IT420 Lab 8: PHP Sessions

DUE: March 20, 2007, BEFORE start of lab

This lab should get you familiarized with using sessions in PHP. In this lab you will use sessions to implement a simple shopping cart for your Online Midshipmen Store application.

Requirements:

Create a Lab8 folder on your W drive. All the PHP and HTML files for this assignment should be stored in the Lab8 folder on your W drive. All PHP files should be well documented.

The online *shopping cart* is a specific online shopping mechanism: while the potential customer browses the online catalog of products, he/she can choose products to add to his/her cart. At check-out, the products from the cart are purchased. In order to implement the shopping cart functionality, you need to:

1. Provide some way for a customer to browse the products in your store. The products are stored in the MySQL database, so your program needs to get the products from the database.
2. Implement a shopping cart to track the products a customer wants to buy. You have to use session variables for this task.
3. Have a checkout script that processes the order. The checkout script needs to ask for payment and delivery information from the customer, record the sale information to the database, and display a confirmation message. The sale information in the database should include the products bought, quantities (if applicable), price (if applicable), delivery address (if applicable), and payment information (if applicable).

Create an *index.htm* file in Lab8 folder. *index.htm* should contain a link to the start page of the application, where a customer can browse and buy products.

You can implement the shopping cart functionality and the interface to your system in any way you want, as long as the above requirements are satisfied. You if want more details, below are detailed steps on how you could implement the shopping cart for your application.

Details:

1) **Browse products:** Create the file *orderProducts.php*. Write code to get all products from the database, and display them in a drop-down menu. The value associated with each item in the drop-down menu should be the BarCode/ProductID/unique product identifier, while the customer should see the plain description of the product. Here is a sample HTML code to create a drop-down menu:

Source	Output

`<select name = "car">`
` <option value ="volvo">Volvo</option>`
` <option value ="saab">Saab</option>`
` <option value ="opel">Opel</option>`
` <option value ="audi">Audi</option>`
`</select>`
	Volvo ▼

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The customer will choose a product to buy from the list. Create the form in such a way that the customer can also specify a quantity, if applicable. The action name in the form should be *processOrderProducts.php*. You will create this file in the next step. The page rendered by the browser could look like this:
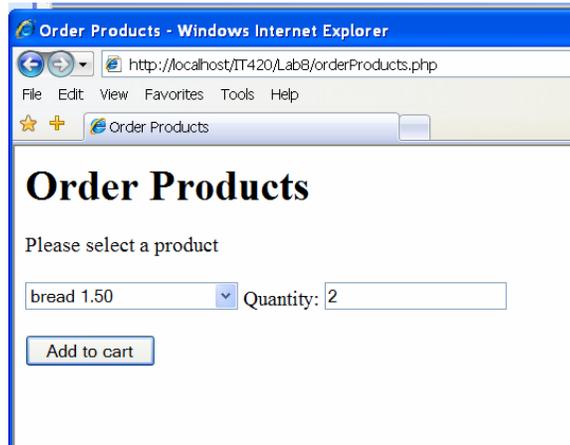
I recommend you re-use the my_connect_db class you created for Lab 7 to connect to the database. Copy all the files/code you need in the Lab8 directory.

2) **Add to shopping cart:** Create the file *processOrderProducts.php*. This program is executed when the customer adds an item to the shopping cart. The shopping cart is most easily implemented as a session variable, called $_SESSION['cart'] for example, that is an associative array that has the product BarCode (or the ProductID, or any other column in the database that uniquely identifies a product) as the key, and the quantity ordered by the customer as value. For example, if the customer selected 2 pieces of the product "bread" with BarCode 1001, the item is added to the shopping cart by

$_SESSION['cart'][1001] = 2 ;

Write code to:
- Add the product selected by the customer to the shopping cart. Remember that **all** files using PHP sessions should have
    session_start();
  as the fist line of the PHP script.
- Display a confirmation message to the customer.
- Offer the customer the option to continue shopping: execute *orderProducts.php* again
- Offer the customer the option of checking out: execute *checkout.php* file that you will create in the next step.

The page rendered by the browser could look like this:

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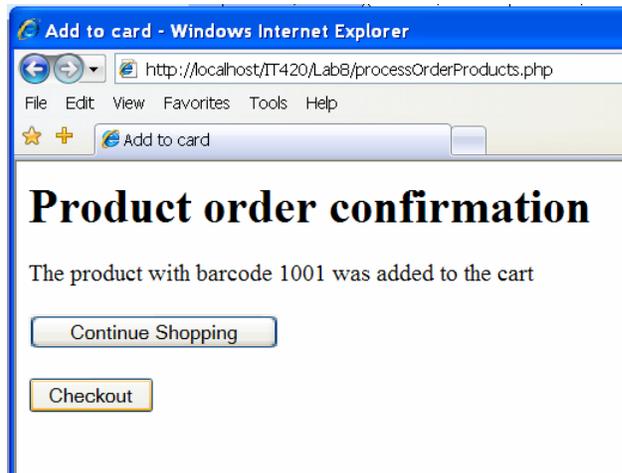
3) **Checkout:** Create the file *checkout.php*. This program is executed when the customer is ready for checkout. Write code to:
- List all the products in the shopping cart. Use a *foreach* statement to loop through all the elements of the associative array $_SESSION['cart]
- Create a form, with the action *processCheckout.php*
    o ask for checkout information from the customer:
        ▪ Delivery address
        ▪ Credit card number
    o Display a "Submit" button

The page rendered by the browser could look like this:
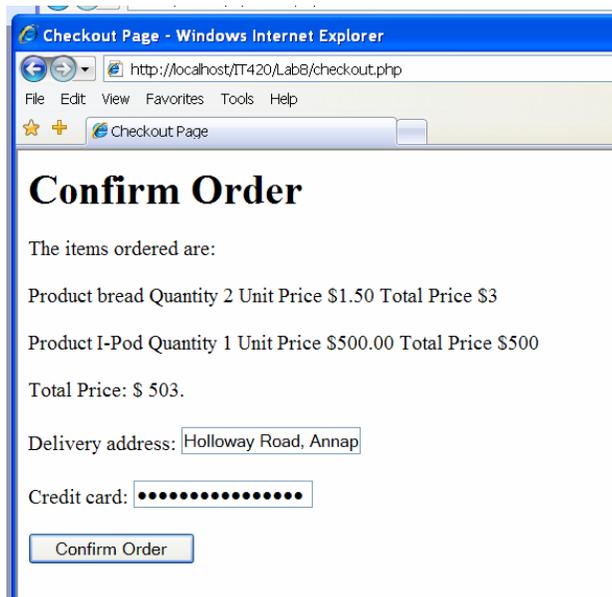
4) **Process Checkout:** Create the file *processCheckout.php*. This program is executed when the customer submits the order. This program should write the sale data into the database, display a confirmation message to the customer, and terminate the session. All session variables as well as the session itself should be destroyed. Write code to:

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- Connect to the database
- Save order data into the Sale, Sale_Products, etc tables in your database. Remember that some of the keys might be surrogate keys. The surrogate keys were created using AUTO_INCREMENT keyword, and the value for the surrogate key is generated by the database system. If you need that value, you should use $db->insert_id property on the database object you have ($db in the example). This property represents the ID created by the previous insert statement.
- Display appropriate message in order confirmation screen. If for any reason the data cannot be saved in the database, an error message should be displayed.
- Close the connection to the database.
- Destroy the session. After session is destroyed, the customer should not see any items in the shopping cart, even if it executes the *checkout.php* program again.

The page rendered by the browser could look like this:
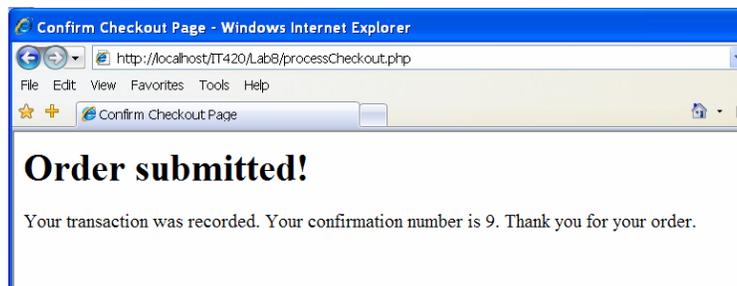
5) **Index:** Create a file called *index.htm*. The index.htm should contain a link to *orderProducts.php*.

Turn in (due before start of lab on March 20, 2007):
Electronic:
1. Upload all files from Lab8 to the Lab 8 assignment on the blackboard.

Hard-copies:
1. The completed assignment coversheet. Your comments will help us improve the course.
2. Screen shots of web browser after each step of the application, similar with the screen shots shown in this assignment.
3. A hard copy of each file written for this lab. Do not forget to comment your code.