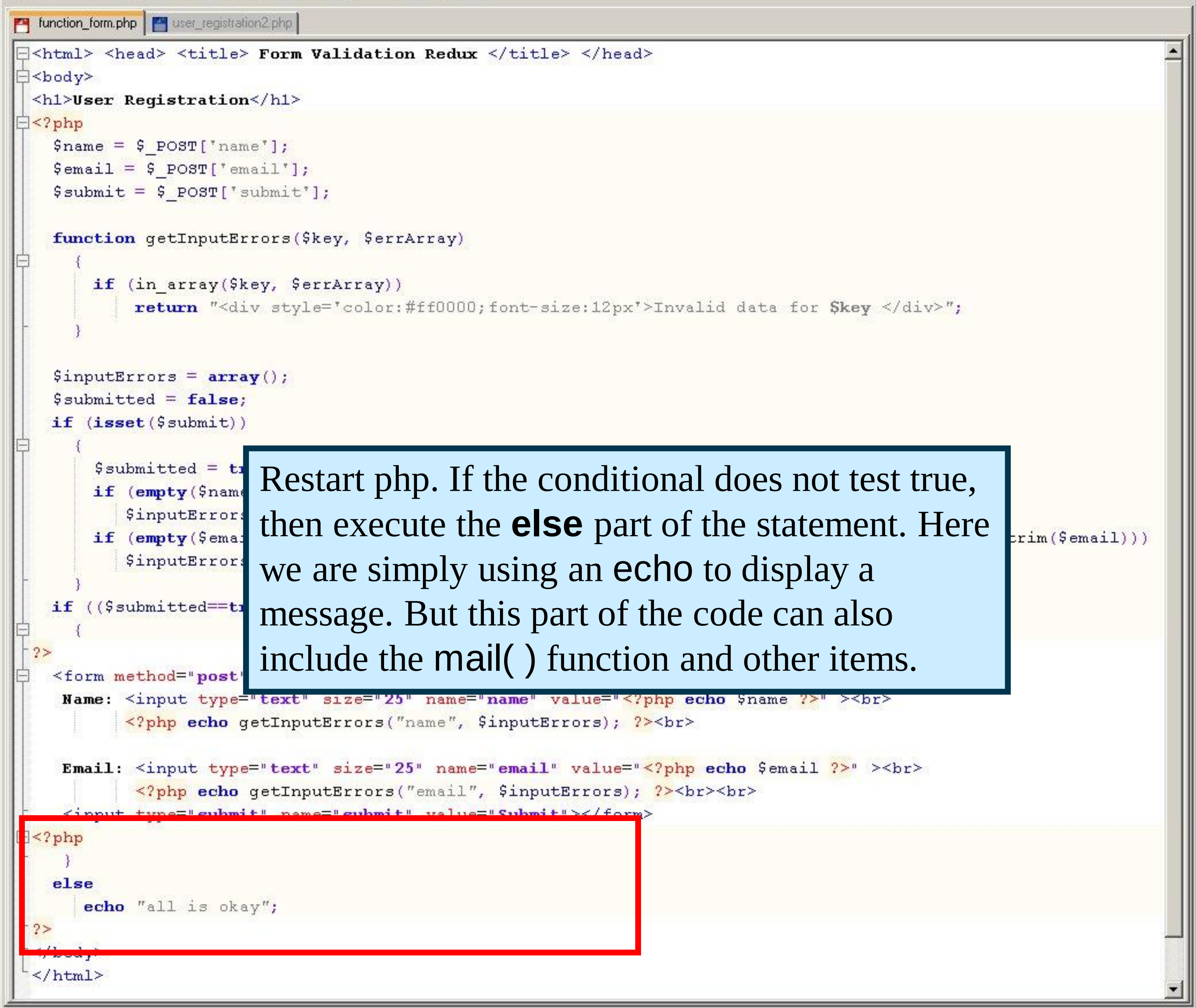
In the form, the **value** of each item is provided by using a php echo followed by the variable name.



```
<html> <head> <title> Form Validation Redux </title> </head>
<body>
<h1>User Registration</h1>
<?php
  $name = $_POST['name'];
  $email = $_POST['email'];
  $submit = $_POST['submit'];

  function getInputErrors($key, $errArray)
    {
      if (in_array($key, $errArray))
          return "<div style='color:#ff0000;font-size:12px'>Invalid data for $key </div>";
    }

  $inputErrors = array();
  $submitted = false;
  if (isset($submit))
    {
      $submitted = true;
      if (empty($name))
         $inputErrors[] = '
      if (empty($email) ||                                                                 rim($email)))
         $inputErrors[] = '
    }
  if (($submitted==true &&
    {
?>
  <form method="post" action="function_form.php">
   Name: <input type="text" size="25" name="name" value="<?php echo $name ?>" ><br>
         <?php echo getInputErrors("name", $inputErrors); ?><br>

   Email: <input type="text" size="25" name="email" value="<?php echo $email ?>" ><br>
          <?php echo getInputErrors("email", $inputErrors); ?><br><br>
   <input type="submit" name="submit" value="Submit"></form>
<?php
   }
  else
     echo "all is okay";
?>
</body>
</html>
```

Include a php echo that will

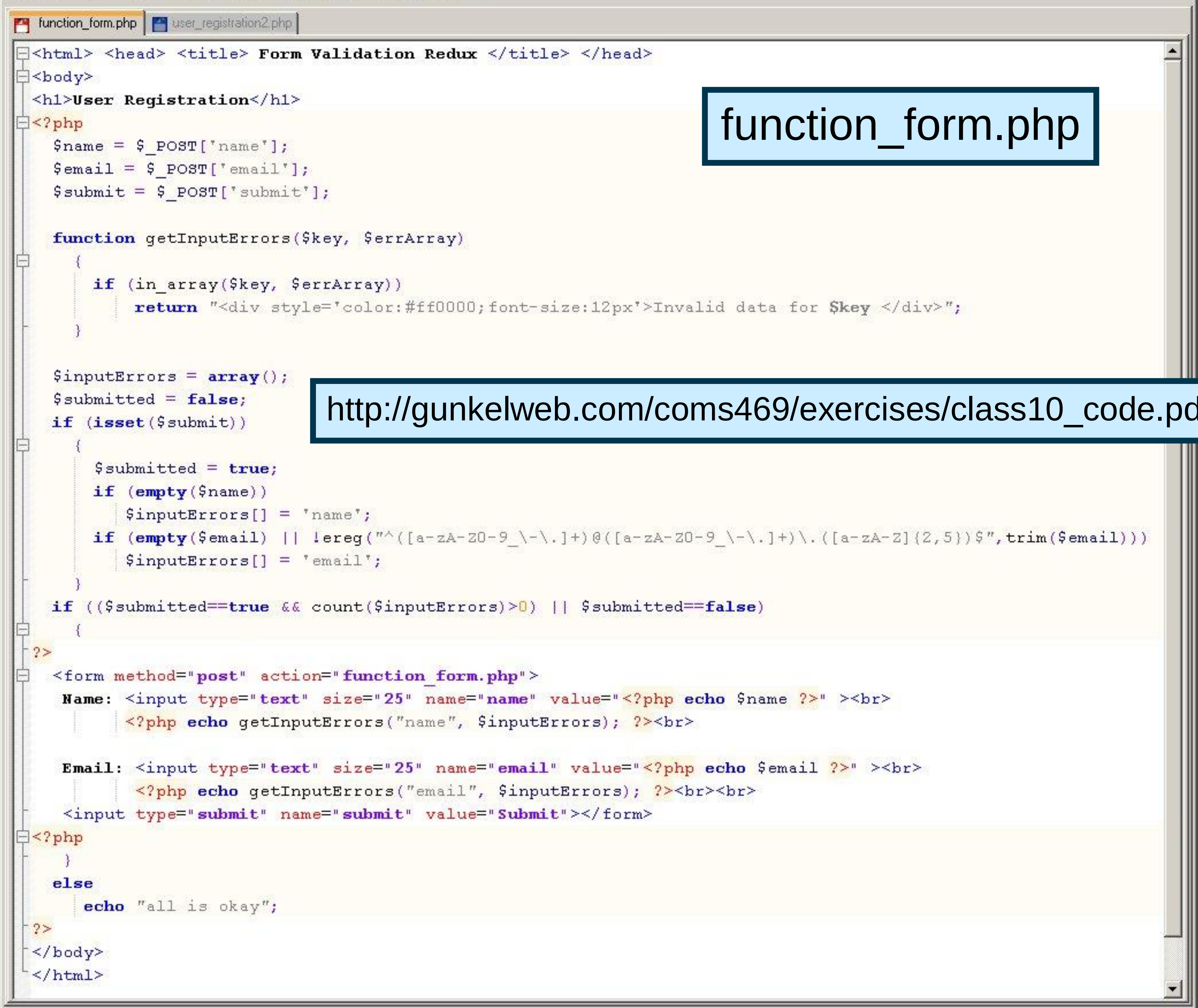
1) call the function and pass two arguments:
   a string value and the $inputErrors array
2) and display the error message, if there is one.



```
<html> <head> <title> Form Validation Redux </title> </head>
<body>
<h1>User Registration</h1>
<?php
  $name = $_POST['name'];
  $email = $_POST['email'];
  $submit = $_POST['submit'];

  function getInputErrors($key, $errArray)
     {
       if (in_array($key, $errArray))
           return "<div style='color:#ff0000;font-size:12px'>Invalid data for $key </div>";
     }

  $inputErrors = array();
  $submitted = false;
  if (isset($submit))
     {
       $submitted = tr
       if (empty($name
           $inputErrors
       if (empty($emai                                                                  trim($email)))
           $inputErrors
     }
  if (($submitted==tr
     {
?>
  <form method="post'
   Name: <input type="text" size="25" name="name" value="<?php echo $name ?>" ><br>
           <?php echo getInputErrors("name", $inputErrors); ?><br>

   Email: <input type="text" size="25" name="email" value="<?php echo $email ?>" ><br>
           <?php echo getInputErrors("email", $inputErrors); ?><br><br>
   <input type="submit" name="submit" value="Submit"></form>
<?php
    }
  else
     echo "all is okay";
?>
</body>
</html>
```

Restart php. If the conditional does not test true, then execute the **else** part of the statement. Here we are simply using an echo to display a message. But this part of the code can also include the mail( ) function and other items.

function_form.php



```
<html> <head> <title> Form Validation Redux </title> </head>
<body>
<h1>User Registration</h1>
<?php
  $name = $_POST['name'];
  $email = $_POST['email'];
  $submit = $_POST['submit'];

  function getInputErrors($key, $errArray)
    {
     if (in_array($key, $errArray))
         return "<div style='color:#ff0000;font-size:12px'>Invalid data for $key </div>";
    }

  $inputErrors = array();
  $submitted = false;
  if (isset($submit))
    {
     $submitted = true;
     if (empty($name))
        $inputErrors[] = 'name';
     if (empty($email) || !ereg("^([a-zA-Z0-9_\-\.]+)@([a-zA-Z0-9_\-\.]+)\.([a-zA-Z]{2,5})$",trim($email)))
        $inputErrors[] = 'email';
    }
  if (($submitted==true && count($inputErrors)>0) || $submitted==false)
    {
?>
  <form method="post" action="function_form.php">
   Name: <input type="text" size="25" name="name" value="<?php echo $name ?>" ><br>
         <?php echo getInputErrors("name", $inputErrors); ?><br>

   Email: <input type="text" size="25" name="email" value="<?php echo $email ?>" ><br>
          <?php echo getInputErrors("email", $inputErrors); ?><br><br>
   <input type="submit" name="submit" value="Submit"></form>
<?php
   }
  else
     echo "all is okay";
?>
</body>
</html>
```

http://gunkelweb.com/coms469/exercises/class10_code.pdf

Cookies

- Topics
  - Introduction
  - Creating, Accessing & Deleting Cookies
- Exercise
  - User Login / Authentication

Cookies

- Introduction
  - Cookies = an HTTP facility that lets you store data on the user’s system
  - Cookies and PHP
    - The value of a PHP variable only lasts as long as the program that contains it – limited scope & lifetime
    - Cookies are variables whose values can persist over time and across a number of different pages
    - Cookies can be used to store user preferences, form values, password validation, etc.

Cookies

- Introduction
  - Cookies = Client-side data storage
  - Some Limitations/Problems
    - User can disable cookies
    - Under some circumstances, others can view your cookies
    - A site can only store 20 cookies and only 4 KB of information

Cookies

- Creating a Cookie
  - setcookie( ) function
    - setcookie(name, value, expiration)
    - Defines cookie name, its value, and expiration date
    - Expiration is usually specified by using the time() function, which returns the elapsed time in seconds since 1 January 1970.
  - Example

```
setcookie(“fruit”, “banana”, time()+3600);
```

    - This statement creates a cookie named fruit, which has the value banana
    - The cookie will be available for one hour (3600 seconds) after its creation

Cookies

- Accessing Cookies
  - The value of a cookie is automatically available as a PHP variable having the same name as the cookie
  - Access a cookie and its value by providing the cookies’ name

    ```
    Echo “The value of the cookie is $fruit”;
    ```

  - Every cookie and its value is contained in the PHP array $_COOKIE

    ```
    foreach ($_COOKIE as $name =>$value)
      echo “<br>$name => $value”;
    ```

Cookies

- Deleting a Cookie
  - Cookies are automatically deleted at the time specified by their expiration
  - You can also delete a cookie by using the setcookie function and specifying an expiration date that is in the past

```
setcookie(“fruit”, “”, time() -3600);
```

  - This is useful for log-out, when using cookies for user authentication

Cookies

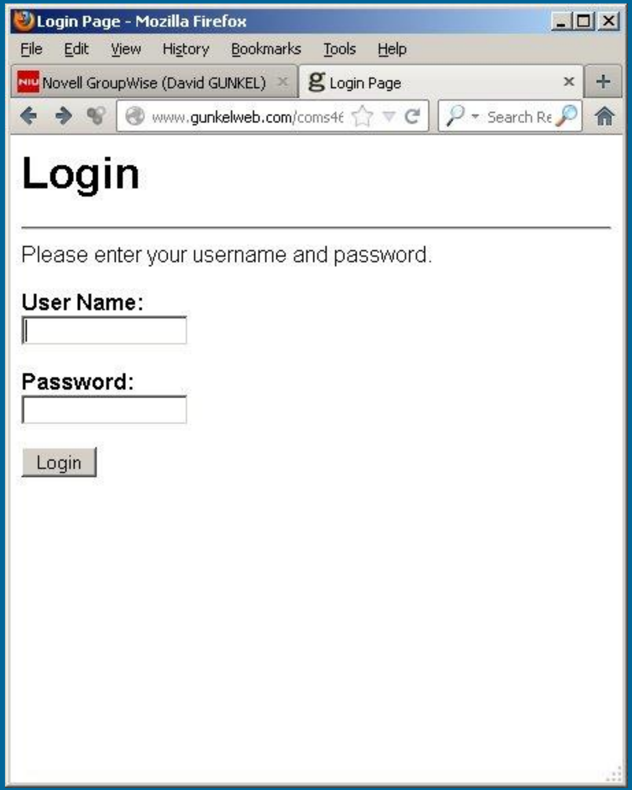
- Other Cookie Options
  - setcookie() takes as many as six arguments

    setcookie(*name*, *value*, *expiration*, *path*, *domain*, *secure*)

    - *Path* – lets you specify the URL path associated with the cookie
    - *Domain* – lets you specify the domain name associated with a cookie
    - *Secure* – integer that specifies whether the cookie is sent over a secure HTTP connection (1) or not (0)

Cookies

- Exercise
  - User Login
    - Create User login page
    - Authentication for CMS
  - Process (3 files)
    - login.html
    - authentication.php
    - secretstuff.php



Login Page - Mozilla Firefox
File Edit View History Bookmarks Tools Help
Novell GroupWise (David GUNKEL)
Login Page
www.gunkelweb.com/coms46
Search Re

Login

Please enter your username and password.

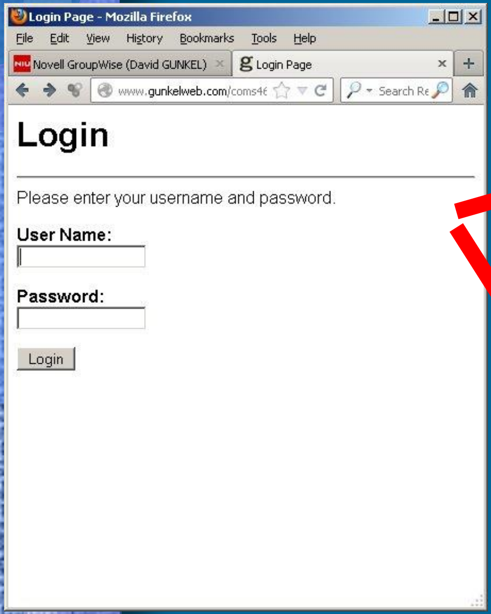
User Name:

Password:

login.html

authentication.php

secretstuff.php


Login Page - Mozilla Firefox
File Edit View History Bookmarks Tools Help
Novell GroupWise (David GUNKEL)
Login Page
www.gunkelweb.com/coms4€
Search Re

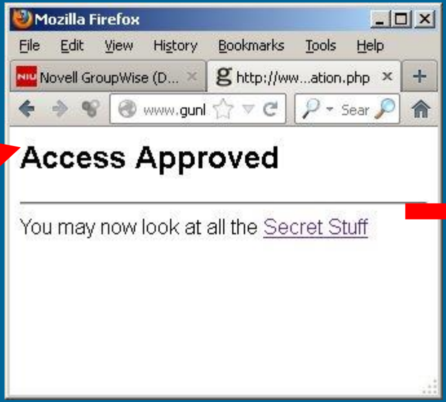
Login

Please enter your username and password.

User Name:

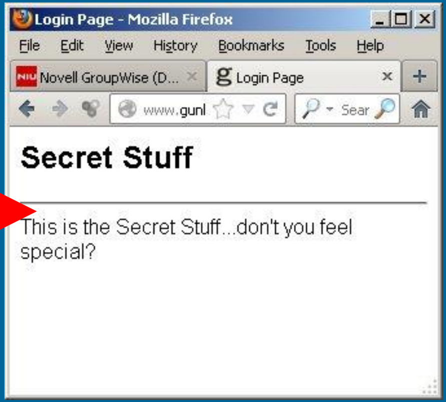
Password:

Login



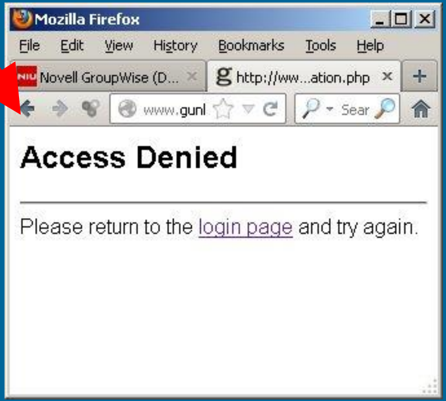
Access Approved

You may now look at all the Secret Stuff


Login Page - Mozilla Firefox
File Edit View History Bookmarks Tools Help
Novell GroupWise (D...
Login Page
www.gunl
Sear

Secret Stuff

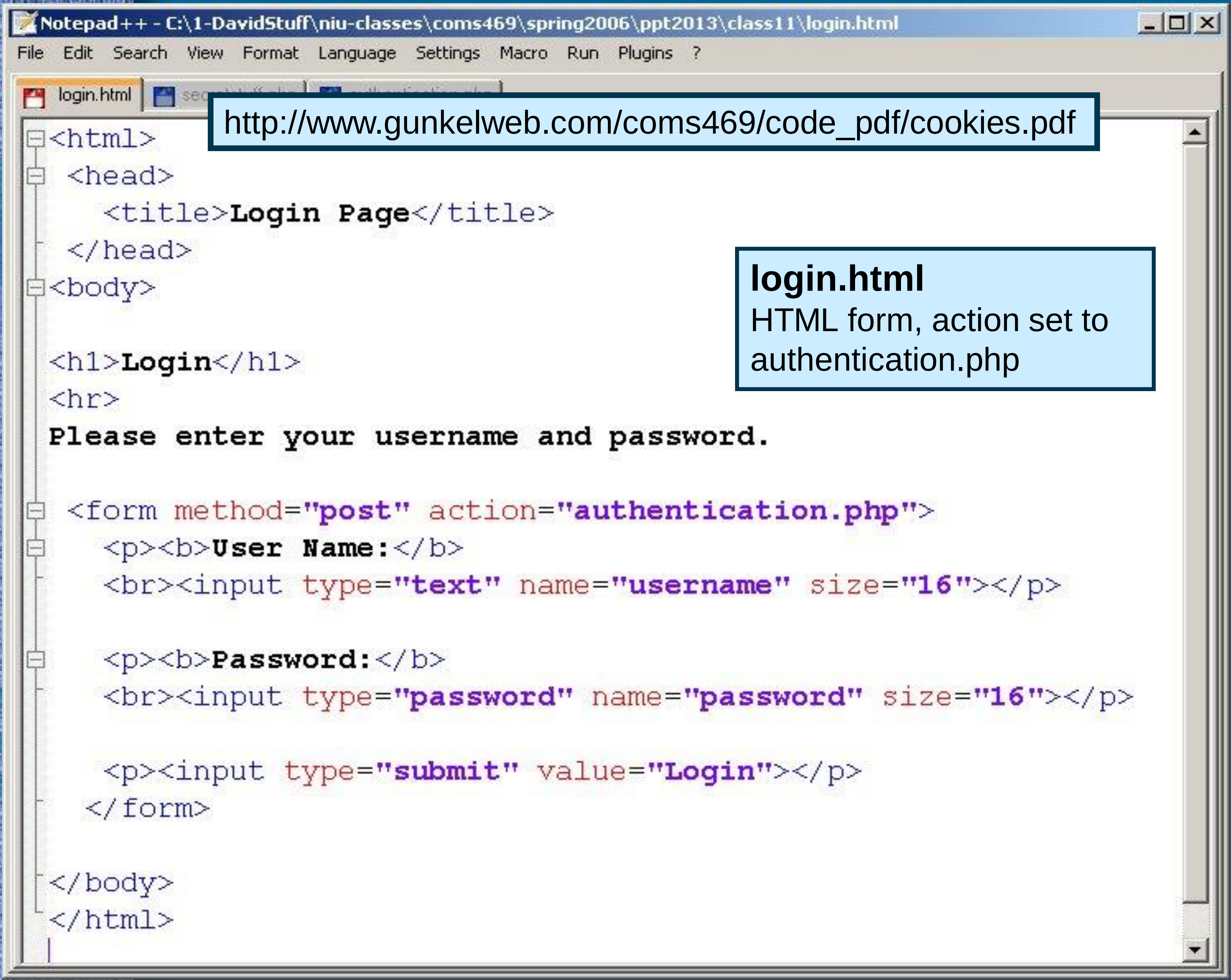
This is the Secret Stuff...don't you feel special?



Access Denied

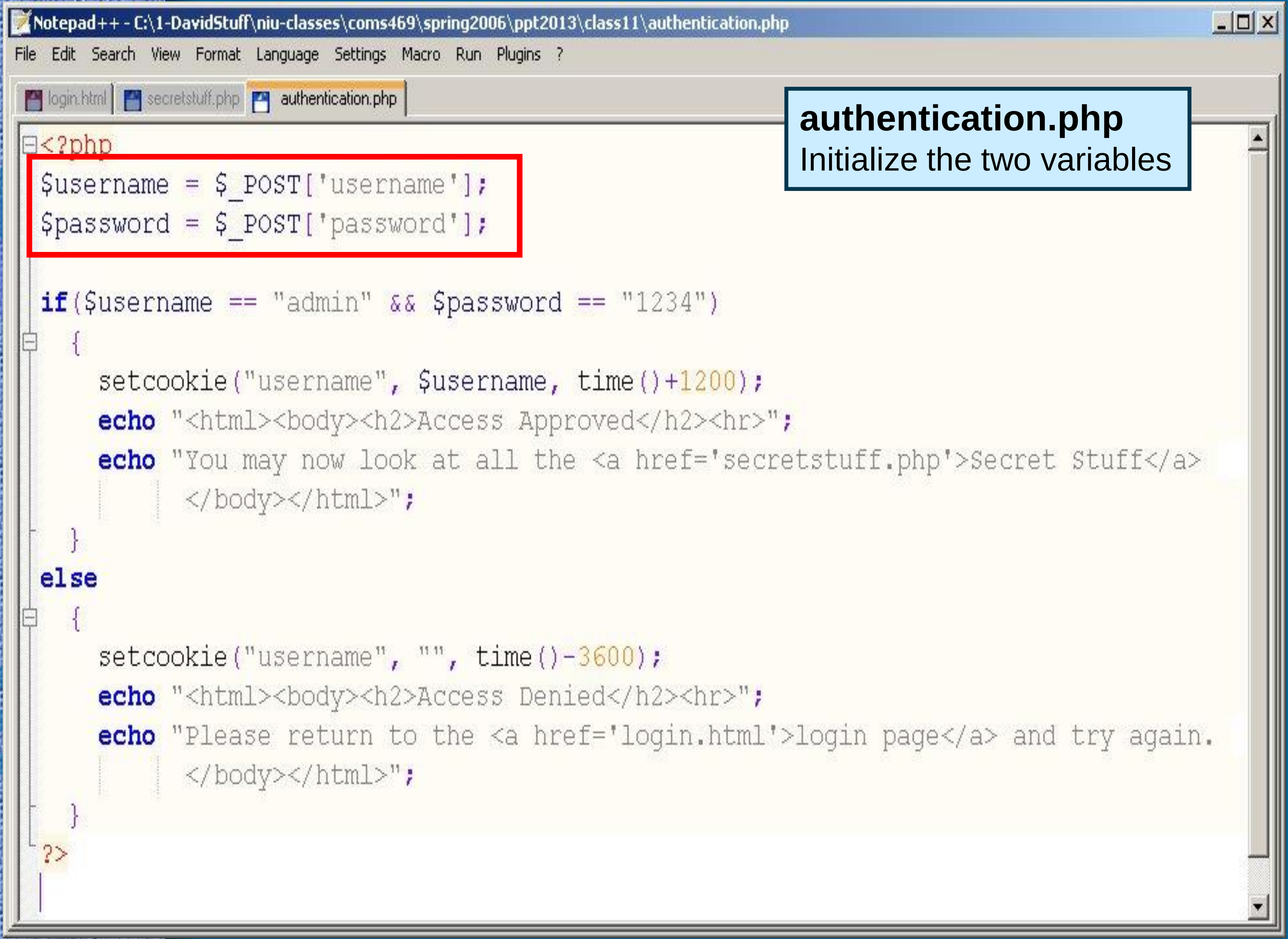
Please return to the login page and try again.

http://www.gunkelweb.com/coms469/code_pdf/cookies.pdf


Notepad++ - C:\1-DavidStuff\niu-classes\coms469\spring2006\ppt2013\class11\login.html
File
Edit
Search
View
Format
Language
Settings
Macro
Run
Plugins
?
login.html

```
<html>
 <head>
   <title>Login Page</title>
 </head>
<body>

<h1>Login</h1>
<hr>
Please enter your username and password.

 <form method="post" action="authentication.php">
   <p><b>User Name:</b>
   <br><input type="text" name="username" size="16"></p>

   <p><b>Password:</b>
   <br><input type="password" name="password" size="16"></p>

   <p><input type="submit" value="Login"></p>
  </form>

</body>
</html>
```

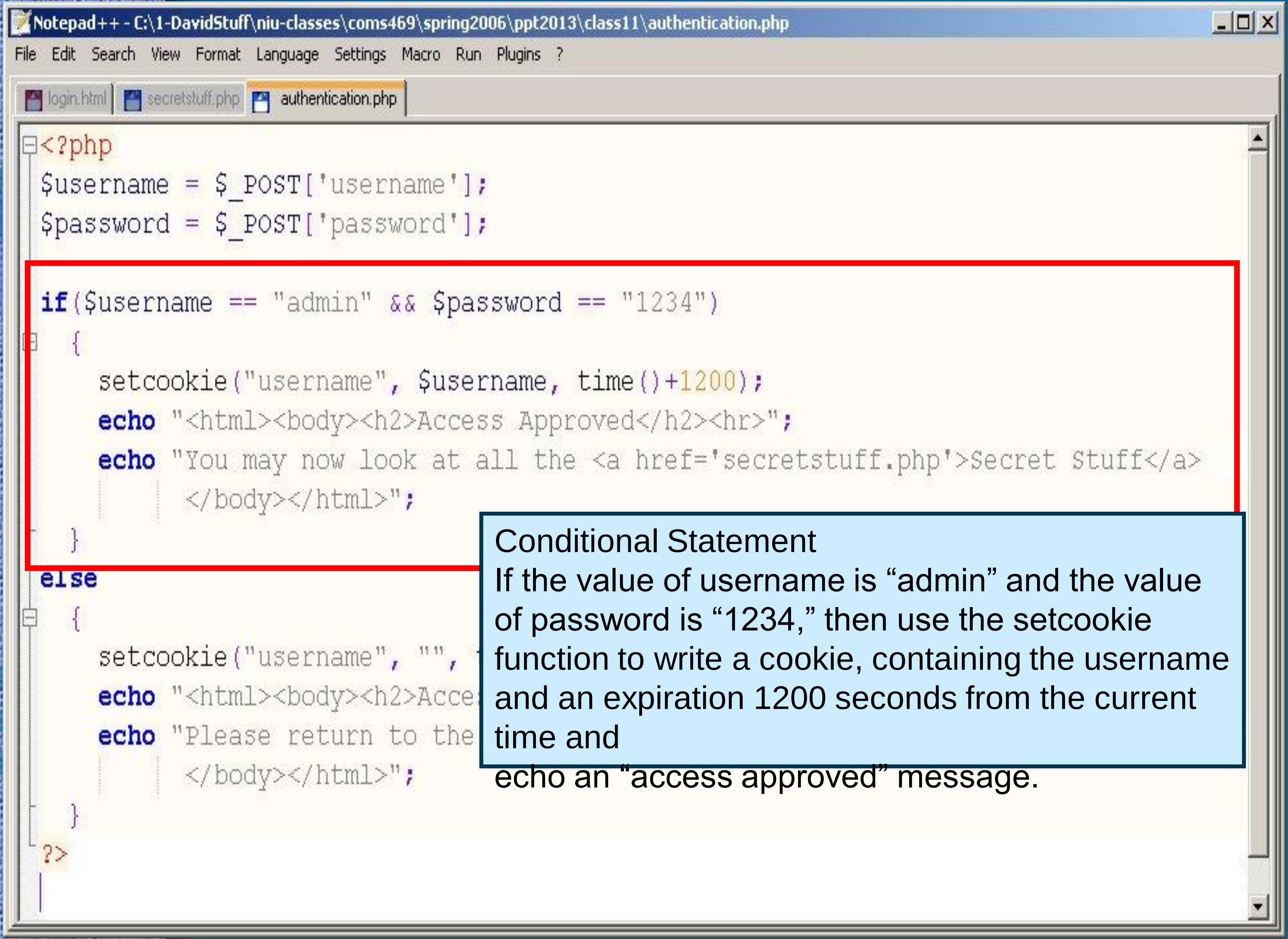
login.html
HTML form, action set to authentication.php


Notepad++ - C:\1-DavidStuff\niu-classes\coms469\spring2006\ppt2013\class11\authentication.php
File Edit Search View Format Language Settings Macro Run Plugins ?
login.html
secretstuff.php
authentication.php

authentication.php

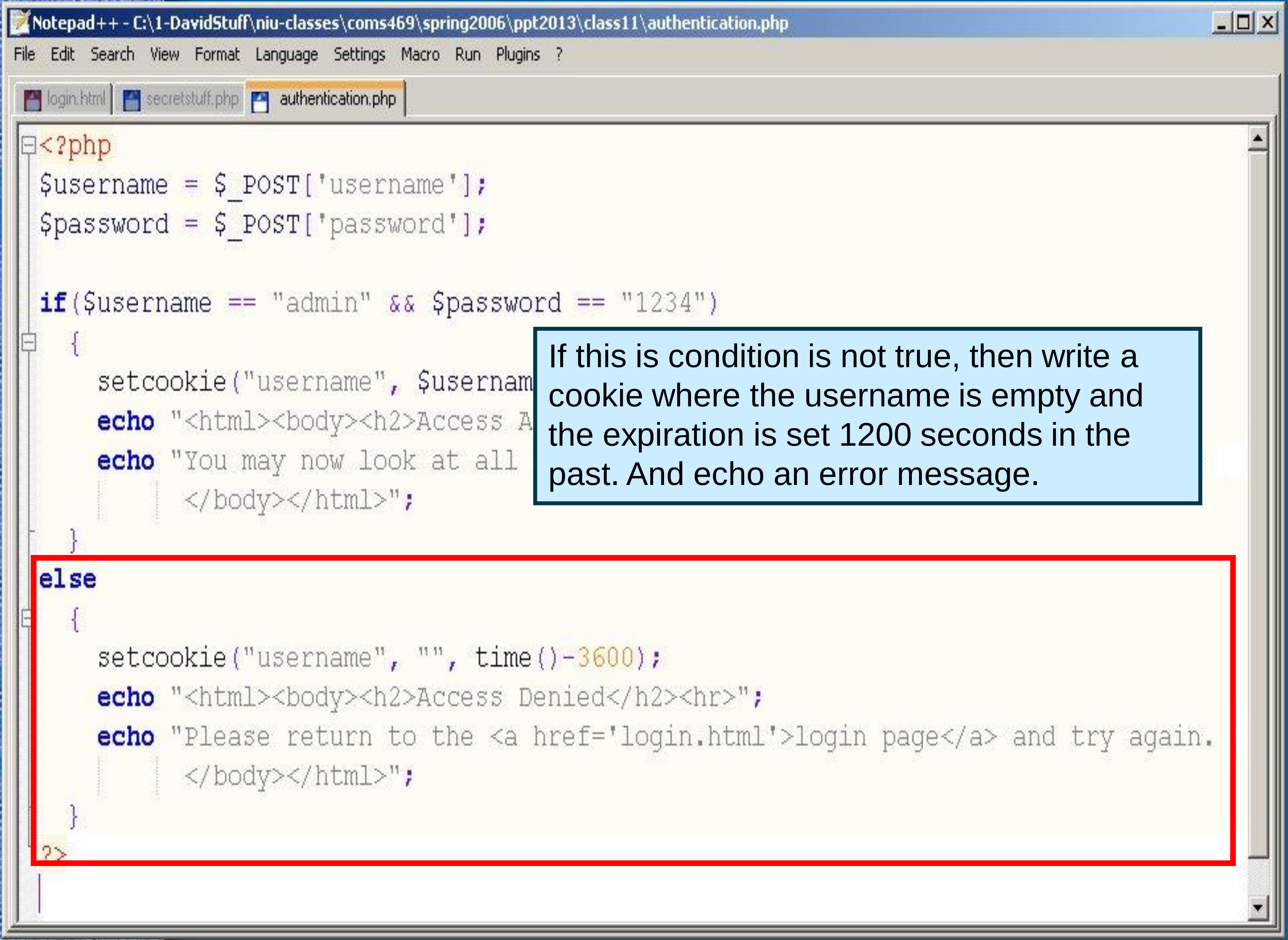
Initialize the two variables

```php
<?php
$username = $_POST['username'];
$password = $_POST['password'];

if($username == "admin" && $password == "1234")
  {
    setcookie("username", $username, time()+1200);
    echo "<html><body><h2>Access Approved</h2><hr>";
    echo "You may now look at all the <a href='secretstuff.php'>Secret Stuff</a>
          </body></html>";
  }
else
  {
    setcookie("username", "", time()-3600);
    echo "<html><body><h2>Access Denied</h2><hr>";
    echo "Please return to the <a href='login.html'>login page</a> and try again.
          </body></html>";
  }
?>
```


Notepad++ - C:\1-DavidStuff\niu-classes\coms469\spring2006\ppt2013\class11\authentication.php
File Edit Search View Format Language Settings Macro Run Plugins ?
login.html
secretstuff.php
authentication.php

```php
<?php
$username = $_POST['username'];
$password = $_POST['password'];

if($username == "admin" && $password == "1234")
  {
    setcookie("username", $username, time()+1200);
    echo "<html><body><h2>Access Approved</h2><hr>";
    echo "You may now look at all the <a href='secretstuff.php'>Secret Stuff</a>
          </body></html>";
  }
else
  {
    setcookie("username", "", t
    echo "<html><body><h2>Acce
    echo "Please return to the
          </body></html>";
  }
?>
```

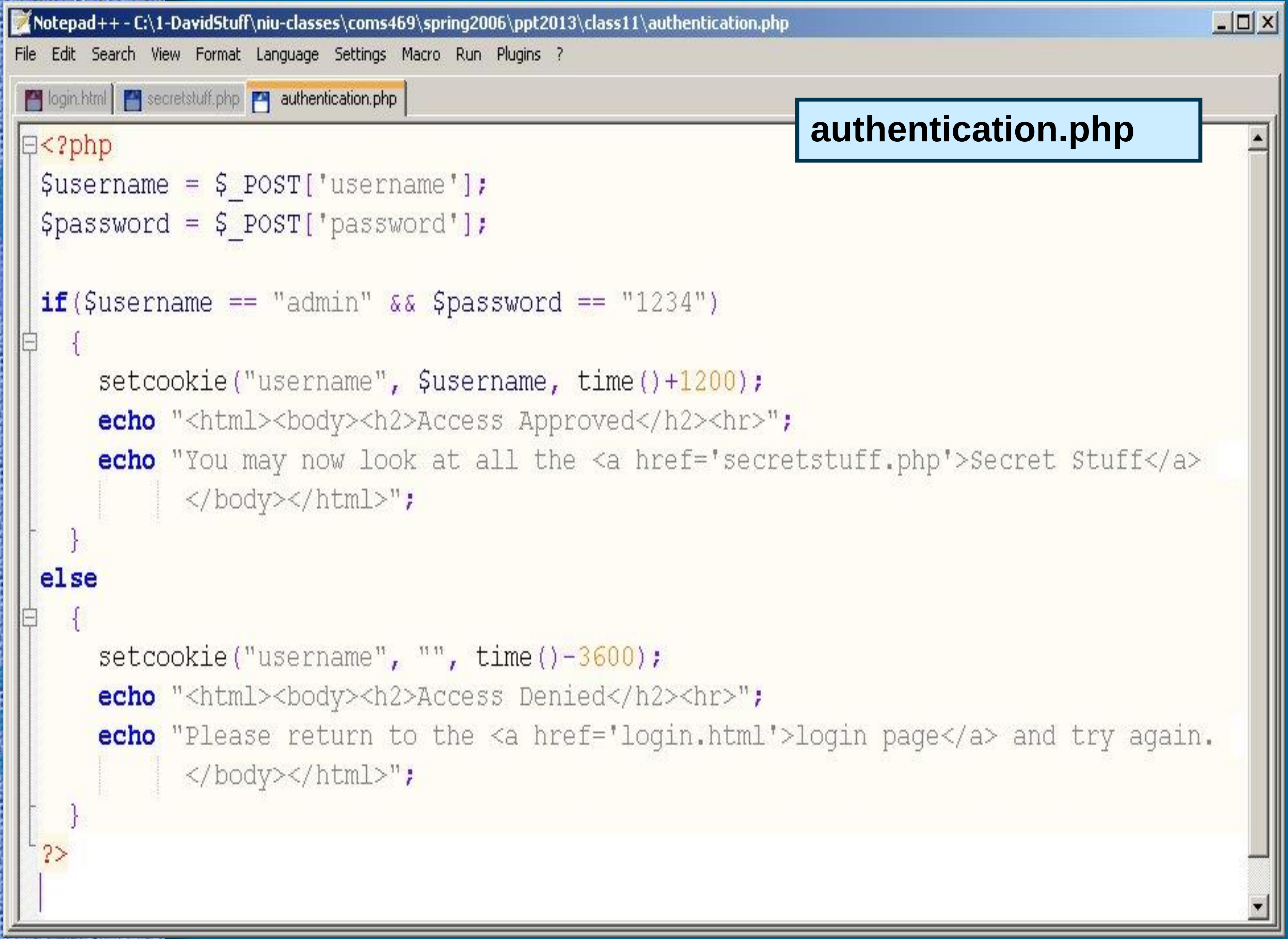
Conditional Statement
If the value of username is “admin” and the value of password is “1234,” then use the setcookie function to write a cookie, containing the username and an expiration 1200 seconds from the current time and
echo an “access approved” message.


Notepad++ - C:\1-DavidStuff\niu-classes\coms469\spring2006\ppt2013\class11\authentication.php
File Edit Search View Format Language Settings Macro Run Plugins ?
login.html
secretstuff.php
authentication.php

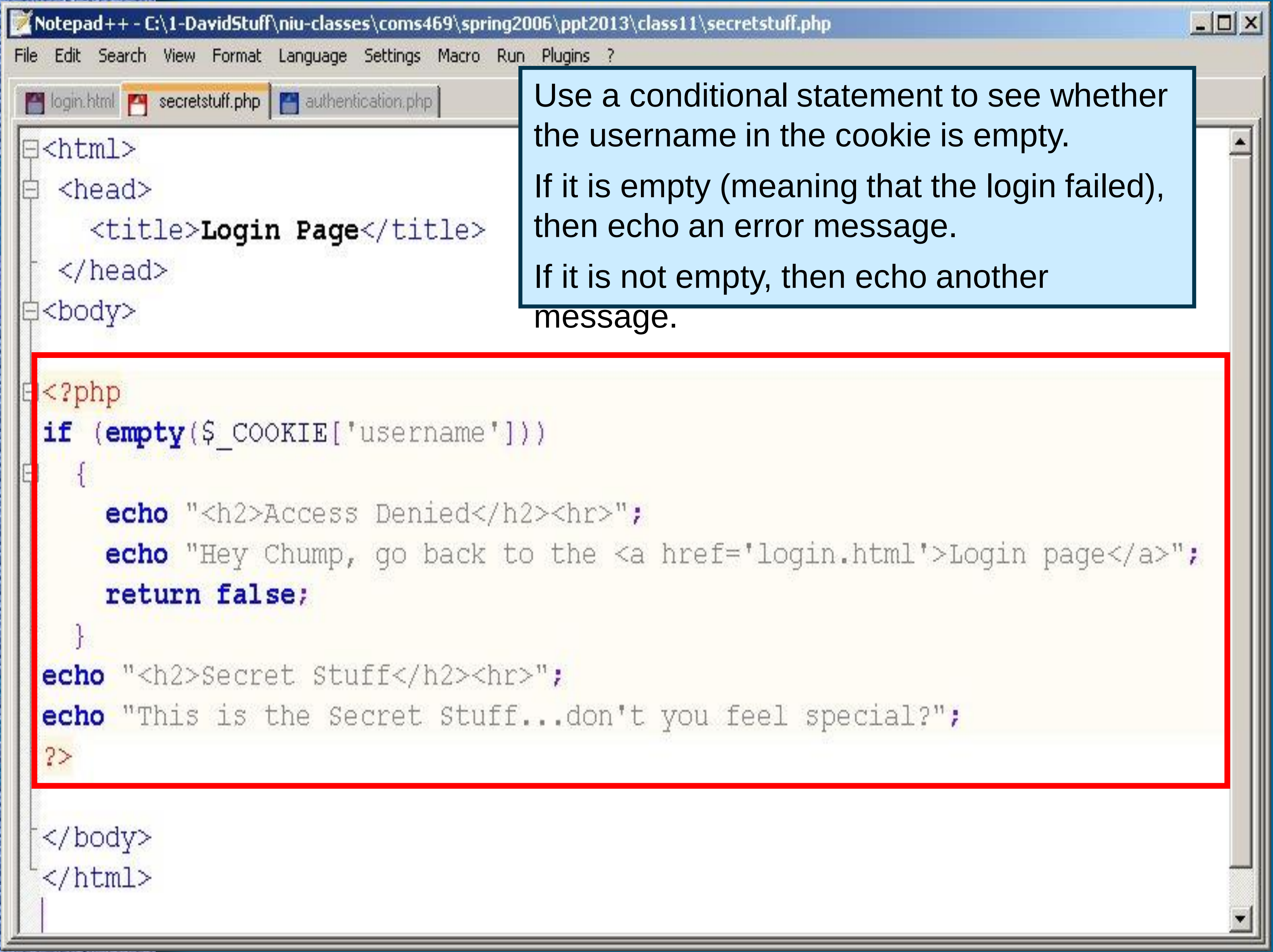
```
<?php
$username = $_POST['username'];
$password = $_POST['password'];

if($username == "admin" && $password == "1234")
  {
    setcookie("username", $usernam
    echo "<html><body><h2>Access A
    echo "You may now look at all
          </body></html>";
  }
else
  {
    setcookie("username", "", time()-3600);
    echo "<html><body><h2>Access Denied</h2><hr>";
    echo "Please return to the <a href='login.html'>login page</a> and try again.
          </body></html>";
  }
?>
```

If this is condition is not true, then write a cookie where the username is empty and the expiration is set 1200 seconds in the past. And echo an error message.

authentication.php


Notepad++ - C:\1-DavidStuff\niu-classes\coms469\spring2006\ppt2013\class11\authentication.php
File Edit Search View Format Language Settings Macro Run Plugins ?
login.html
secretstuff.php
authentication.php

```
<?php
$username = $_POST['username'];
$password = $_POST['password'];

if($username == "admin" && $password == "1234")
  {
    setcookie("username", $username, time()+1200);
    echo "<html><body><h2>Access Approved</h2><hr>";
    echo "You may now look at all the <a href='secretstuff.php'>Secret Stuff</a>
          </body></html>";
  }
else
  {
    setcookie("username", "", time()-3600);
    echo "<html><body><h2>Access Denied</h2><hr>";
    echo "Please return to the <a href='login.html'>login page</a> and try again.
          </body></html>";
  }
?>
```

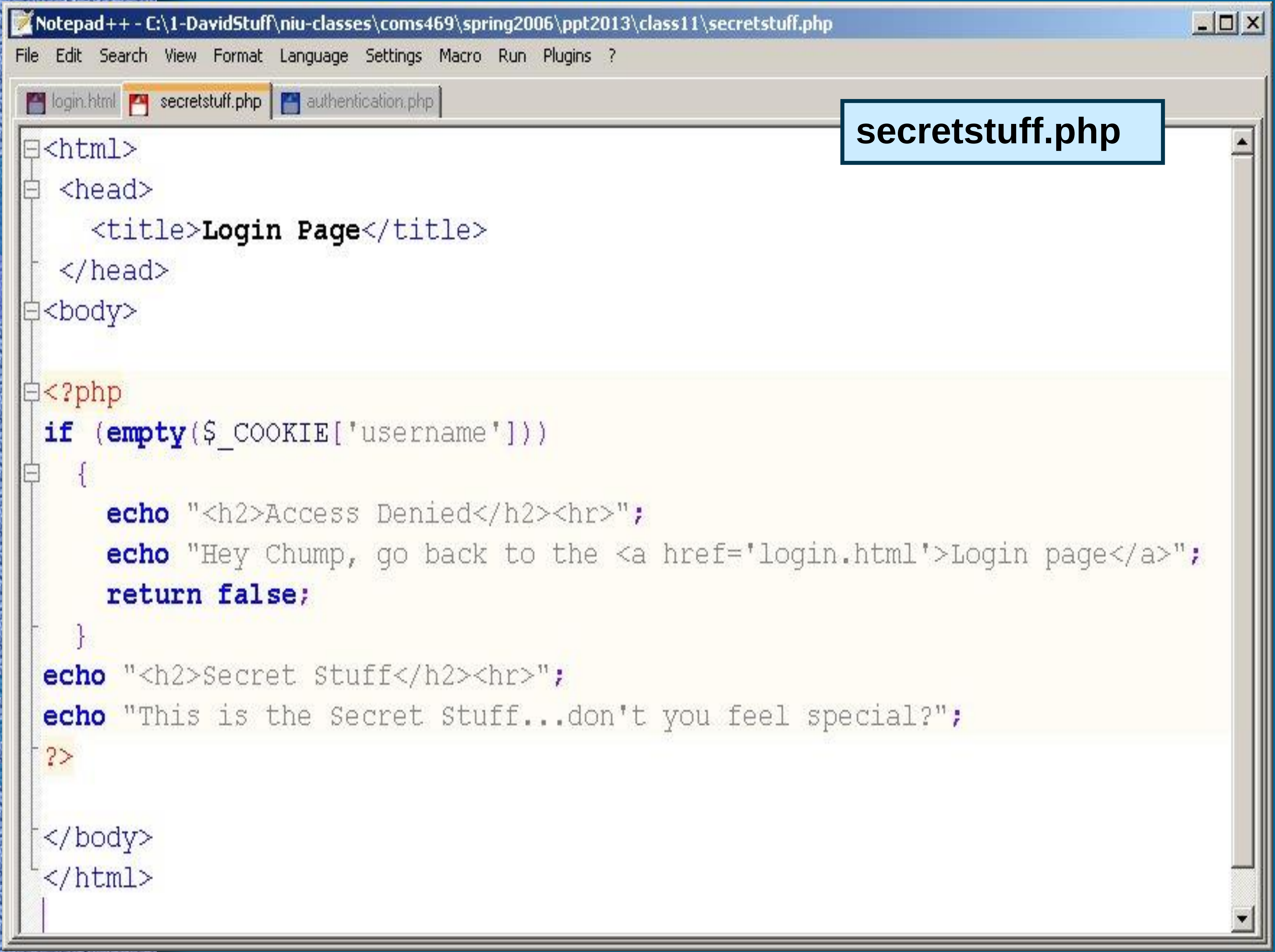

Notepad++ - C:\1-DavidStuff\niu-classes\coms469\spring2006\ppt2013\class11\secretstuff.php
File Edit Search View Format Language Settings Macro Run Plugins ?
login.html
secretstuff.php
authentication.php

Use a conditional statement to see whether the username in the cookie is empty.

If it is empty (meaning that the login failed), then echo an error message.

If it is not empty, then echo another message.

```
<html>
 <head>
   <title>Login Page</title>
 </head>
<body>

<?php
if (empty($_COOKIE['username']))
  {
    echo "<h2>Access Denied</h2><hr>";
    echo "Hey Chump, go back to the <a href='login.html'>Login page</a>";
    return false;
  }
echo "<h2>Secret Stuff</h2><hr>";
echo "This is the Secret Stuff...don't you feel special?";
?>

</body>
</html>
```



Notepad++ - C:\1-DavidStuff\niu-classes\coms469\spring2006\ppt2013\class11\secretstuff.php
File Edit Search View Format Language Settings Macro Run Plugins ?
login.html
secretstuff.php
authentication.php

secretstuff.php

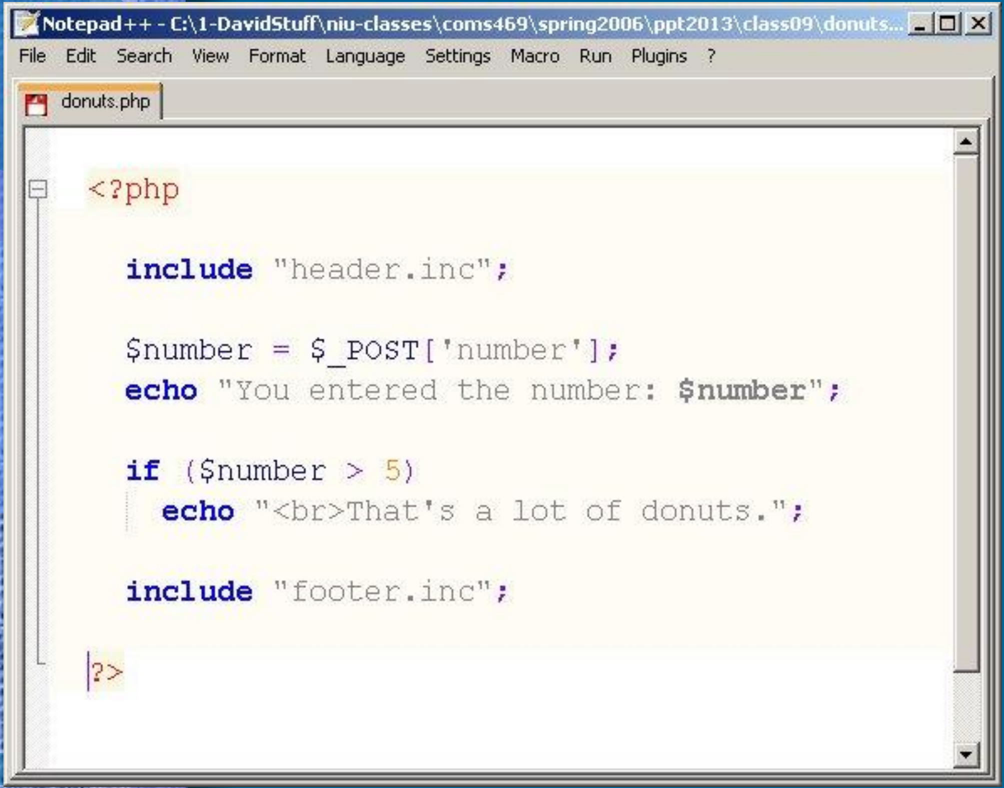
```
<html>
 <head>
   <title>Login Page</title>
 </head>
<body>

<?php
if (empty($_COOKIE['username']))
  {
    echo "<h2>Access Denied</h2><hr>";
    echo "Hey Chump, go back to the <a href='login.html'>Login page</a>";
    return false;
  }
echo "<h2>Secret Stuff</h2><hr>";
echo "This is the Secret Stuff...don't you feel special?";
?>

</body>
</html>
```

Included Files

- Two ways to access and insert other files into a PHP document
  - require “header.inc”
  - include “header.inc”

    Included files often have the extension .inc but you can also use other extensions
- Purpose
  - Efficiency – it saves time
  - Consistency – same info used by numerous pages
  - Maintenance – common information held in one file

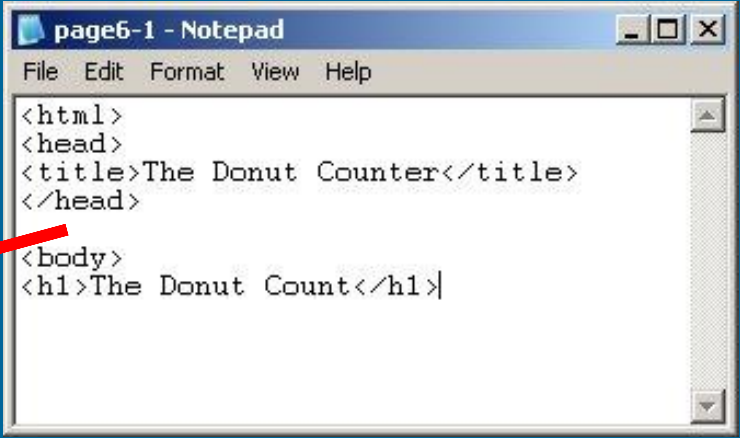
mypage.php



Notepad++ - C:\1-DavidStuff\niu-classes\coms469\spring2006\ppt2013\class09\donuts...
File Edit Search View Format Language Settings Macro Run Plugins ?
donuts.php

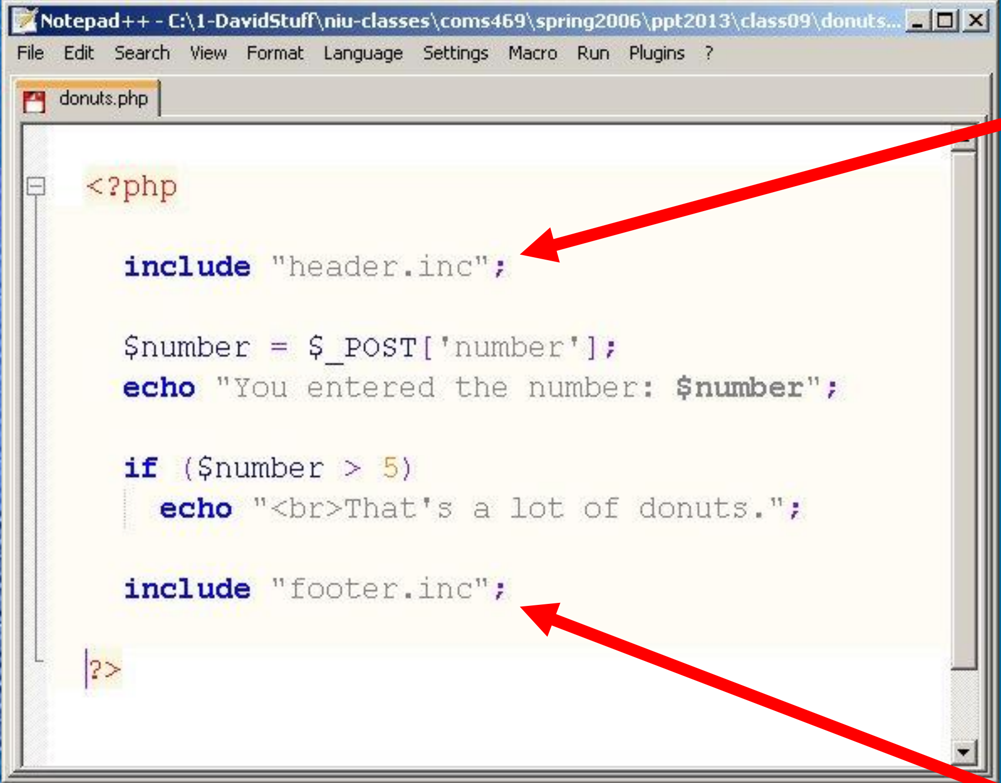
```
<?php

  include "header.inc";

  $number = $_POST['number'];
  echo "You entered the number: $number";

  if ($number > 5)
    echo "<br>That's a lot of donuts.";

  include "footer.inc";

?>
```

header.inc



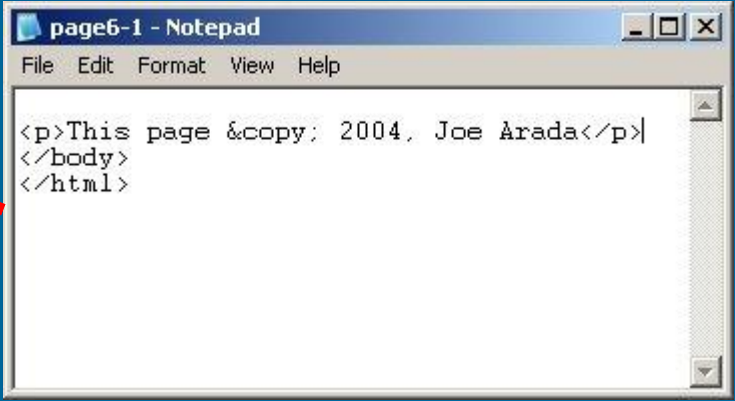
```
<html>
<head>
<title>The Donut Counter</title>
</head>

<body>
<h1>The Donut Count</h1>
```

mypage.php


Notepad++ - C:\1-DavidStuff\niu-classes\coms469\spring2006\ppt2013\class09\donuts...
File Edit Search View Format Language Settings Macro Run Plugins ?
donuts.php

```
<?php

  include "header.inc";

  $number = $_POST['number'];
  echo "You entered the number: $number";

  if ($number > 5)
    echo "<br>That's a lot of donuts.";

  include "footer.inc";

?>
```

footer.inc



```
<p>This page &copy; 2004, Joe Arada</p>
</body>
</html>
```

<u>Require vs. Include</u>

require is not an executable statement; include is executable. Consequently, include provides more options and flexibility.

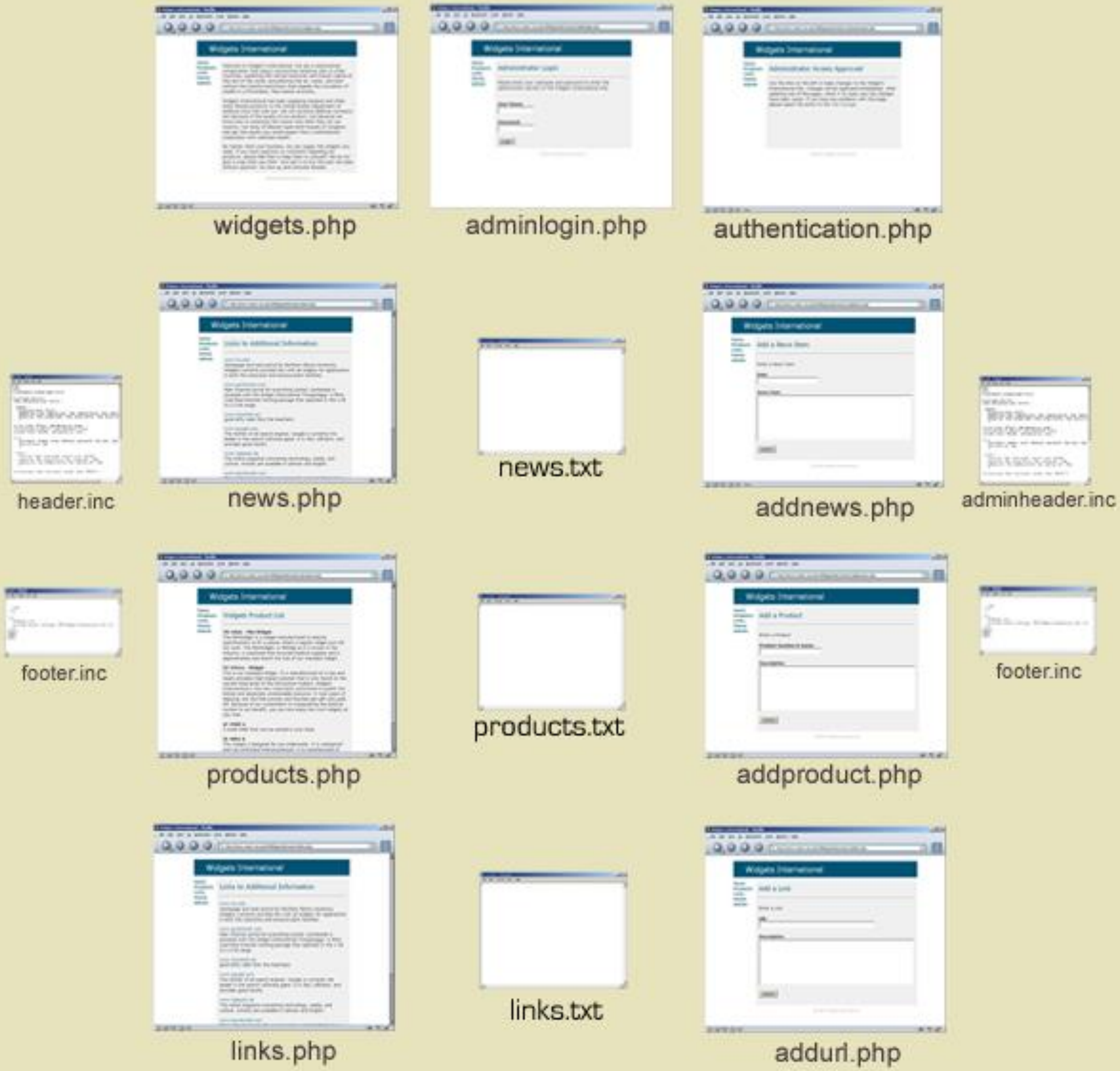
Preview

- Ch. 6 - Working with Files and Directories (pp. 159-183)

Preview

- Content Management System – CMS
  - Entirely different way to create, manage and deliver information over the web
  - Learning to think in this fashion is the main goal of working with server-side scripting (i.e. php)
- This is the kind application you should be producing for your second project
  - Project two should be organized around this sort of content management approach
  - Outcome – a flexible, responsive, and dynamic web site for your client

Content Management Site



Content Management Site

widgets.php

adminlogin.php

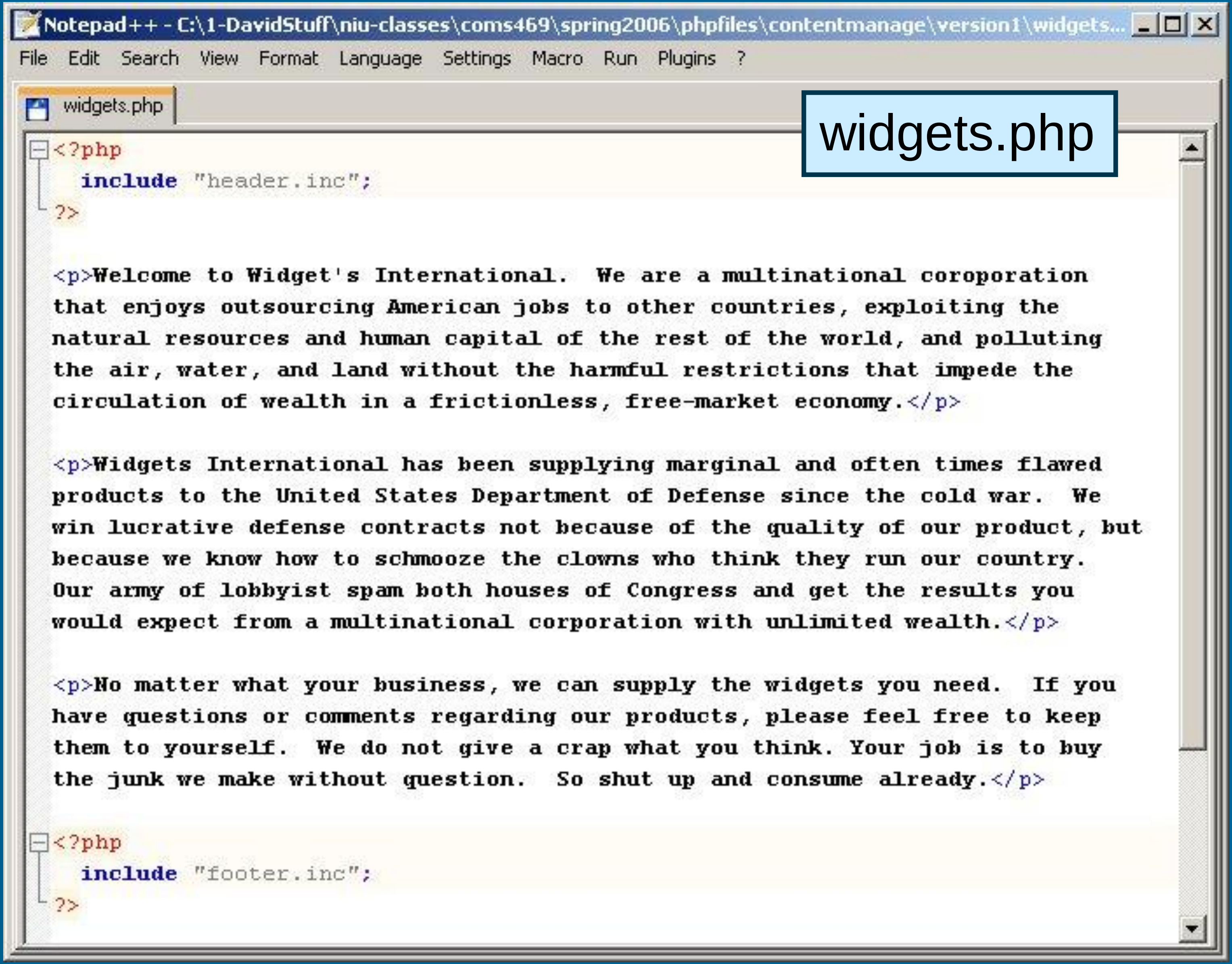
authentication.php

header.inc

adminheader.inc

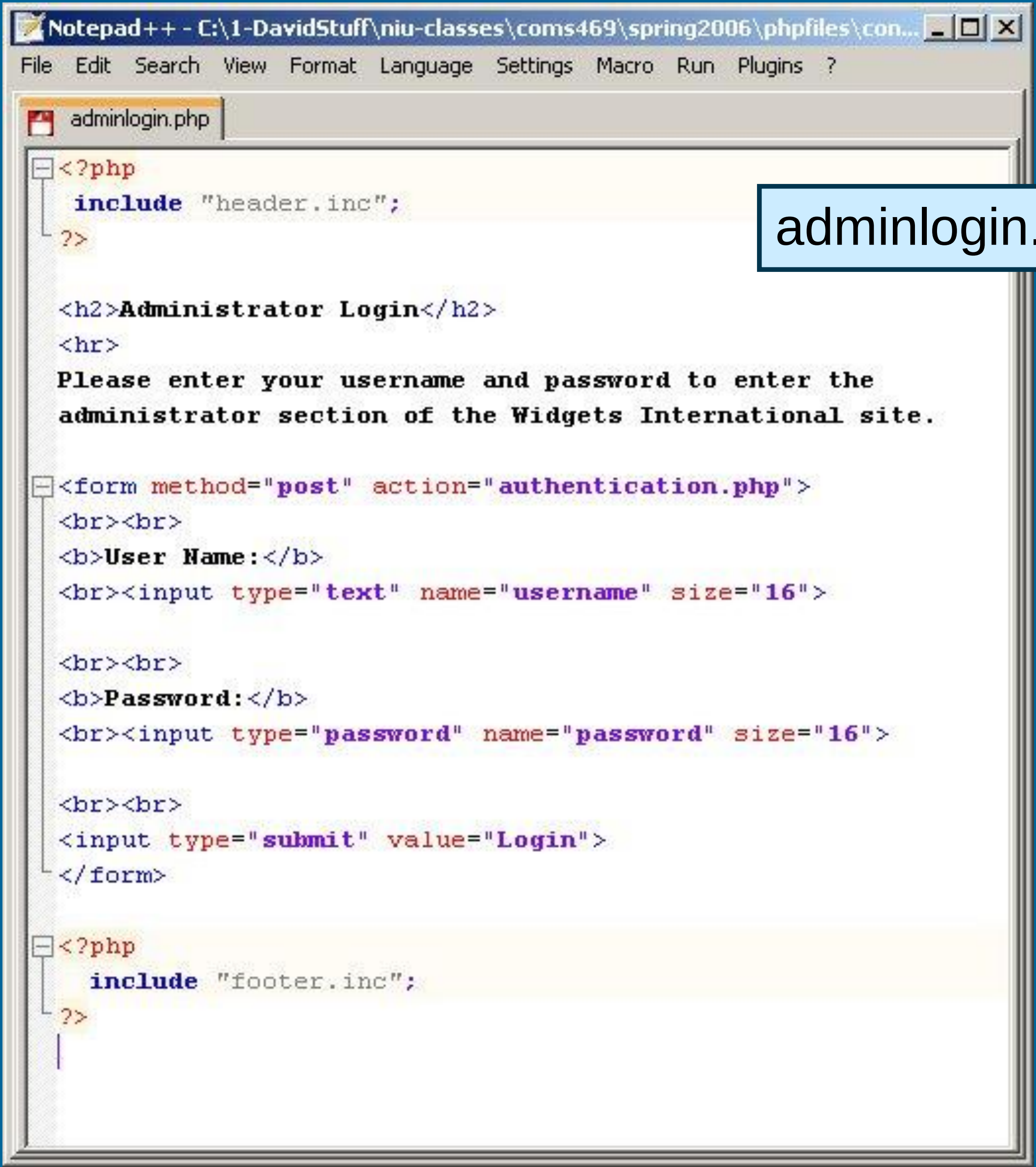
footer.inc

widgets.php


Notepad++ - C:\1-DavidStuff\niu-classes\coms469\spring2006\phpfiles\contentmanage\version1\widgets...
File
Edit
Search
View
Format
Language
Settings
Macro
Run
Plugins
?
widgets.php

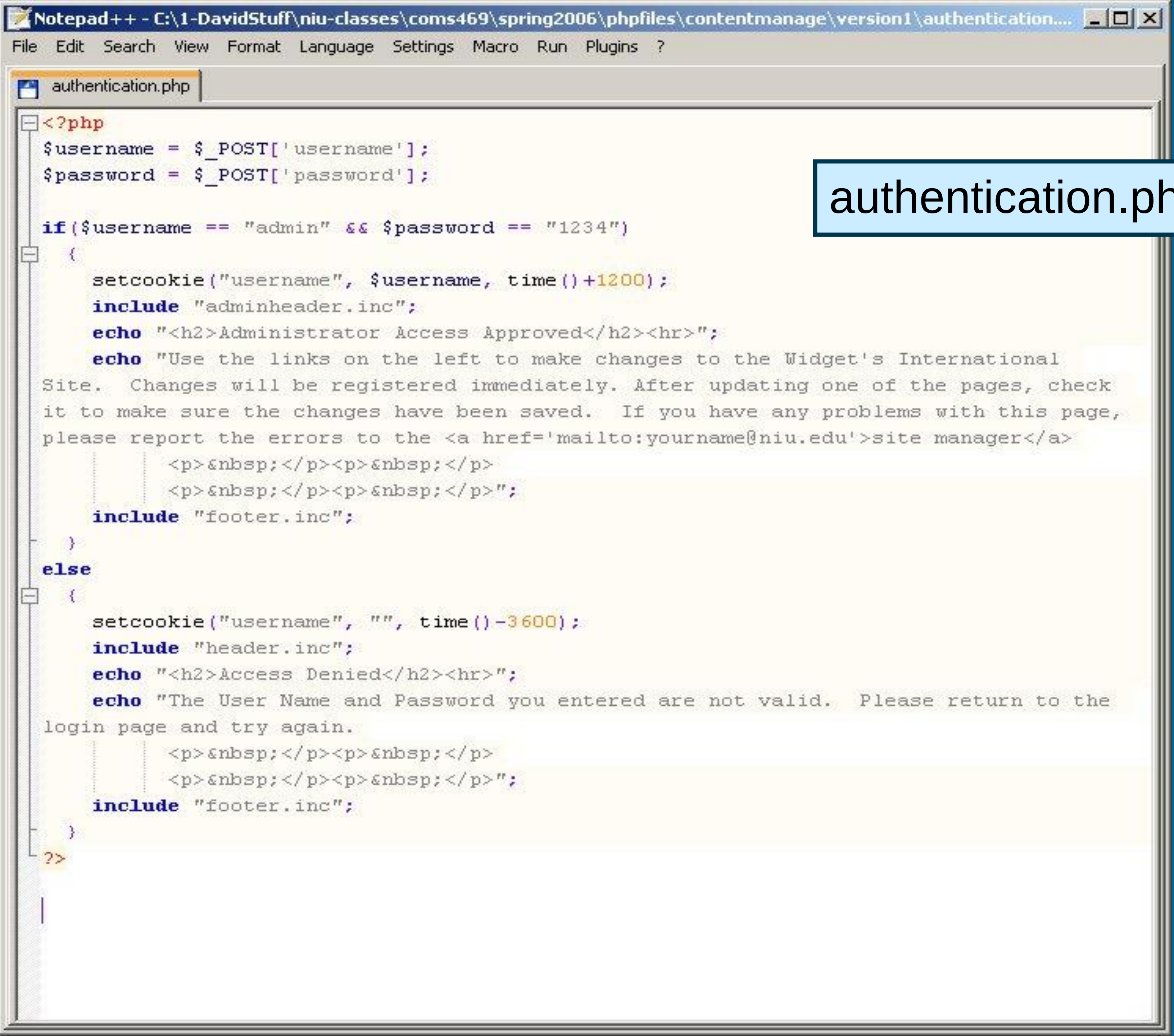
```
<?php
  include "header.inc";
?>

<p>Welcome to Widget's International.  We are a multinational coroporation
that enjoys outsourcing American jobs to other countries, exploiting the
natural resources and human capital of the rest of the world, and polluting
the air, water, and land without the harmful restrictions that impede the
circulation of wealth in a frictionless, free-market economy.</p>

<p>Widgets International has been supplying marginal and often times flawed
products to the United States Department of Defense since the cold war.  We
win lucrative defense contracts not because of the quality of our product, but
because we know how to schmooze the clowns who think they run our country.
Our army of lobbyist spam both houses of Congress and get the results you
would expect from a multinational corporation with unlimited wealth.</p>

<p>No matter what your business, we can supply the widgets you need.  If you
have questions or comments regarding our products, please feel free to keep
them to yourself.  We do not give a crap what you think. Your job is to buy
the junk we make without question.  So shut up and consume already.</p>

<?php
  include "footer.inc";
?>
```

adminlogin.php


Notepad++ - C:\1-DavidStuff\niu-classes\coms469\spring2006\phpfiles\con...
File Edit Search View Format Language Settings Macro Run Plugins ?
adminlogin.php

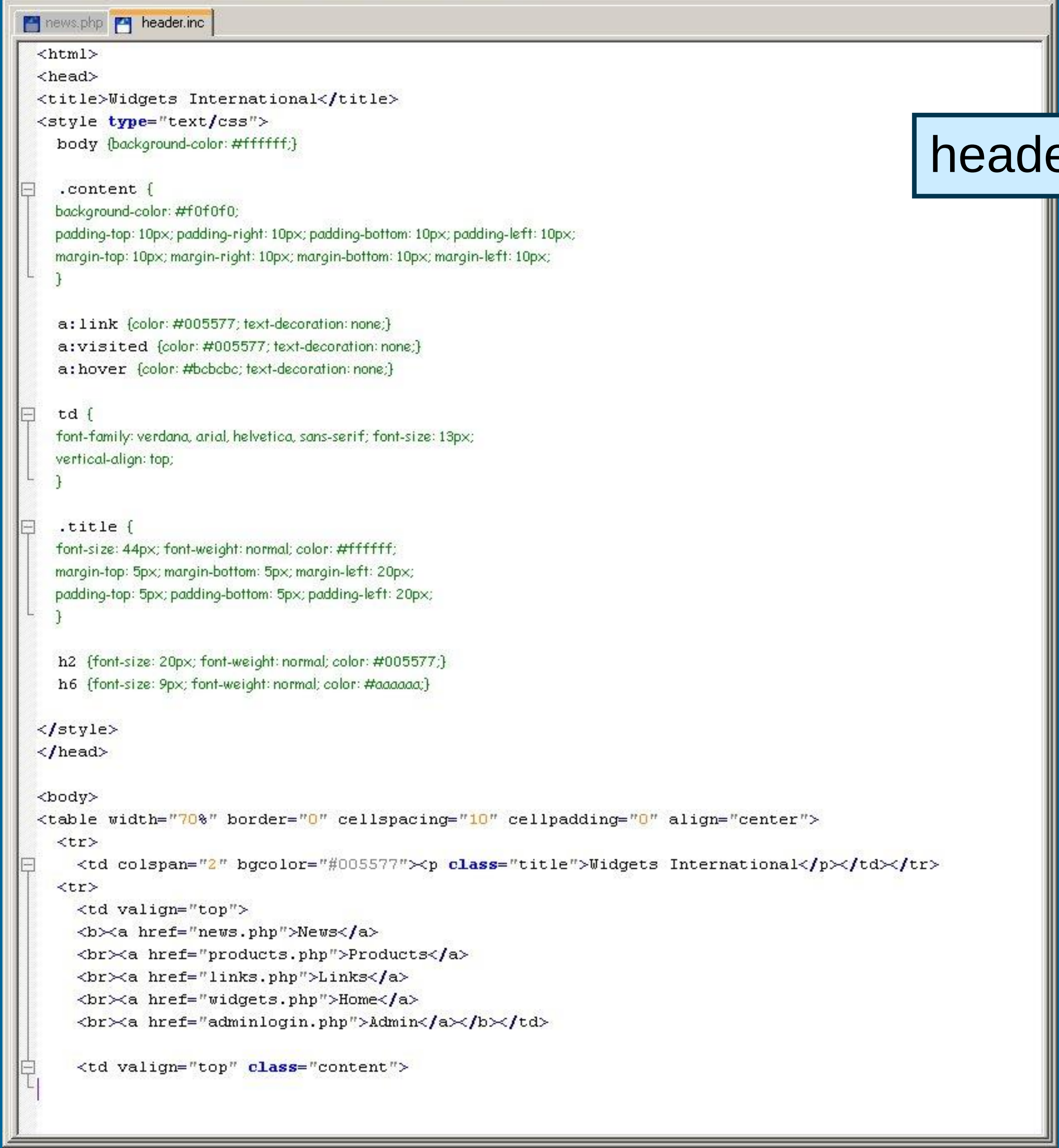
```
<?php
 include "header.inc";
?>

<h2>Administrator Login</h2>
<hr>
Please enter your username and password to enter the
administrator section of the Widgets International site.

<form method="post" action="authentication.php">
<br><br>
<b>User Name:</b>
<br><input type="text" name="username" size="16">

<br><br>
<b>Password:</b>
<br><input type="password" name="password" size="16">

<br><br>
<input type="submit" value="Login">
</form>

<?php
  include "footer.inc";
?>
```

authentication.php


Notepad++ - C:\1-DavidStuff\niu-classes\coms469\spring2006\phpfiles\contentmanage\version1\authentication....
File Edit Search View Format Language Settings Macro Run Plugins ?
authentication.php

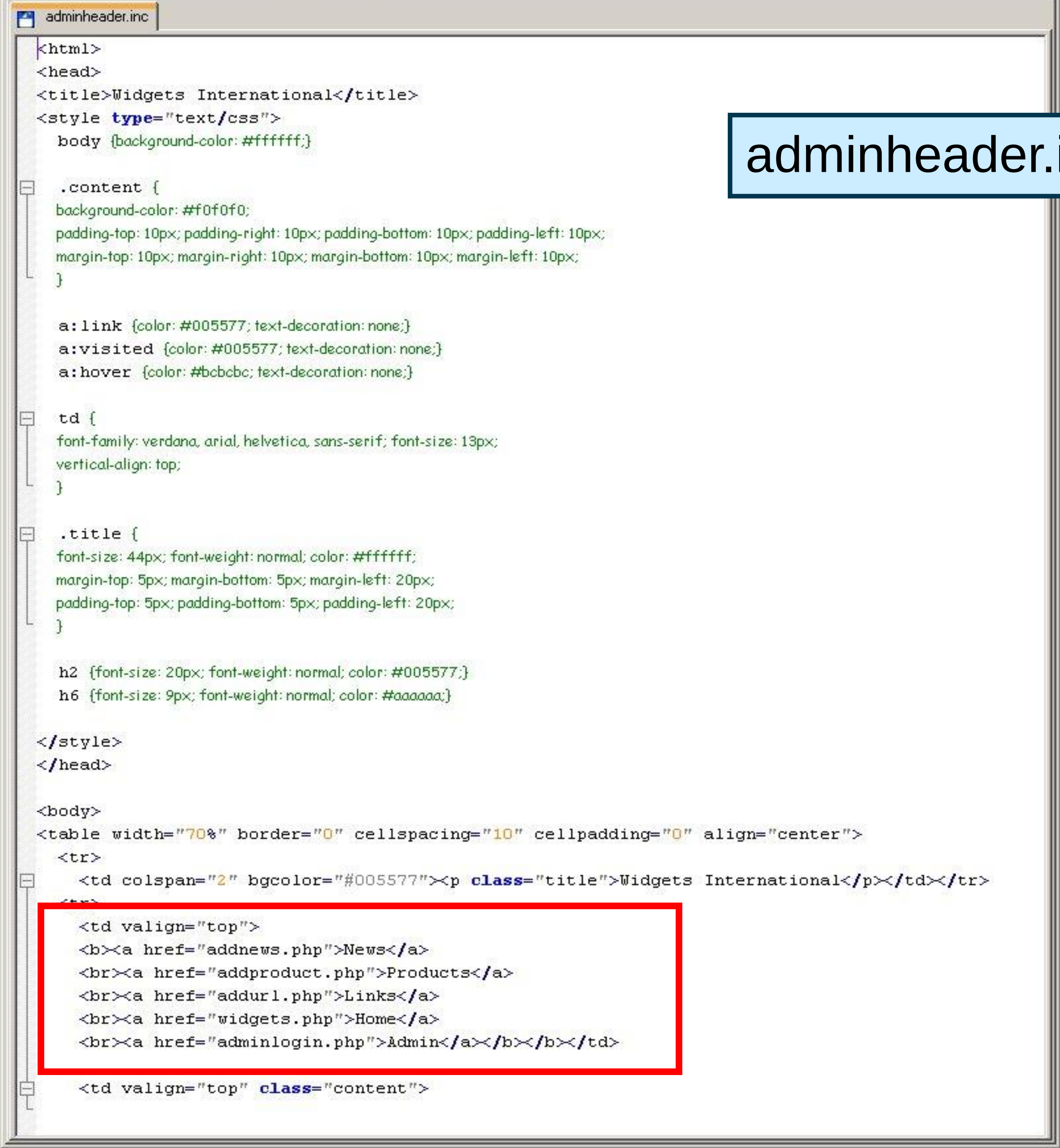
```php
<?php
$username = $_POST['username'];
$password = $_POST['password'];

if($username == "admin" && $password == "1234")
  {
    setcookie("username", $username, time()+1200);
    include "adminheader.inc";
    echo "<h2>Administrator Access Approved</h2><hr>";
    echo "Use the links on the left to make changes to the Widget's International
Site.  Changes will be registered immediately. After updating one of the pages, check
it to make sure the changes have been saved.  If you have any problems with this page,
please report the errors to the <a href='mailto:yourname@niu.edu'>site manager</a>
          <p>&nbsp;</p><p>&nbsp;</p>
          <p>&nbsp;</p><p>&nbsp;</p>";
    include "footer.inc";
  }
else
  {
    setcookie("username", "", time()-3600);
    include "header.inc";
    echo "<h2>Access Denied</h2><hr>";
    echo "The User Name and Password you entered are not valid.  Please return to the
login page and try again.
          <p>&nbsp;</p><p>&nbsp;</p>
          <p>&nbsp;</p><p>&nbsp;</p>";
    include "footer.inc";
  }
?>
```

header.inc

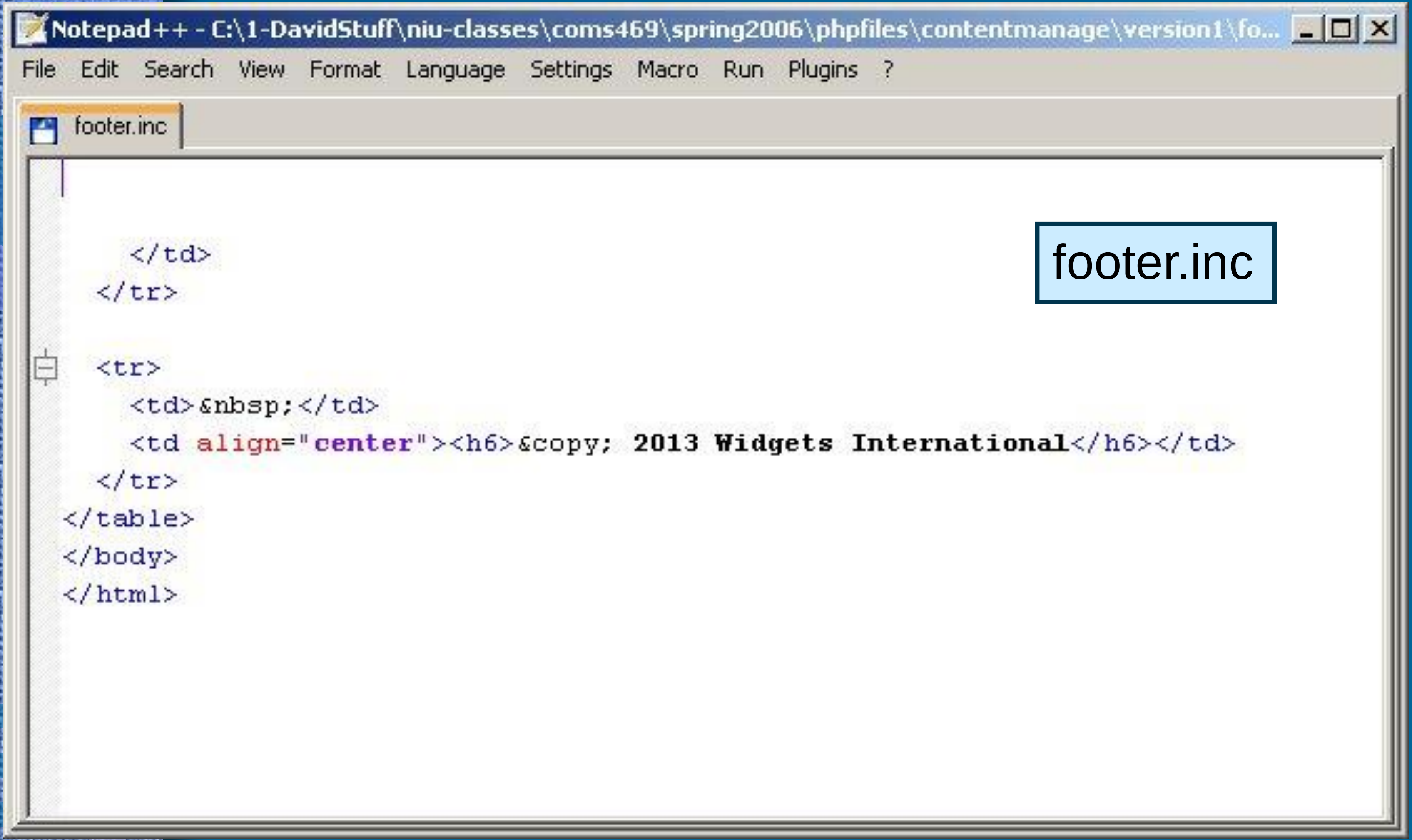


```
<html>
<head>
<title>Widgets International</title>
<style type="text/css">
  body {background-color: #ffffff;}

  .content {
  background-color: #f0f0f0;
  padding-top: 10px; padding-right: 10px; padding-bottom: 10px; padding-left: 10px;
  margin-top: 10px; margin-right: 10px; margin-bottom: 10px; margin-left: 10px;
  }

  a:link {color: #005577; text-decoration: none;}
  a:visited {color: #005577; text-decoration: none;}
  a:hover {color: #bcbcbc; text-decoration: none;}

  td {
  font-family: verdana, arial, helvetica, sans-serif; font-size: 13px;
  vertical-align: top;
  }

  .title {
  font-size: 44px; font-weight: normal; color: #ffffff;
  margin-top: 5px; margin-bottom: 5px; margin-left: 20px;
  padding-top: 5px; padding-bottom: 5px; padding-left: 20px;
  }

  h2 {font-size: 20px; font-weight: normal; color: #005577;}
  h6 {font-size: 9px; font-weight: normal; color: #aaaaaa;}

</style>
</head>

<body>
<table width="70%" border="0" cellspacing="10" cellpadding="0" align="center">
  <tr>
    <td colspan="2" bgcolor="#005577"><p class="title">Widgets International</p></td></tr>
  <tr>
    <td valign="top">
    <b><a href="news.php">News</a>
    <br><a href="products.php">Products</a>
    <br><a href="links.php">Links</a>
    <br><a href="widgets.php">Home</a>
    <br><a href="adminlogin.php">Admin</a></b></td>

    <td valign="top" class="content">
```

adminheader.inc



```
<html>
<head>
<title>Widgets International</title>
<style type="text/css">
  body {background-color: #ffffff;}

  .content {
  background-color: #f0f0f0;
  padding-top: 10px; padding-right: 10px; padding-bottom: 10px; padding-left: 10px;
  margin-top: 10px; margin-right: 10px; margin-bottom: 10px; margin-left: 10px;
  }

  a:link {color: #005577; text-decoration: none;}
  a:visited {color: #005577; text-decoration: none;}
  a:hover {color: #bcbcbc; text-decoration: none;}

  td {
  font-family: verdana, arial, helvetica, sans-serif; font-size: 13px;
  vertical-align: top;
  }

  .title {
  font-size: 44px; font-weight: normal; color: #ffffff;
  margin-top: 5px; margin-bottom: 5px; margin-left: 20px;
  padding-top: 5px; padding-bottom: 5px; padding-left: 20px;
  }

  h2 {font-size: 20px; font-weight: normal; color: #005577;}
  h6 {font-size: 9px; font-weight: normal; color: #aaaaaa;}

</style>
</head>

<body>
<table width="70%" border="0" cellspacing="10" cellpadding="0" align="center">
  <tr>
    <td colspan="2" bgcolor="#005577"><p class="title">Widgets International</p></td></tr>
  <tr>
    <td valign="top">
    <b><a href="addnews.php">News</a>
    <br><a href="addproduct.php">Products</a>
    <br><a href="addurl.php">Links</a>
    <br><a href="widgets.php">Home</a>
    <br><a href="adminlogin.php">Admin</a></b></b></td>

    <td valign="top" class="content">
```


Notepad++ - C:\1-DavidStuff\niu-classes\coms469\spring2006\phpfiles\contentmanage\version1\fo...
File
Edit
Search
View
Format
Language
Settings
Macro
Run
Plugins
?
footer.inc

```


      </td>
    </tr>

    <tr>
      <td>&nbsp;</td>
      <td align="center"><h6>&copy; 2013 Widgets International</h6></td>
    </tr>
  </table>
  </body>
  </html>
```

footer.inc

Preview

- Ch. 6 - Working with Files and Directories (pp. 159-183)