Data Base Management System

[24CSH-204]

Project Report

on

Online Shopping System

Submitted By:

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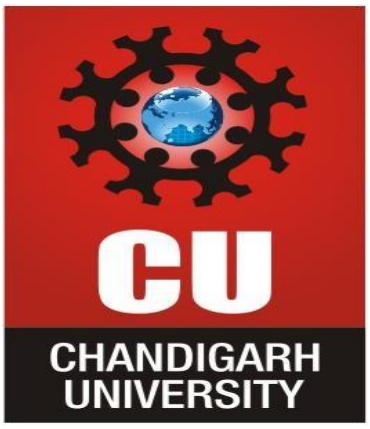

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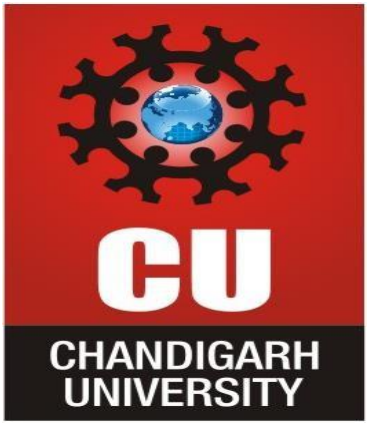

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Chandigarh University, Gharuan, Mohali, Punjab, India-140413 November, 2025

Index

Online Shopping System

1. Project Overview

This project, “Online Shopping System,” is a simple yet complete web-based application that allows users to experience the process of online shopping.
The idea behind this project is to give users an easy way to browse through products, add them to their cart, and place orders — all while learning how databases manage and connect data in the background.The system is built using PHP for backend logic, MySQL for database handling, and HTML/CSS for creating a clean, card-style design. It’s developed to demonstrate how real-world e-commerce websites function using database concepts we studied in DBMS.

2. Key Features

- User Registration & Login

Users can create their own account and log in securely.
Login sessions are handled properly so that users’ data remains private.

- Product Listing

All products are displayed in a card-grid layout that looks neat and modern.
Each card includes the product name, price, and a short description.
Optional images make the interface more attractive and user-friendly.

- Add to Cart

Users can select how many items they want and add them to their cart.
Each product card has an “Add to Cart” button for quick selection.

- Remove from Cart

If users change their mind, they can easily remove products from the cart using a “Remove” button.

- Cart Summary and Total Price

The cart section shows all the selected items, their quantities, and automatically calculates the total price.

- Checkout and Order Placement

After reviewing the cart, users can click on “Checkout” to confirm their order.
The order details are saved in the database, the cart is cleared, and a success message is displayed.

3. Database Design

The system is backed by a MySQL relational database that stores all user, product, cart, and order information in an organized way.

Tables Used
Table Attributes

users -id, name, email, password
products- id, name, price, description, image (optional)
cart- id, user_id, product_id, quantity
orders-id, user_id, order_date, total_amount

Relationships

- One user can have multiple items in the cart.

- One user can place multiple orders.
- One product can be added by many users to their carts.
- These relationships help maintain proper data consistency and show how one-to-many relationships work in a DBMS.

4. Project Workflow

1. A user first registers and logs in.
2. All products are displayed on the homepage in a card layout.
3. The user adds products to their cart and can remove them anytime.
4. The cart shows total cost and product details.
5. On clicking “Checkout”, the order is recorded in the database and a success message is shown.

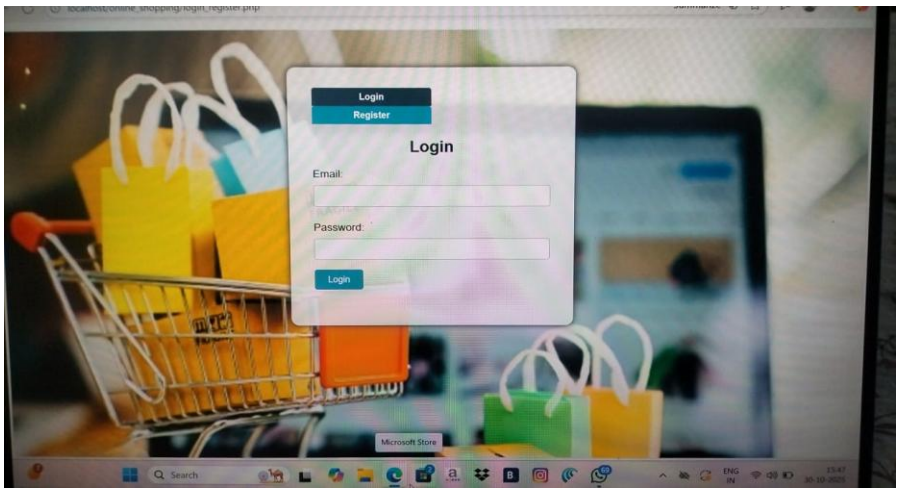
This flow closely represents how real online stores work, from login to checkout.

5. Technologies Used

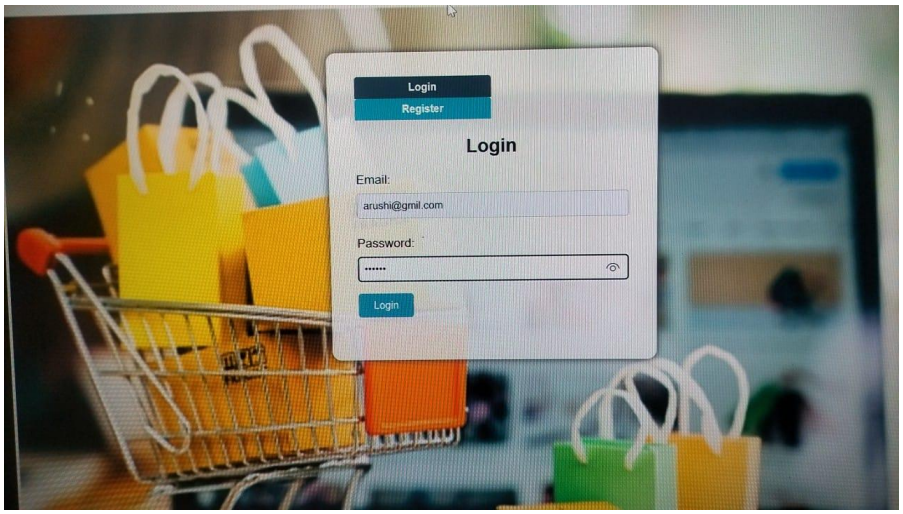
Technology Purpose

PHP Handles backend and logic for user actions
CSS Adds design and styling for a better look
MySQL Stores and manages all the project data
XAMPP Local server to run and test the project
HTML Builds the structure of all web pages

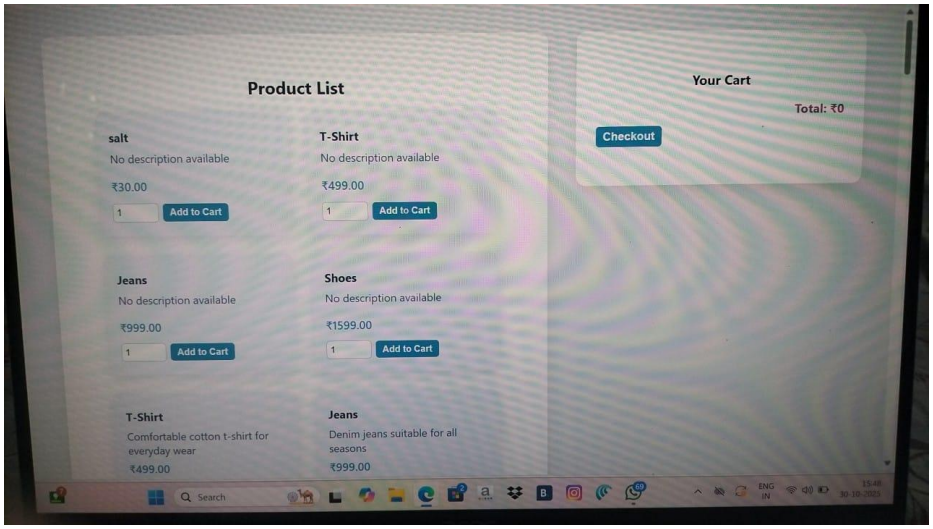
6. Screenshots



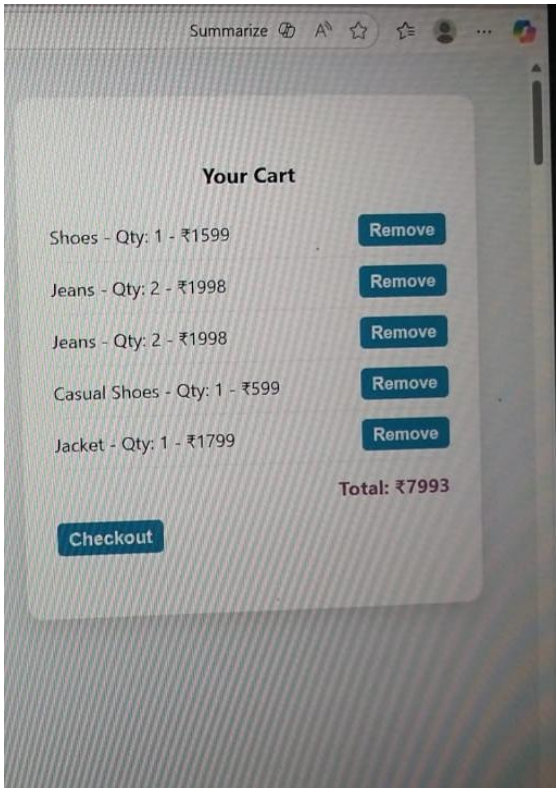
- Login page interface



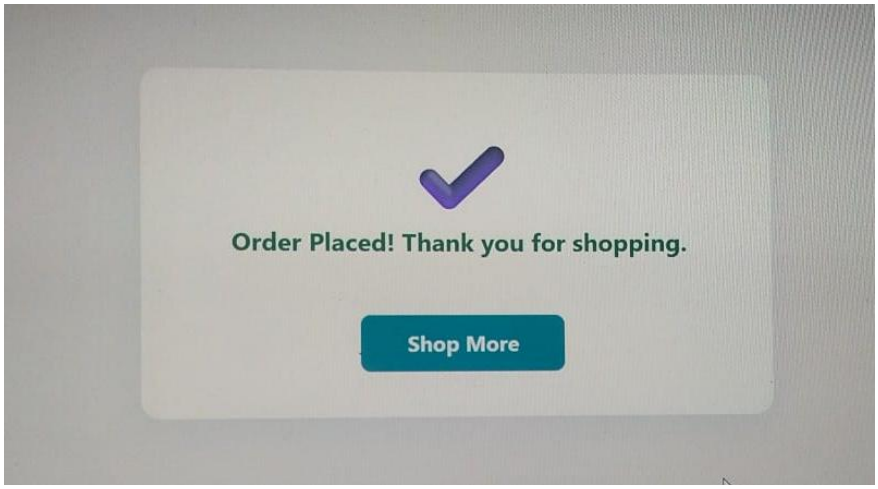
- Enter Email details and password



- This is the product list



- Select the items you want to a Buy and click on checkout.



- Your order has been placed.

7. Highlights and Learnings

Working on this project helped me understand how database systems actually work behind the scenes of real-world websites.
Some of the key learnings include:

- Designing and connecting relational tables in MySQL.
- Performing CRUD operations (Create, Read, Update, Delete) using PHP and SQL queries.
- Managing user sessions for secure logins and logouts.
- Building a responsive and user-friendly interface with HTML and CSS.
- Handling real-time updates like total price calculation and order confirmation.
- It was an interesting experience combining both frontend and backend development with DBMS principles.

8. Conclusion

The Online Shopping System project successfully demonstrates the key concepts of Database Management Systems — from data storage and relationships to transactions and session handling.It not only helped in understanding how data flows between a user and the database but also gave hands-on experience in building a functional web application.
Overall, it was a great learning journey that combined coding, logic, and creativity to create something practical and interactive.

9. References

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