**http://code.tutsplus.com/tutorials/build-a-shopping-cart-with-php-and-mysql--net-5144**

**Build a Shopping Cart With PHP and MySQL**

## Step 1

Let's begin by taking a look at the folder structure:

**Structure**

* **reset.css** - you can get the reset from [this](http://meyerweb.com/eric/thoughts/2007/05/01/reset-reloaded/) link
* **style.css** - our own css file that we will be using to style our HTML markup
* **connection.php** - the file that will make our database connection
* **index.php** - the template for our shopping cart
* **cart.php** - the file where will able to change our products from the cart(add, remove)
* **products.php** - the products listing page

## Step 2

We'll start by writing the html markup and then style it. So open **index.php** and copy/paste the code below:

|  |  |
| --- | --- |
| 01  02  03  04  05  06  07  08  09  10  11  12  13  14  15  16  17  18  19  20  21  22  23  24  25  26  27  28  29  30 | <!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Strict//EN"  "<http://www.w3.org/TR/xhtml1/DTD/xhtml1-strict.dtd>">    <html xmlns="<http://www.w3.org/1999/xhtml>">  <head>        <meta http-equiv="Content-Type" content="text/html; charset=utf-8" />      <link rel="stylesheet" href="css/reset.css" />      <link rel="stylesheet" href="css/style.css" />        <title>Shopping cart</title>    </head>    <body>        <div id="container">            <div id="main">            </div><!--end main-->            <div id="sidebar">            </div><!--end sidebar-->        </div><!--end container-->    </body>  </html> |

As you can see, our page has two columns: the main column and the sidebar. Let's move on to the CSS. Open the file **style.css** and type the code below:

body {

    font-family: Verdana;

    font-size: 12px;

    color: #444;

}

#container {

    width: 700px;

    margin: 150px auto;

    background-color: #eee;

    overflow: hidden; /\* Set overflow: hidden to clear the floats on #main and #sidebar \*/

    padding: 15px;

}

    #main {

        width: 490px;

        float: left;

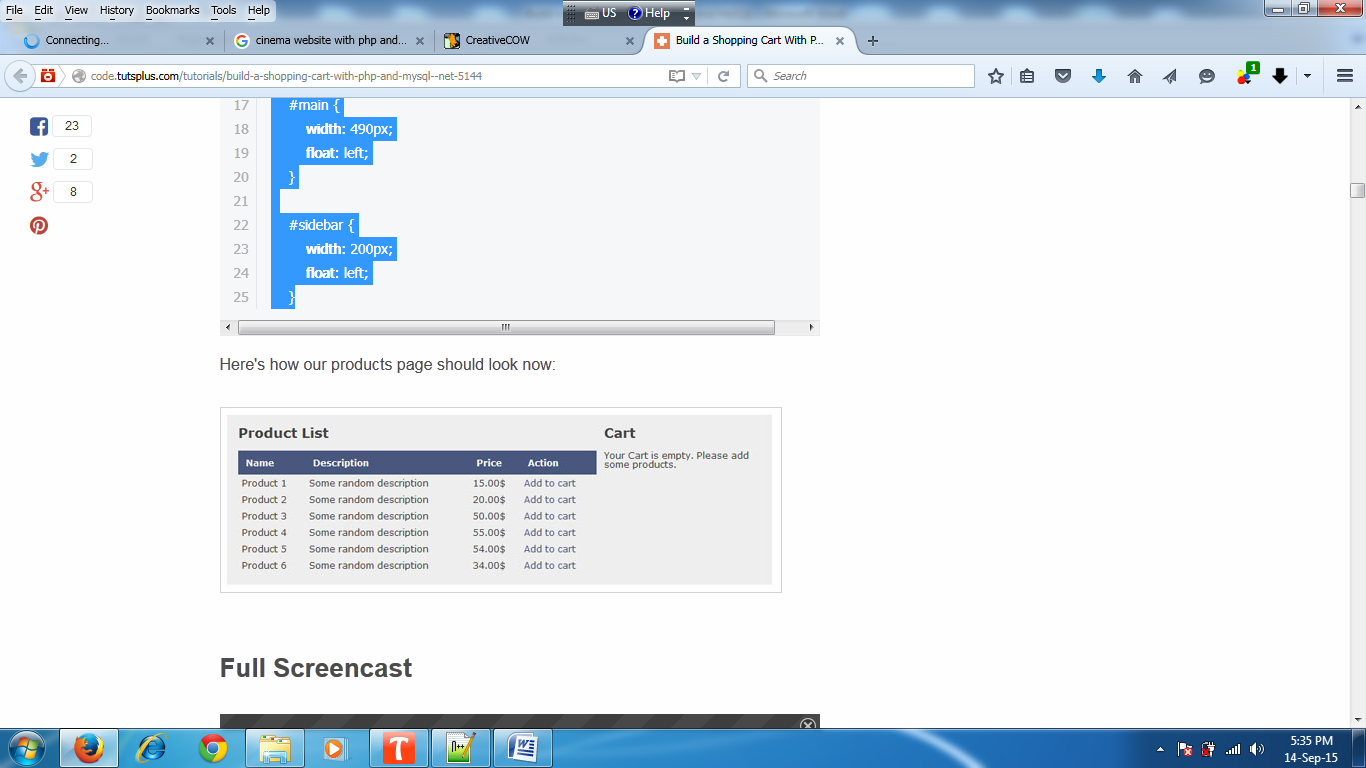
    }

    #sidebar {

        width: 200px;

        float: left;

    }



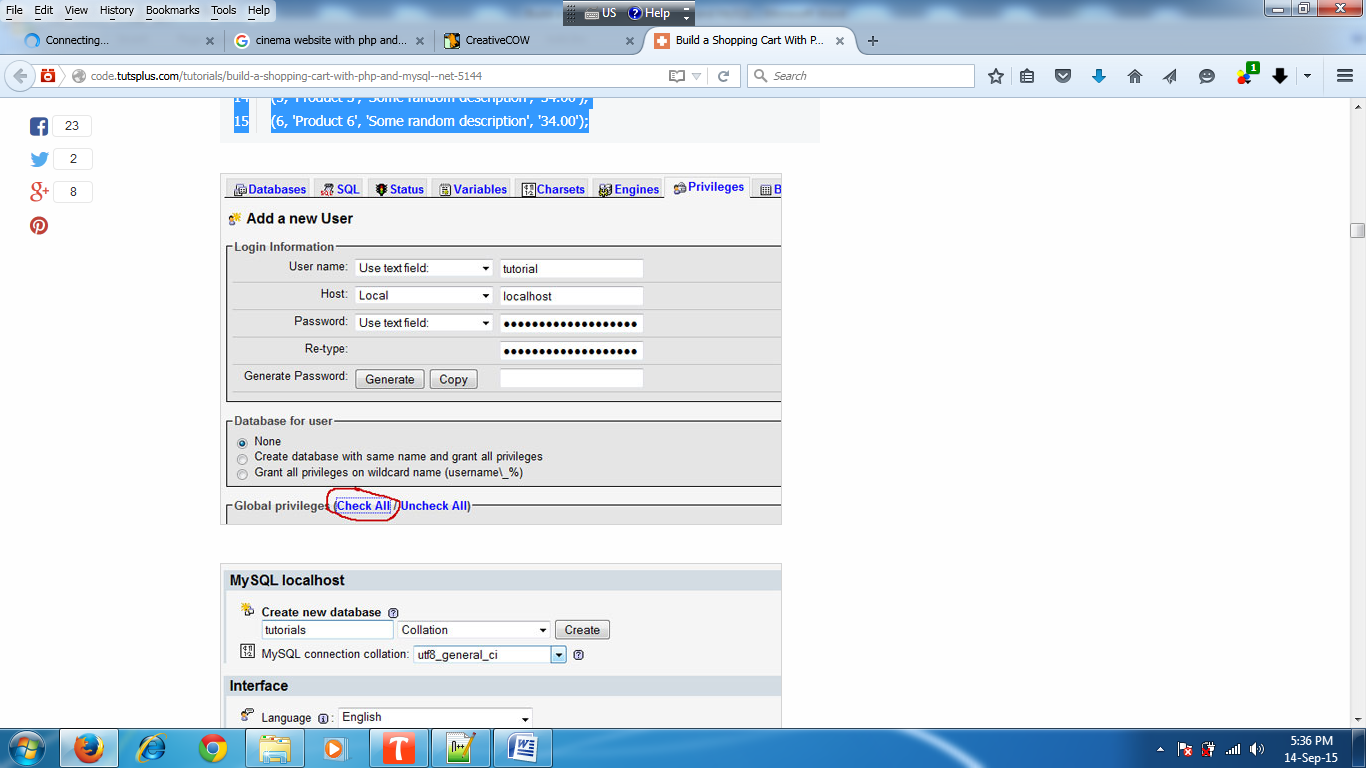
## Step 3

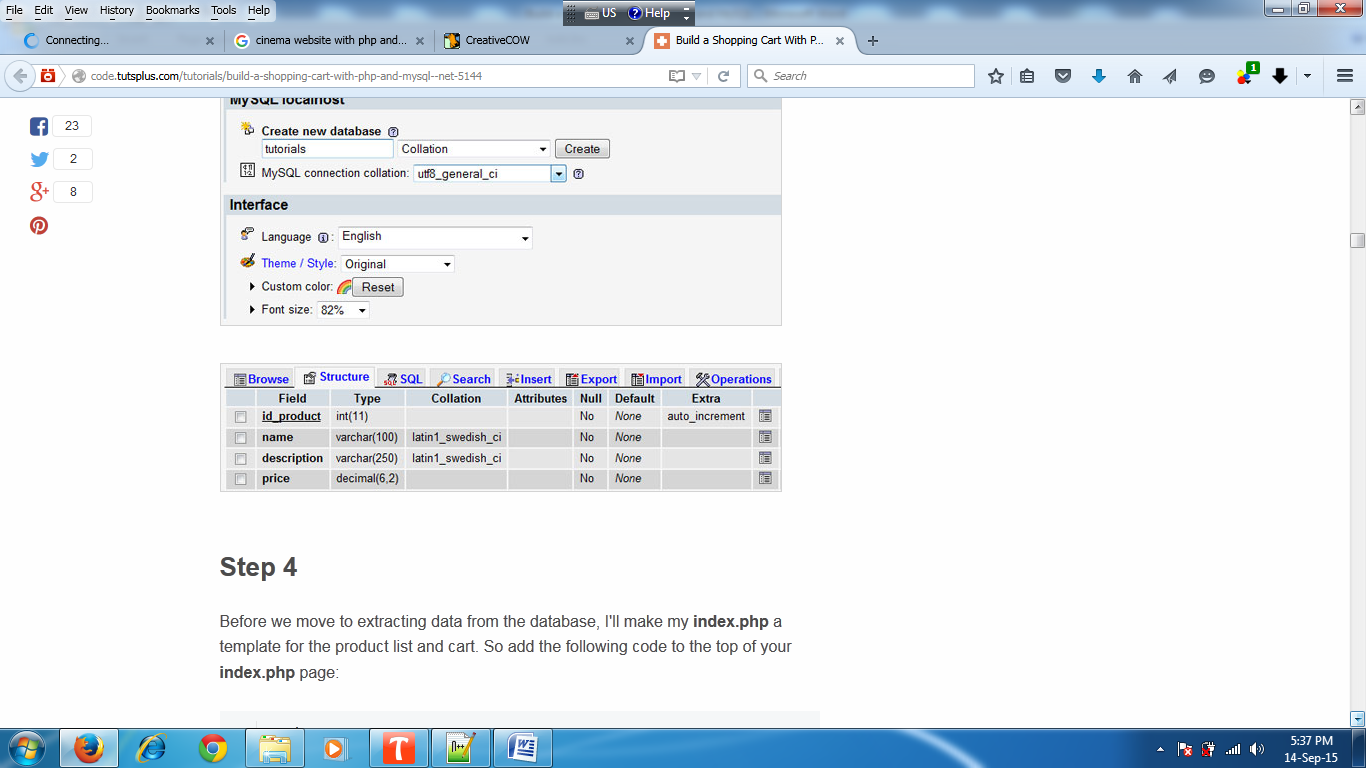
Before we move on to the PHP/MySQL part, we need to create the database. So open phpMyadmin and follow these steps:

1. Go to the **Privileges** tab, click the add new user button, and use the following settings: **Username**: tutorial; **Host**: localhost; **Password**: supersecretpassword;. Now make sure the Global privileges is set; then move on to the next step.
2. Create a new database called **tutorials**.
3. Create a new table called **products** and set the number of fields to 4. Now populate those fields so you have: **id\_integer** - make sure it's set to INT and mark it as PRIMARY(also set it to auto\_increment); **name** - make it VARCHAR with a length of 100; **description** - VARCHAR with a length of 250; **price** - make sure it's set to DECIMAL(2,6)
4. Populate your table with some sample products

To save some time, I've exported my products table so that you can simply run the following query:

|  |  |
| --- | --- |
| 01  02  03  04  05  06  07  08  09  10  11  12  13  14  15 | CREATE TABLE IF NOT EXISTS `products` (    `id\_product` int(11) NOT NULL AUTO\_INCREMENT,    `name` varchar(100) NOT NULL,    `description` varchar(250) NOT NULL,    `price` decimal(6,2) NOT NULL,    PRIMARY KEY (`id\_product`)  ) ENGINE=MyISAM  DEFAULT CHARSET=latin1 AUTO\_INCREMENT=7 ;    INSERT INTO `products` (`id\_product`, `name`, `description`, `price`) VALUES  (1, 'Product 1', 'Some random description', '15.00'),  (2, 'Product 2', 'Some random description', '20.00'),  (3, 'Product 3', 'Some random description', '50.00'),  (4, 'Product 4', 'Some random description', '55.00'),  (5, 'Product 5', 'Some random description', '54.00'),  (6, 'Product 6', 'Some random description', '34.00'); |





## Step 4

Before we move to extracting data from the database, I'll make my **index.php** a template for the product list and cart. So add the following code to the top of your **index.php** page:

|  |  |
| --- | --- |
| 01  02  03  04  05  06  07  08  09  10  11  12  13  14  15  16  17  18  19  20  21  22  23 | <?php      session\_start();      require("includes/connection.php");      if(isset($\_GET['page'])){            $pages=array("products", "cart");            if(in\_array($\_GET['page'], $pages)) {                $\_page=$\_GET['page'];            }else{                $\_page="products";            }        }else{            $\_page="products";        }  ?> |

1. **session\_start()** - this is for later use; it will allow us to actually use sessions (it's vital that the session\_start is written before any other data is sent to the browser).
2. On the second line, we include the connection.php that will establish the connection to the database (we will deal with this in a second). One more thing: the difference between include and require is that if you use require and the file can't be found, the script execution will end. If you use "include", the script will continue working.
3. Instead of copying the entire html code(the link to the css, to the js) for every file in your site, you could just make them all relative to a single file. So first, I'm checking if there's a GET variable called "page set". If it's not, I'm creating a new variable called **\_pages**. If the GET variable called pages is set first, I want to make sure that the file which I'm going to include is a valid page.

To make this work, we need to include the file; add this line to the index.php between the div with the id of "main":

|  |  |
| --- | --- |
| 1 | <?php require($\_page.".php"); ?> |

Now here's the complete **index.php** we have now:

|  |  |
| --- | --- |
| 01  02  03  04  05  06  07  08  09  10  11  12  13  14  15  16  17  18  19  20  21  22  23  24  25  26  27  28  29  30  31  32  33  34  35  36  37  38  39  40  41  42  43  44  45  46  47  48  49  50  51  52  53  54  55  56 | <?php      session\_start();      require("includes/connection.php");      if(isset($\_GET['page'])){            $pages=array("products", "cart");            if(in\_array($\_GET['page'], $pages)) {                $\_page=$\_GET['page'];            }else{                $\_page="products";            }        }else{            $\_page="products";        }    ?>  <!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN" "<http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd>">  <html xmlns="<http://www.w3.org/1999/xhtml>">  <head>        <meta http-equiv="Content-Type" content="text/html; charset=utf-8" />      <link rel="stylesheet" href="css/reset.css" />      <link rel="stylesheet" href="css/style.css" />          <title>Shopping Cart</title>      </head>    <body>        <div id="container">            <div id="main">                <?php require($\_page.".php"); ?>            </div><!--end of main-->            <div id="sidebar">            </div><!--end of sidebar-->        </div><!--end container-->    </body>  </html> |

Let's create the connection to MySQL. Open **connections.php** and type the following:

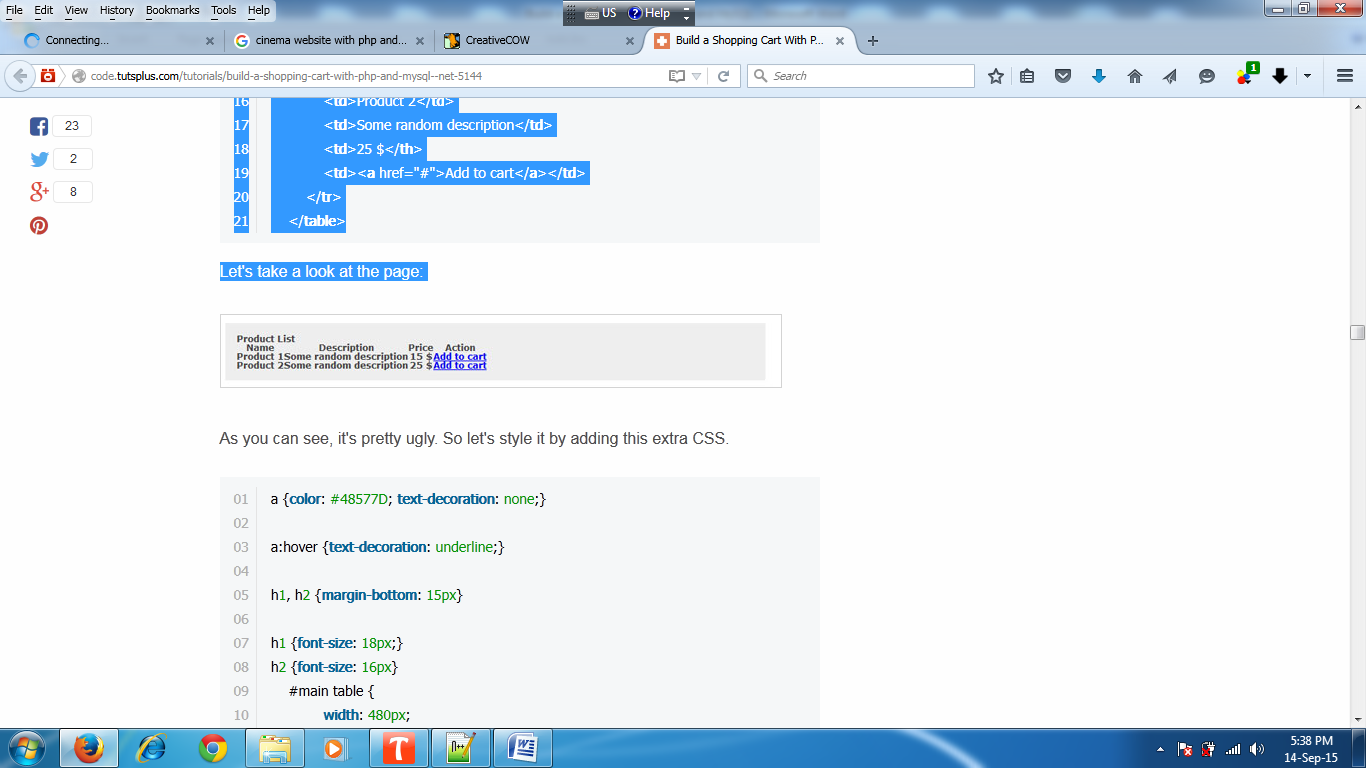
|  |  |
| --- | --- |
| 01  02  03  04  05  06  07  08  09  10  11  12  13  14  15  16 | <?php        $server="localhost";      $user="tutorial";      $pass="supersecretpassword";      $db="tutorials";        // connect to mysql        mysql\_connect($server, $user, $pass) or die("Sorry, can't connect to the mysql.");        // select the db        mysql\_select\_db($db) or die("Sorry, can't select the database.");    ?> |

## Step 5

Now it's time to write the markup for the products page. So go ahead open it and type the following:

|  |  |
| --- | --- |
| 01  02  03  04  05  06  07  08  09  10  11  12  13  14  15  16  17  18  19  20  21 | <h1>Product List</h1>      <table>          <tr>              <th>Name</th>              <th>Description</th>              <th>Price</th>              <th>Action</th>          </tr>          <tr>              <td>Product 1</td>              <td>Some random description</td>              <td>15 $</th>              <td><a href="#">Add to cart</a></td>          </tr>           <tr>              <td>Product 2</td>              <td>Some random description</td>              <td>25 $</th>              <td><a href="#">Add to cart</a></td>          </tr>      </table> |

Let's take a look at the page:



As you can see, it's pretty ugly. So let's style it by adding this extra CSS.

|  |  |
| --- | --- |
| 01  02  03  04  05  06  07  08  09  10  11  12  13  14  15  16  17  18  19  20  21  22  23  24  25 | a {color: #48577D; text-decoration: none;}    a:hover {text-decoration: underline;}    h1, h2 {margin-bottom: 15px}    h1 {font-size: 18px;}  h2 {font-size: 16px}      #main table {              width: 480px;          }                #main table th {                  padding: 10px;                  background-color: #48577D;                  color: #fff;                  text-align: left;              }                #main table td {                  padding: 5px;              }              #main table tr {                  background-color: #d3dcf2;              } |

Okay: let's have another look now:



Looks a lot better, don't you think? Below you have the complete **style.css** code:

|  |  |
| --- | --- |
| 01  02  03  04  05  06  07  08  09  10  11  12  13  14  15  16  17  18  19  20  21  22  23  24  25  26  27  28  29  30  31  32  33  34  35  36  37  38  39  40  41  42  43  44  45  46  47  48  49  50  51 | body {      font-family: Verdana;      font-size: 12px;      color: #444;  }    a {color: #48577D; text-decoration: none;}    a:hover {text-decoration: underline;}    h1, h2 {margin-bottom: 15px}    h1 {font-size: 18px;}  h2 {font-size: 16px}    #container {      width: 700px;      margin: 150px auto;      background-color: #eee;      padding:15px;      overflow: hidden;  }        #main {          width: 490px;          float: left;      }            #main table {              width: 480px;          }                #main table th {                  padding: 10px;                  background-color: #48577D;                  color: #fff;                  text-align: left;              }                #main table td {                  padding: 5px;              }                #main table tr {                  background-color: #d3dcf2;              }        #sidebar {          width: 200px;          float: left;      } |

## Step 6

Before we extract the product from the database, let's remove the last 2 table rows from our table(we used it only to see how our table will look like). Remove this:

|  |  |
| --- | --- |
| 01  02  03  04  05  06  07  08  09  10  11  12 | <tr>      <td>Product 1</td>      <td>Some random description</td>      <td>15 $</th>      <td><a href="#">Add to cart</a></td>  </tr>   <tr>      <td>Product 2</td>      <td>Some random description</td>      <td>25 $</th>      <td><a href="#">Add to cart</a></td>  </tr> |

Great! Now in the place where the table rows were, type the following PHP code:

|  |  |
| --- | --- |
| 01  02  03  04  05  06  07  08  09  10  11  12  13  14  15  16  17  18  19 | <?php        $sql="SELECT \* FROM products ORDER BY name ASC";      $query=mysql\_query($sql);        while ($row=mysql\_fetch\_array($query)) {    ?>          <tr>              <td><?php echo $row['name'] ?></td>              <td><?php echo $row['description'] ?></td>              <td><?php echo $row['price'] ?>$</td>              <td><a href="index.php?page=products&action=add&id=<?php echo $row['id\_product'] ?>">Add to cart</a></td>          </tr>  <?php        }    ?> |

1. So, first we use SELECT to retrive the products, then we loop trough each row from the database and echo it to the page in a table row.
2. You can see that the anchor links to the same page(when the user clicks the anchor the product it's added to the cart/session). We just pass some extra variables like the id of the product.

If you hover one of the add to cart links, you can see, at the bottom of the page, that the id of the product is passed.

https://cms-assets.tutsplus.com/legacy-premium-tutorials/posts/9747/images/9747_23677e15f62b6d499d9439b396109572.jpg

## Step 7

Let's make that anchor work by adding the following code at the top of our page:

|  |  |
| --- | --- |
| 01  02  03  04  05  06  07  08  09  10  11  12  13  14  15  16  17  18  19  20  21  22  23  24  25  26  27  28  29  30  31  32  33  34  35 | <?php        if(isset($\_GET['action']) && $\_GET['action']=="add"){            $id=intval($\_GET['id']);            if(isset($\_SESSION['cart'][$id])){                $\_SESSION['cart'][$id]['quantity']++;            }else{                $sql\_s="SELECT \* FROM products                  WHERE id\_product={$id}";              $query\_s=mysql\_query($sql\_s);              if(mysql\_num\_rows($query\_s)!=0){                  $row\_s=mysql\_fetch\_array($query\_s);                    $\_SESSION['cart'][$row\_s['id\_product']]=array(                          "quantity" => 1,                          "price" => $row\_s['price']                      );                  }else{                    $message="This product id it's invalid!";                }            }        }    ?> |

1. If the GET variable called action is set and it's value is ADD, we execute the code.
2. We make sure that the id passed through the GET variable is an integer
3. If the id of the product is in the cart SESSION, we just increment it's quantity by 1
4. If the id is not in the session, we need to make sure that the id passed through the GET variable exists in the database. If it does, we grab the price and create it's session. If it doesn't, we set a variable called message that will hold our error.

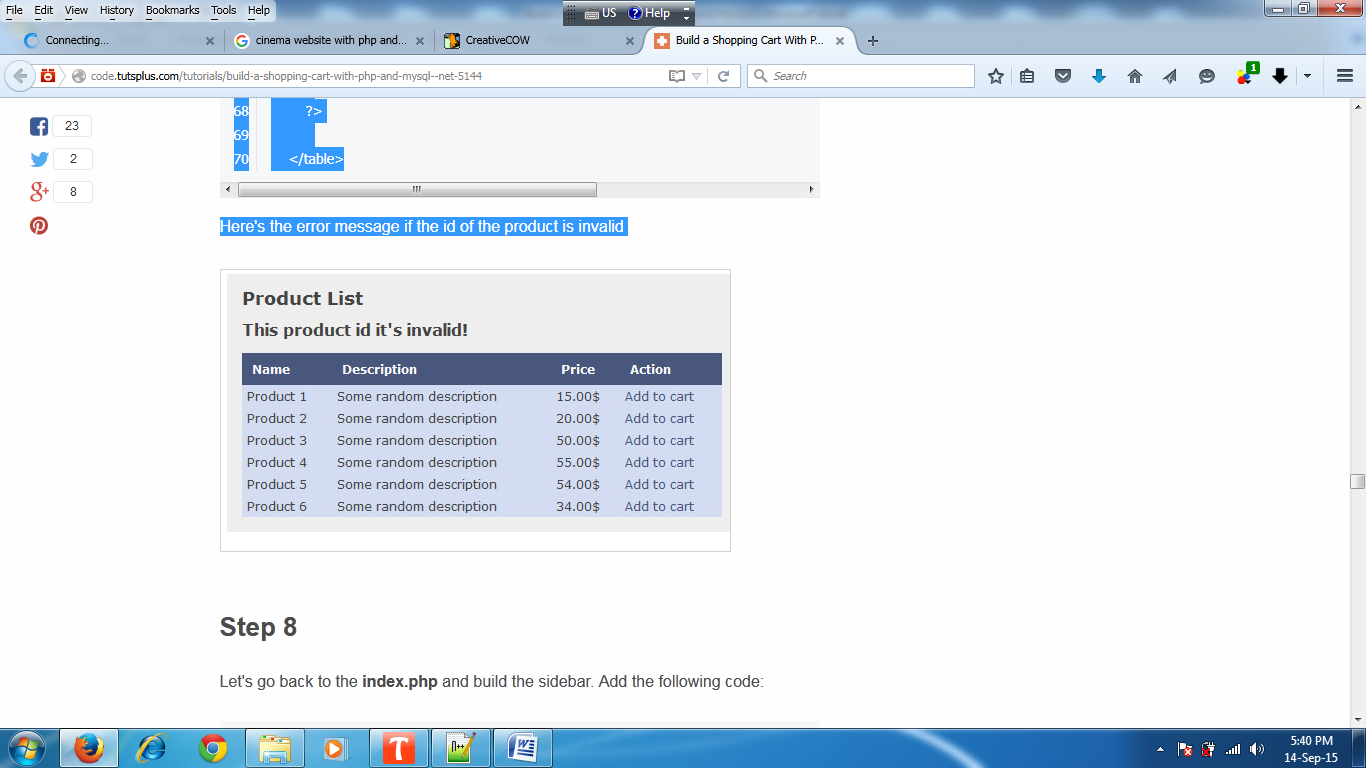
Let's check if that message variable is set and echo it to the page(type this code under the H1 page title):

|  |  |
| --- | --- |
| 1  2  3  4  5 | <?php      if(isset($message)){          echo "<h2>$message</h2>";      }  ?> |

Here you can see the complete **products.php** page.

|  |  |
| --- | --- |
| 01  02  03  04  05  06  07  08  09  10  11  12  13  14  15  16  17  18  19  20  21  22  23  24  25  26  27  28  29  30  31  32  33  34  35  36  37  38  39  40  41  42  43  44  45  46  47  48  49  50  51  52  53  54  55  56  57  58  59  60  61  62  63  64  65  66  67  68  69  70 | <?php        if(isset($\_GET['action']) && $\_GET['action']=="add"){            $id=intval($\_GET['id']);            if(isset($\_SESSION['cart'][$id])){                $\_SESSION['cart'][$id]['quantity']++;            }else{                $sql\_s="SELECT \* FROM products                  WHERE id\_product={$id}";              $query\_s=mysql\_query($sql\_s);              if(mysql\_num\_rows($query\_s)!=0){                  $row\_s=mysql\_fetch\_array($query\_s);                    $\_SESSION['cart'][$row\_s['id\_product']]=array(                          "quantity" => 1,                          "price" => $row\_s['price']                      );                  }else{                    $message="This product id it's invalid!";                }            }        }    ?>      <h1>Product List</h1>      <?php          if(isset($message)){              echo "<h2>$message</h2>";          }      ?>      <table>          <tr>              <th>Name</th>              <th>Description</th>              <th>Price</th>              <th>Action</th>          </tr>            <?php                $sql="SELECT \* FROM products ORDER BY name ASC";              $query=mysql\_query($sql);                while ($row=mysql\_fetch\_array($query)) {            ?>              <tr>                  <td><?php echo $row['name'] ?></td>                  <td><?php echo $row['description'] ?></td>                  <td><?php echo $row['price'] ?>$</td>                  <td><a href="index.php?page=products&action=add&id=<?php echo $row['id\_product'] ?>">Add to cart</a></td>              </tr>          <?php                }            ?>        </table> |

Here's the error message if the id of the product is invalid



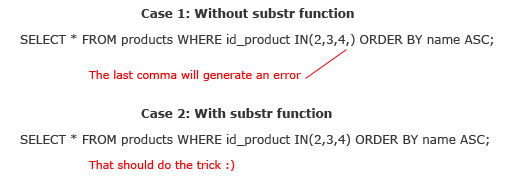
## Step 8

Let's go back to the **index.php** and build the sidebar. Add the following code:

|  |  |
| --- | --- |
| 01  02  03  04  05  06  07  08  09  10  11  12  13  14  15  16  17  18  19  20  21  22  23  24  25  26  27  28  29  30  31  32 | <h1>Cart</h1>  <?php        if(isset($\_SESSION['cart'])){            $sql="SELECT \* FROM products WHERE id\_product IN (";            foreach($\_SESSION['cart'] as $id => $value) {              $sql.=$id.",";          }            $sql=substr($sql, 0, -1).") ORDER BY name ASC";          $query=mysql\_query($sql);          while($row=mysql\_fetch\_array($query)){            ?>              <p><?php echo $row['name'] ?> x <?php echo $\_SESSION['cart'][$row['id\_product']]['quantity'] ?></p>          <?php            }      ?>          <hr />          <a href="index.php?page=cart">Go to cart</a>      <?php        }else{            echo "<p>Your Cart is empty. Please add some products.</p>";        }    ?> |

1. First we check if the session cart is set. If it's not, we display the message, alerting the user that the cart is empty.
2. Next we make a mysql SELECT, but we're selecting only the products that exists in the session too. To accomplish this, we use the foreach function. So we are looping through the session and are adding the product id to the SELECT. Next, we are using the substr function to remove the last comma from the SELECT.
3. In the end we output the data to the browser.

Take a look at the pictures below:





Since the index.php is a template for all the files, the sidebar will be visible in the **cart.php** too. Ain't that cool?!

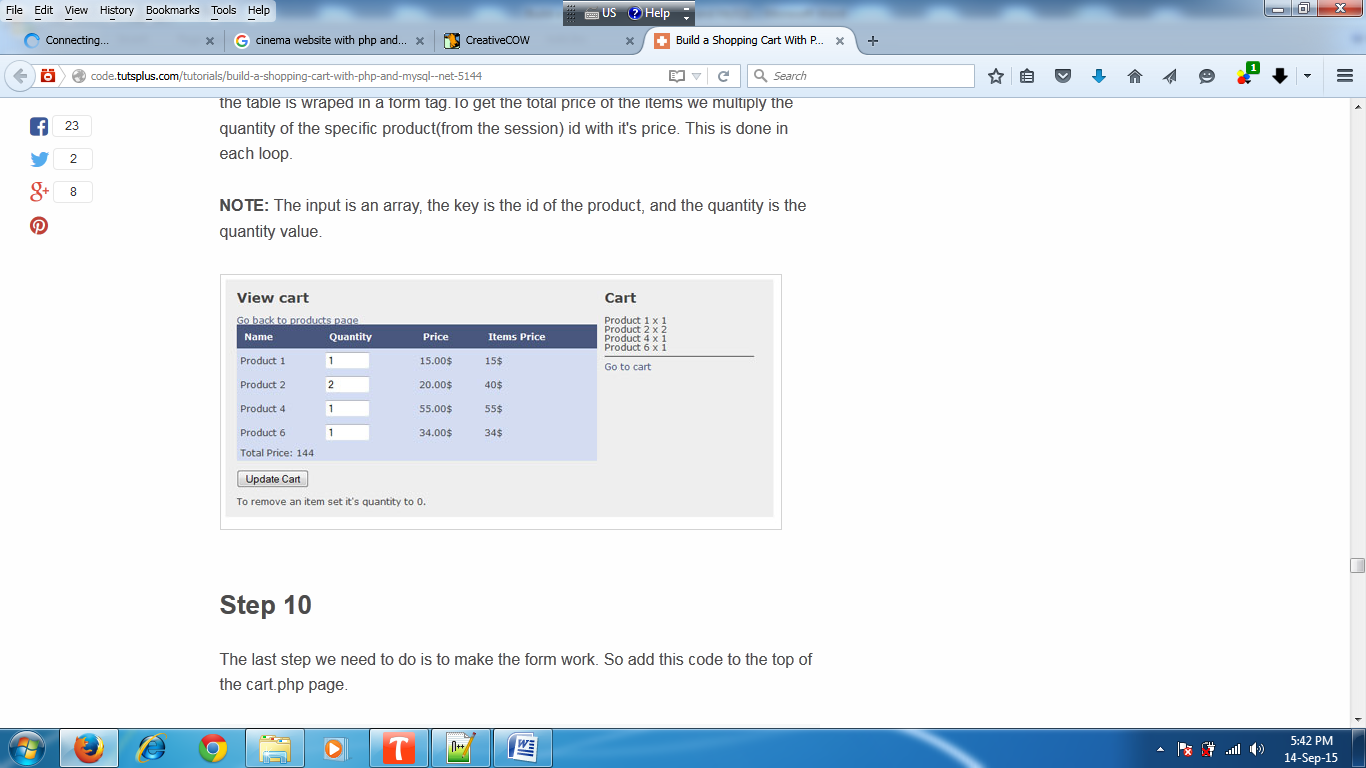
## Step 9

Finally, open **cart.php** and start by typing the following code:

|  |  |
| --- | --- |
| 01  02  03  04  05  06  07  08  09  10  11  12  13  14  15  16  17  18  19  20  21  22  23  24  25  26  27  28  29  30  31  32  33  34  35  36  37  38  39  40  41  42  43  44  45  46  47  48 | <h1>View cart</h1>  <a href="index.php?page=products">Go back to products page</a>  <form method="post" action="index.php?page=cart">        <table>            <tr>              <th>Name</th>              <th>Quantity</th>              <th>Price</th>              <th>Items Price</th>          </tr>            <?php                $sql="SELECT \* FROM products WHERE id\_product IN (";                        foreach($\_SESSION['cart'] as $id => $value) {                          $sql.=$id.",";                      }                        $sql=substr($sql, 0, -1).") ORDER BY name ASC";                      $query=mysql\_query($sql);                      $totalprice=0;                      while($row=mysql\_fetch\_array($query)){                          $subtotal=$\_SESSION['cart'][$row['id\_product']]['quantity']\*$row['price'];                          $totalprice+=$subtotal;                      ?>                          <tr>                              <td><?php echo $row['name'] ?></td>                              <td><input type="text" name="quantity[<?php echo $row['id\_product'] ?>]" size="5" value="<?php echo $\_SESSION['cart'][$row['id\_product']]['quantity'] ?>" /></td>                              <td><?php echo $row['price'] ?>$</td>                              <td><?php echo $\_SESSION['cart'][$row['id\_product']]['quantity']\*$row['price'] ?>$</td>                          </tr>                      <?php                        }          ?>                      <tr>                          <td colspan="4">Total Price: <?php echo $totalprice ?></td>                      </tr>        </table>      <br />      <button type="submit" name="submit">Update Cart</button>  </form>  <br />  <p>To remove an item, set it's quantity to 0. </p> |

The code is similar to the one from index.php and products.php, so I'm not going to explain everything again. You should notice that instead of displaying the quantity in a form, now it's displayed in an input box (so that we can change the quantity). Also the table is wraped in a form tag.To get the total price of the items we multiply the quantity of the specific product(from the session) id with it's price. This is done in each loop.

**NOTE:** The input is an array, the key is the id of the product, and the quantity is the quantity value.



## Step 10

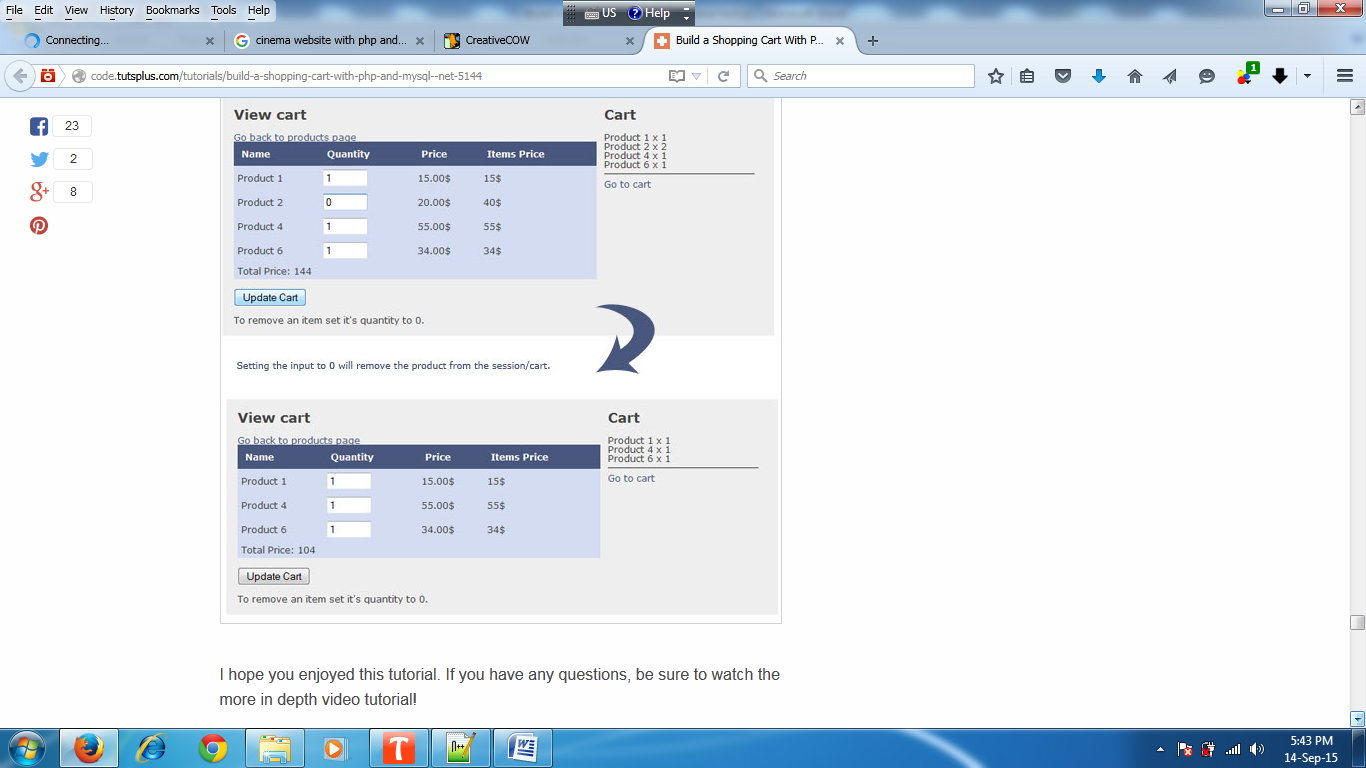
The last step we need to do is to make the form work. So add this code to the top of the cart.php page.

|  |  |
| --- | --- |
| 01  02  03  04  05  06  07  08  09  10  11 | if(isset($\_POST['submit'])){    foreach($\_POST['quantity'] as $key => $val) {      if($val==0) {          unset($\_SESSION['cart'][$key]);      }else{          $\_SESSION['cart'][$key]['quantity']=$val;      }  }    } |

1. First we check if the form was submitted. If it was submitted and the value of the input was zero, we unset that session.
2. If the value is any other value, we set the quantity to that value instead.

Here is the complete **cart.php**

|  |  |
| --- | --- |
| 01  02  03  04  05  06  07  08  09  10  11  12  13  14  15  16  17  18  19  20  21  22  23  24  25  26  27  28  29  30  31  32  33  34  35  36  37  38  39  40  41  42  43  44  45  46  47  48  49  50  51  52  53  54  55  56  57  58  59  60  61  62  63  64 | <?php        if(isset($\_POST['submit'])){            foreach($\_POST['quantity'] as $key => $val) {              if($val==0) {                  unset($\_SESSION['cart'][$key]);              }else{                  $\_SESSION['cart'][$key]['quantity']=$val;              }          }        }    ?>    <h1>View cart</h1>  <a href="index.php?page=products">Go back to the products page.</a>  <form method="post" action="index.php?page=cart">        <table>            <tr>              <th>Name</th>              <th>Quantity</th>              <th>Price</th>              <th>Items Price</th>          </tr>            <?php                $sql="SELECT \* FROM products WHERE id\_product IN (";                        foreach($\_SESSION['cart'] as $id => $value) {                          $sql.=$id.",";                      }                        $sql=substr($sql, 0, -1).") ORDER BY name ASC";                      $query=mysql\_query($sql);                      $totalprice=0;                      while($row=mysql\_fetch\_array($query)){                          $subtotal=$\_SESSION['cart'][$row['id\_product']]['quantity']\*$row['price'];                          $totalprice+=$subtotal;                      ?>                          <tr>                              <td><?php echo $row['name'] ?></td>                              <td><input type="text" name="quantity[<?php echo $row['id\_product'] ?>]" size="5" value="<?php echo $\_SESSION['cart'][$row['id\_product']]['quantity'] ?>" /></td>                              <td><?php echo $row['price'] ?>$</td>                              <td><?php echo $\_SESSION['cart'][$row['id\_product']]['quantity']\*$row['price'] ?>$</td>                          </tr>                      <?php                        }          ?>                      <tr>                          <td colspan="4">Total Price: <?php echo $totalprice ?></td>                      </tr>        </table>      <br />      <button type="submit" name="submit">Update Cart</button>  </form>  <br />  <p>To remove an item set its quantity to 0. </p> |



I hope you enjoyed this tutorial. If you have any questions, be sure to watch the more in depth video tutorial!