

# CS545 Fall 2015

## Project #4, Final Project

*125 points*

### **Due Date/Time:**

Your project is due on Monday, December 14th at 4:00 PM San Diego time. There is **no** final exam for this course, but a final project instead. **Note that this deadline is firm; late programs cannot be accepted as we are at the end of the semester.**

### **The Project**

For this assignment, you will create an online store web site that features products from a fictional company, **Bertha's Deluxe Chocolates**. This company produces fine chocolates and confections for sale over the Internet. You will create the online store front for the company that allows customers to browse the various product offerings, and purchase products online. Your site must feature a shopping cart that allows customers to add or remove items. Additionally, you will create a report page for management that shows all orders placed, ordered by date.

Your main page (`/~jadrnxxx/proj4/index.html`) must include the following:

- Links: **Home, Products, Order Online, About Us, Contact**.
- Home: Brings the user back to the main page.
- Products: A description of the types of candies available for order. Products should be organized by category.
- Order Online: An order form for the customer to select the types of chocolates to order and the quantity of each. Look at existing

online order forms for ideas of the best way to organize your checkout form. Users must be able to edit the quantity or remove an item. The total (extended amount) for an item must change dynamically when the user changes the quantity field. At the bottom your form should show a grand total for the order.

- The About Us and Contact links are static pages with appropriate fictional details.

The products should be organized by categories:

- Milk chocolate
- Dark chocolate
- Nuts and chews
- Brittles and toffies
- Truffles
- Gifts
- Holiday assortments

## **The database**

The available products for sale are in a read-only table named `products` in database `proj4` on `opatiya.sdsu.edu`. You will query this table to populate the items in your web site.

### **Here's how to connect to the database with Perl:**

```
my $host = "opatiya.sdsu.edu";
my $port = "3306";
my $database = "proj3";
my $username = "jadrnXXX";
my $password = "apple";
my $database_source = "dbi:mysql:$database:$host:$port";

my $dbh = DBI->connect($database_source, $username,
    $password)
or die 'Cannot connect to db';
```

Note that you have limited privileges on the `products` table. The only command you can execute on this table is `SELECT`. Make all connections to the `proj3` database using `YOUR` account, not `jadrn000`.

You will need to store sales information to produce the reports. This information should be stored in *your database on opatija*.

The fields in table `products` are:

```
mysql> describe products;
```

Field	Type	Null	Key	Default
sku	char(9)	NO	PRI	NULL
category	varchar(20)	YES		NULL
title	varchar(25)	YES		NULL
short_description	varchar(200)	YES		NULL
long_description	varchar(500)	YES		NULL
cost	decimal(6,2)	YES		NULL
retail	decimal(6,2)	YES		NULL

7 rows in set (0.00 sec)

## The Order Form

The order form should have the following fields:

- Billing Address
  - First Name
  - Last Name
  - Address (two lines)
  - City/State/Zip
  - Phone
- Shipping Address
  - First Name
  - Last Name

- Address (two lines)
  - City/State/Zip
  - Phone
- Payment Type (Visa, Mastercard, Discover, American Express)
- Card Number
- Expiration Date

## **Technology**

You will use html5 or xhtml, css, Javascript and/or jQuery, Perl for all dynamic code, and the MySQL databases on opatija. For this assignment, you must use Perl cgi for all dynamic code. You may not use any PHP code in this project.

## **Additional Details**

- The application must be user-friendly. The customer ordering experience will be an important criterion for the project grade. For instance, many customers will order products for themselves. They should not have to re-enter the same information twice. Perhaps a "Ship to same address" checkbox can be used to determine whether or not to autofill the second name/address block. Think carefully about enhancing the customer experience.
- Use javascript creatively, and AJAX where appropriate to avoid refreshing the page from the server.
- Be sure to place your html, CSS, and javascript into separate files. In some of the examples posted, I have put html, CSS and javascript in a single file to make the examples easier to follow. But you should not do this.
- Charge \$2.00 shipping fee for each item.
- Use the tax rate in San Diego for all purchases (8.0%).

- Note that you are not storing any customer information. This was done to keep the size of the project manageable. You will only store the information needed for the report:
  - date
  - sku
  - quantity
- The additional report fields (see below) can be obtained by a database query.
- It should be obvious, but make sure that you do not show the cost price to customers. **Cost** is what it costs Bertha's to make the product. **Retail** is the price customers pay for the product.

Once the order is submitted, the customer should receive a confirmation that includes details of the order, including tax, shipping charges and a total, as well as the address where the order is to be shipped. Do not print credit card numbers to screen *\*ever\**. You may let the customer know which card was used by showing only the last four digits, preceded by X's. ie XXXX XXXX XXXX 3281. In other words, look at commercial applications and compare your efforts with them. Your project should look and feel like a "real" application, and should be as user friendly as possible. This is an important metric for determining your project grade.

## The Management Report

The URL for the management report is:

<http://jadran.sdsu.edu/~jadrnxxx/proj3/report.html>

The report should have the following fields:

- order date
- sku
- title

- quantity
- cost
- retail

The bottom of the report should have the following summary fields:

- Total retail (total sales)
- Total quantity (number of items sold)
- Total profit.

## **Submission**

Your project main page, or landing page will be an html file with the following URL:

<http://jadran.sdsu.edu/~jadrnxxx/proj4/index.html>

All project files must be located in /home/jadrnxxx/public\_html/proj4/ and also in /srv/www/cgi-bin/jadrnxxx/ where xxx is your jadran account number.

You do not need to put a finished file in your public\_html/proj4/ folder, as late programs will not be accepted.