CS4WW3 Assignment 3

Online Store

Due Date: March 31, 2015

Objective

This group assignment (3 persons/group max) will expose you to the following web technologies: HTML/HTML5, CSS, JavaScript, PHP and MySql.

Description

Your task is to develop a functional prototype of e-commerce site for an online store. You may prefer to work on files of the previous assignments.

Part 1 Database [20 marks]

In this part, you will build a relational database for online store using MySql. Minimize data redundancy wherever possible. Keep in mind the use of keys and constraints that are discussed in class to enforce relationships and rules. It is always desirable to have the database in 3NF. Insert necessary records for the products and other tables. You will start with designing a database by modeling it with an entity-relationship (ER) diagram. Use the ER notation described in class.

Part 2 Web site and data connectivity [60 marks]

Client site: In this part, you will build the web site using html/html5, CSS, JavaScript and PHP and connect with the database as needed. Your online store site should contain welcome page, user registration page, user profile update page, login page, catalog page, checkout page, logout page, user review page, show review page, contact us page and/or searched product output page, order status page and/or order search page and site map page. Add additional pages only as needed. A user should be able to update his/her info after registration. A user should not be able to register his/her profile with existing email address and username in the database. No user should be able to purchase (check out) anything without logging in, though a visitor should be able to search any product available in the catalog page and add to his/her shopping cart. If a product is all sold out, display sold out message beside the product in the catalog page (or quantity left could be shown). A user should not be able to purchase a sold out product or more than available quantity. A user should be logged out automatically (session expires) if inactive for a certain period of time. You should connect to database only when necessary (in order to save trip time to the database server) i.e., maintain session variables etc. as much as possible. A user should be able to remove and add products to his/her shopping cart before purchase order is placed. You may add 13% tax and some shipping charge with the subtotal of selected product

price for purchase. Purchase related information is inserted into the database when the user confirms to purchase order. Update the quantity field in the database for products purchased after every purchase. The shopping cart for a user should be emptied/cleared out once an order is placed or session expired. User should be able to logout any time during purchase process. If he/she logs out before purchase, the shopping cart should be cleared (though modern sites tend to use cookies to save previously selected products for purchase for a period of time) and user should be taken to login page (any session must be destroyed when logged out). Appropriate messages should be generated to guide the user throughout the purchase process to make the purchase experience smooth. For instance, "You need to enable cookie / you have to login to purchase / login username does not exist, you need to register / Password does not match, try again with this username / Click only once / Your session expired / You are one step away / Confirm to place order / Your order has been successfully placed / Your credit card has been charged / Order will be shipped immediately" etc. could be displayed where helpful to users. Display links to appropriate pages where helpful to users. For instance, if a user is ready to check out but have not logged in, should be provided link to the login page. Display recommendations of some other related products after every purchase. Generate order number in the display message for every purchase order placed. The user will be able to search his/her order status any time via this order number after purchase. For every order status info, you should display "order will be shipped immediately" if order is placed on the same day or display "order already shipped" if otherwise. Of course, other info like purchased product info, quantity, price, total paid etc. must be displayed in every order status. The form validation for registration and login page must work as required in Assignment 2. Use regular expression or pattern matching as much as possible for data validation such as credit card info etc. The catalog page should display about 5 products initially. It is a search box in the catalog page that will allow user to search by multiple metadata. For instance, if you are selling music CDs, then the user should be able to search by title, price, release date, category, author, description etc. The search should produce and display all (or no) matched product(s) from the database on the catalog page. The thumbnails and larger images of products should work the same way as required in assignment 2. The user should be able to write review only if he/she has placed an order and on ordered products only. Although a review is requested only after a user has received a product, you may allow a user to write review immediately after order is placed for this assignment. All the user reviews on a product should be displayed (if available) to everyone in the show review page. The catalog page will have a link to show review page beside a product if any user review is available. The contact us page should list all the group members' full name and id working on this assignment.

Admin site: You will have an admin site containing four pages: login, logout, product and user_info page. Add additional pages only if necessary. You must maintain session for this site and will not allow anyone to arrive at the user_info or product page without logging in as admin. The logout site will destroy any admin session and redirect the browser to the admin login page. The admin of the site is able to retrieve (including account info) and delete any user info via the user_info page. The admin site is able to retrieve, insert, update and delete any product (including quantity) using the product page (image upload implementation via web page is optional in this page). By default, user_info and product page will list all users and products (including quantity) available in the system. The need of this site can be seen as the admin needing to retrieve the user info and email user's password if requested by the user due to forgotten that. Although, the modern sites generate auto email to user's email address in case of

forgotten password. Note that password is stored in clear text in the database though such approach is unsafe and would not be used in a real deployment. The other need is the deletion of user records as requested by the user to the admin, since the user is only able to update his information by himself/herself.

****You will be evaluated based on the creativity and usability of your interactive features.

Image handling: there are different methods available for storing images using PHP into MySQL. Perhaps the easiest solution is to store images in a folder and save the corresponding image names/links in the MySQL table. If the image is not available for a product, then the catalog page will display 'no image available' for that product.

Browser issues: you should test your site with at least 2 browsers: IE/FX/Chrome. You   may display a note in the welcome page which 2 browsers (with versions) your site works the best, whether cookies need to be enabled etc.

Link Paths: try not to hard code any path with drive info. You should use relative Path so that your files are portable without changes!

Part 3 Documentation [20 marks]

This part is the documentation part of your assignment. The required content is detail description with ER diagram, database schema, an explanation of relationship in between tables, 3NF process, table creation and data insertion syntax; data flow or navigation process of web site; username/password information required to login as admin; site/page names; browsers the site is tested; any places where Ajax and/or JSON technology is used. You should also include a list of step by step sql statements to create and populate tables in database (If you used a script to create/load your tables, you may submit your script). In addition, you must provide step by step instruction how to test your system from the hosted site/submitted files.

Late assignments will be marked with a **late penalty of 20% per calendar day.** However, no assignment will be accepted if more than 3 calendar days late.

Notes

1. Host your web pages on the CAS undergraduate servers (ugweb.cas.mcmaster.ca) under your own accounts. Ensure the file permissions allow for everyone to read your files, and visitors can visit ugweb.cas.mcmaster.ca/~yourMACID/index.html to try out your online store site. Only one person in the group needs to upload.

2. Upload your files to your public_html folder.

3. Ensure your code is properly documented with comments so that TA can clearly understand what your code is doing and is easy to read. Marks will be allocated for style and readability.

4. Your website will be evaluated based on satisfying the stated requirements, creativity, correctness of search results, usability, and robustness.

Submission

All files are to be submitted using the Avenue system. Submit the following files (with the indicated names):

1. A file pjt.pdf that satisfies the requirement of part 3, all members' full name and id, any additional site related information you feel the TA might find helpful re your assignment, any special design considerations, and the URL of your site.

2. All files included in your site.