



North South University  
Department Of Electrical and Computer Engineering  
Final Project Report

Course Code: CSE311L

Course Title: Database Management System Lab

Section: 05

Project Name:

Computer Product Store

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Submitted by:

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## Introduction:

In the digital era, e-commerce has revolutionized how businesses operate and interact with customers. Computer Product Store is a digitalized system that offers an online presence through an e-commerce website, expanding its reach, enhancing customer convenience and product sales, and growing business in an online market. In this fastest-growing online world, we are adding a website called "Computer Product Store," which aims to develop a dynamic, user-friendly platform that enables customers to browse and purchase a wide range of computer products, including hardware, software, peripherals, and accessories all from the comfort of the home. This website is based on a database system that implements CRUD activities. Using this platform, one can purchase anything related to computer products and see a receipt, which enables transparency of the purchase with the total purchase.

## About "Computer Product Store":

The computer product store system is developed to ease the customer into the e-commerce system, which is practical in real life. With no ads or pop-ups, it is a clean, simple website that enables customers to buy anything related to computers. This project is built both for the admin and customer side, allowing access for both the admin and customer side with their relevant sides. A clean interface on the admin and customer side to ensure smooth flow integration with fast response time and the overall stability of the whole system. The main highlights of our system are the easy insertion and updating of products. It is super simple with a clean interface that everybody would love and maintains all functionalities. An admin can quickly see all the categories, including all customers and their order information. On the customer side, the customer can browse through a product, add it to the cart, and then go back to browse the products again. Customers can then buy products and generate an online receipt to save on the device.

## Purpose and benefits of "Computer Product Store":

- The website's primary purpose is to view, browse through the products, and buy an item necessary for a customer.
- On the admin side, an admin can insert, view, update, and delete a product from the database. Also, an admin can see customers' information and orders.
- Faster and intuitive website with real-time updates in the database.
- The bugs in the website are close to zero.
- Simplified user interface.

## Features:

### Admin Side:

- Inserting Products: An admin can create or insert a product in the database and show it to users.
- Updating Products: An existing product can be updated for additional or excluding information.
- Removing Products: A product can be removed from the website or the database.

- View Products: Admin can see all existing products.
- View Orders: All the orders from the products can be viewed.
- View Customers: Customer information is visible to the admin.

#### Customer Side:

- Searching: Customer can search for a product and buy that product
- Browse: A customer can browse through a range of products based on categories.
- Add to cart: Customers can add their desired product and return to browsing.
- Remove from the cart: If the customer changes his/her mind, he/she can remove the product from the cart.
- Receipt Generation: After buying a product, an automatic receipt will be generated, which the user can save on their device.

#### User Story:

Scenario 1: Ibrahim is an admin of the computer product store system. He will have to change his account password if he is entering for the first time to get access to the system. After entering, he can see all the products and add, update, delete, and view all the products.

- Goes to the admin login page and changes his password. This website, its IP address, and its whereabouts will not be visible to customers or anyone. Only the admin and authorized person will know of it.
- Insert and make necessary changes to the product database.

Scenario 2: Shakib is a customer or a user of the computer product store. He will purchase a product from the website. So, he chooses a product from the website by searching or browsing through products.

- He must log in as a user to save all the purchases in his account.
- He can see all his selected products in the cart and purchase a product.
- After purchasing, he/she will get a receipt to ensure transparency of the customer and the store.
- After login, until logout, there is no way another user on the same device can log in and neither can see any previous user information.

## Limitations:

There are limitations in our system. Some of them are:

- We can't compare a product with another product.
- Category is predefined from the database.
- Sometimes, bugs from backend bugs may pop up.
- Proper indexing is not implemented, so in the case of many products stored in the database, it may be slow.
- Payment gateways like SSLZ commerz or single gateways like Bkash payment gateways are not implemented.

## Advantages:

There are some advantages of our computer product store:

- Admin can quickly save and store the products and info with the cleanest User Interface possible.
- Editing and updating product information is just one click away.
- Admins can see orders and customers' information efficiently.
- Customers can browse through products very easily.
- They can search for a product and buy it.
- They can remove products from the cart and add them to the cart easily.
- If one customer is logged in, every purchase will only be made against that user.
- Accessible from anywhere.
- Receipt generation.

## Challenges:

The main challenges for this website are entering product information and data. It takes a long time to insert products; if there are multiple products, it will take time. Because of time limitations, we had to leave out some of the features, like comparing, to avoid complexity while coding.

## Front End Plan:

There are some front-end plans both in the admin side and customer side:

Admin Side:

- Login Page
- Forgot password
- Main Dashboard
- Add Products
- View Products (includes Update/Delete)

- View Orders
- View Customer Information

#### Customer Side:

- Login
- Forgot Password
- Registration for a customer.
- Front Page with Dashboard
- Search products
- Browse products through categories
- Owl-Card Carousel
- Cart

## Back End Plan:

#### Admin Side:

- Account Login. Password Recovery
  - Login
  - Forget password
  - Password Recovery
- Products Management
  - Insertion of Product
  - Deletion of Product
  - Update Product
  - Search a product by the product's name.
- Orders and Customers Information
  - View Orders
  - View Customers Information

#### Customer Side:

- Account Login. Password Recovery, Registration
  - Login
  - Forget password
  - Password Recovery
  - Register as a user/customer.
- Browse Search through products
  - Search a product
  - Browse Product by Categories
  - See information on a product.
- Cart and Order Information
  - For every product, the add-to-cart option is available.

- Adding a product and removing it from the cart.
- Checkout
- Receipt Generation

## Tools and Technologies:

- HTML, CSS, JavaScript, PHP.
- Database: MySQL
- Protocol: HTTP
- PHP
- PHP Library dompdf for receipt generation:  
<https://github.com/dompdf/dompdf>
- Server: XAMPP

## Project Contribution:

| SL | Work Plan             | MD. Ibrahim Siddik | S. M Atiqur Islam |
|----|-----------------------|--------------------|-------------------|
| 1  | Front End Development | 25%                | 75%               |
| 2  | Back End Development  | 75%                | 25%               |
| 3  | Database Design       | 50%                | 50%               |
| 4  | ER Diagram            | 70%                | 30%               |
| 5  | Project Report        | 60%                | 40%               |