

Online Shopping System

Every group is required to develop an online shopping system for a shop of their own choice. Groups should be formed of 7-8 students.

Description

The application will allow customers to select products. Every selected item will then be added to the shopping cart. Customers, can view, modify and delete the content of their shopping cart any time. The shopping cart number of items and total price are displayed on every page of the online shop. Customers can checkout at any time but once they checkout their order can't be modified and their order details will be stored in a database. The shopping cart content will then be cleared.

The application will also enable authenticated administrators to manage their shop products online (add, modify and delete products).

Functional requirements

Task1: Database design

The web shop products are stored in a database. Depending on your choice of shop you need to design a database with appropriate tables and fields. The following fields are mandatory. However, you will defiantly need more tables and fields (color, size,).

Id: a unique identifier for every product.

Name: name of the product.

Picture: picture of the product. (Saved as a file name in the database)

Stock: number of available items.

Price: unit price of the product.

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Database must be normalized. Tables' primary keys and foreign keys must be specified in the ER diagram.

Task 2: Web Design

The web application will include several pages. Groups are free to choose the content, number and naming of their pages. However, their project should include all the required functionality.

- Pages must be designed using html and css.
- Pages should have similar appearance.
- Pages should not exceed 10
- Images must be stored in images directory under the web application.
- inappropriate or copyrighted images must be avoided.

As an example, the web application can include the following pages

1. Home or main page that can also include the products.
2. Product detail page.
3. Checkout page
4. Administrator authentication page
5. Managing products page.
6. Contact us page.

Task 3: Display Products.

Products details must be retrieved from the database. All the shop products must be displayed by an image of each product on the products page. The customer can select any product by clicking on it.

Task 4: Display Product Details

Display selected product details on the product details page. Allow the customer to input the required quantity in an input box and add the items to the shopping cart by clicking **add to shopping cart** button.

Task 5: Add to Cart

The customer entered quantity will be checked against the product available stock. If the required quantity is available, the customer order will be added to the shopping cart. Otherwise, appropriate message indicating unavailable required quantity will be displayed. Total for each item is also displayed (unit price * quantity). PHP sessions should be used to achieve this functionality.

Task 6: Checkout

Customer can check out by clicking **checkout** button in the product detail page or checkout (can be a shopping cart image) available on every page of the web application.

Customer orders will then be displayed in the checkout page. The customer will be allowed to delete, modify quantity of any order or delete all orders (empty shopping cart).

The customer can also buy all products in the shopping cart.

Task 7: Buy

The customer can click on the **buy** button on the checkout page. The quantity field of every product will be updated in the database. The shopping cart will be emptied.

Task 8: Authenticate Managers

Managers will be authenticated in the Administrator authentication page. Managers will enter their id and password in input boxes their input will be compared with the managers accounts in the database. If a match is found they will be granted authority otherwise, appropriate message will be displayed.

Task 9: Add New Product

Authenticated managers can add new products. For every product, relevant fields must be entered (differ for each group). The database will be updated by clicking the add button.

Task 10: Search for a product to modify or delete.

Authenticated managers can search for a product to modify or delete. The database will be updated by clicking the modify or delete button.

Task11: Display address and location map

The address of the shop and a Google location map will be displayed in the contact us page.

Google map is a web service that you can add to your web application for free by creating a Google account.

Task12: Past purchases

Returning customers will see their past purchases on the main web page. Cookies should be used to achieve this functionality.

Task13: Forms Validation

Every form must be validated using JavaScript.

Task 14: Help window

Include a pop up help window in the product details page suitable to your project.

Task 15: Accessibility

Make sure your web page is accessible by disabled users.

Task16: Efficiency

Make sure your code is efficient (use of functions, avoid repetition, use of include...).

Task 17: Implication of Project

You have to add implications of the project on business organization which will include the following points:

1. What are the issues faced by that organization which are going to be solved through your website?
2. What are the technological features that you have included in the website to solve these problems?
3. List down additional problems/challenges that may result due to your system.
4. How the tools used in project helped you to design an appropriate system?

Submission instructions

Milestones

Milestone	Due date
Proposal + group formation + assigning leader and tasks [2 Documents to be Submitted, Resume + Contract]	Sat, 8 Feb 2025
Web interface + tables filled with data + hardcopy of tables +ER design	Sat, 8 Mar 2025
60% implementation of project	Sat, 12 Apr 2024
Final complete project + presentation (15-20 mints) + report (pdf+ hard copy)	Sun, 4 May 2025

Report

The report should include the following

1. Report cover including project title, team members, major (CS, CIS), section, group # (according to blackboard) and date
2. How work was divided between members.
3. Database design + tables + ER design
4. Web application Interface.
5. Fulfilled requirements (specify tasks that work properly, tasks that you tried but didn't succeed and tasks that you haven't' done)
6. Testing cases (that covers all the assigned tasks) + print screens
7. Project Implications

Important: Every group is expected to submit their project (web application) + soft copy of their report (pdf file) using the blackboard.

Notes

1. More tasks might be assigned or changed through the semester.
2. Code must be commented.
3. The author of every task must be documented (as a comment)
4. Late projects will result in mark deduction.
5. Make sure the code is your own work. Cheating can result in a zero grade for the whole project.
6. Every team is expected to divide the work evenly between members (team leader responsibility). Group members will receive the same mark. In case some members output is not as expected by their group; their work will be

graded based on their covered tasks. Hence, they will not receive the same group mark.

7. Students will divide themselves in teams (mentioning their skills, roles and part in the teamwork). (template attached)
8. Team will sign a contract against the provided information to achieve the teamwork. (template provided). (submit as a proposal with the Resume)