PROJECT REPORT ON

Prime Mart

Submitted By:

Vasu Rachhadiya (003303221211)

Kush Vadaliya (003303221241)

T.N.RAO COLLEGE RAJKOT

Bachelor of Computer Application

Year: 2024-25

Project Guide : Jayshree Donga

Acknowledgement

I would like to express my deepest gratitude to everyone who contributed to the successful completion of this “Prime Mart” website project.

First and foremost, I would like to thank **Jayshree Donga** for their continuous guidance, valuable insights, and unwavering support throughout the project. Their expertise and constructive feedback were instrumental in overcoming challenges and refining the project to meet high standards of quality.

I would also like to extend my thanks to my colleagues, who collaborated on various aspects of the project. Their hard work, dedication, and collaborative spirit made it possible to complete this project on time and with great success.

Finally, I would like to acknowledge the authors, developers, and communities who created and maintained the open-source tools and technologies that were crucial to the development of this project. Their contributions to the field of software development are invaluable, and this project would not have been possible without their work.

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Abstract

The "Prime Mart" e-commerce website is a college project developed to simulate a fully functional online shopping platform. The project aims to provide a seamless shopping experience for users while offering robust administrative controls for managing the product inventory. Key features of the website include user authentication (login and signup), an admin interface for product management (admin signup and add product), and a user-friendly shopping experience (home, cart). The website was built using modern web development technologies, focusing on a responsive design and secure data handling.

The project was developed in response to the growing need for digital commerce solutions, especially in the context of small and medium-sized businesses seeking to establish an online presence. This documentation covers the complete lifecycle of the project, from the initial system analysis and design to the final implementation and testing. It also discusses the limitations encountered during development and suggests potential areas for future enhancement. Through this project, we aimed to gain practical experience in web development, project management, and the application of theoretical knowledge to real-world scenarios.

Preface

The development of the "Prime Mart" e-commerce website represents a practical application of the skills and knowledge acquired during my studies. This project bridges the gap between theoretical concepts and their real-world implementation, allowing me to explore technical aspects like frontend and backend integration, user interface design, and database management. This project not only allowed me to explore the technical aspects of building an e-commerce platform but also emphasized the importance of user experience, security, and scalability in web applications. The journey of creating "Prime Mart" has been both challenging and rewarding, offering insights into the complexities of developing a modern web application. I hope this documentation serves as a comprehensive guide to understanding the project's objectives, development process, and outcomes.

This documentation serves as a comprehensive guide to the objectives, development process, and outcomes of the "Prime Mart" project. It will walk you through the methodologies applied, the technical challenges faced, and the solutions implemented, giving a full picture of the project’s journey from concept to completion.

Project Introduction

The "Prime Mart" e-commerce website is designed to simulate a real-world online shopping platform. The primary objectives include user authentication, product browsing and search, cart management, and an admin panel. The project scope covers a fully functional frontend and backend, with future enhancements planned for payment integration and advanced features.

Scope of the Project: The scope of this project includes the development of a fully functional front-end and back-end, covering essential features of an e-commerce platform. The project focuses on ensuring a seamless user experience, security in data handling, and an intuitive interface for both customers and administrators. The Prime Mart website is designed to be scalable, with the potential for future enhancements such as payment integration, order tracking, and more advanced search capabilities.

Significance: The creation of the Prime Mart website demonstrates a comprehensive understanding of web development principles, from the initial system analysis and design to the implementation and testing phases. It also highlights the importance of considering user needs and security concerns in the development of any web-based application.

Software and Hardware Requirements

Software Requirements:

1. Processor:
Windows 10 or later / macOS / Linux
2. Frontend Development:
HTML5, CSS3, JavaScript
3. Backend Development:
PHP, MySQL
4. Development Environment:
Code Editor: Visual Studio Code, Sublime Text
Web Server: XAMPP, WAMP
5. Browser:
Google Chrome, Mozilla Firefox

Hardware Requirements:

1. Processor:
Intel Core i3 or higher
2. RAM:
Minimum 4GB (8GB recommended)
3. Storage:
At least 1GB free space
4. Internet Connection:
Required for dependencies and live testing

Tools and Technology Used

Frontend Technologies :

1. HTML5 :Structure for web pages

2. CSS3 :Styling and responsive design

3. JavaScript :Interactivity (jQuery,Vanilla JavaScript)

Backend Technologies :

1. PHP : Server-side scripting

2. MySQL : Database management

Development Tools :

1. Code Editors/IDEs :

Visual Studio Code, SublimeText

2. Local Development Environments :

XAMPP, WAMP

3. Version Control :

Git, GitHub

System Analysis and Design

System Analysis:

Objective:

Develop an e-commerce platform supporting user authentication, product management, and shopping cart functionality.

Functional Requirements:

User registration, product listing, cart management, admin functionalities

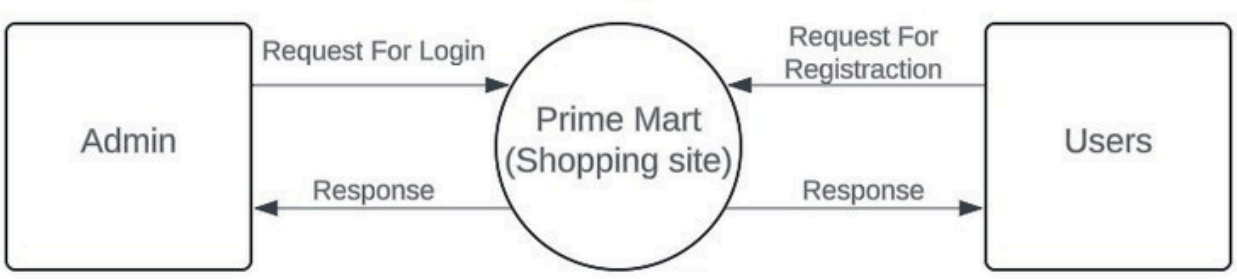
Non-Functional Requirements:

Performance, security, usability

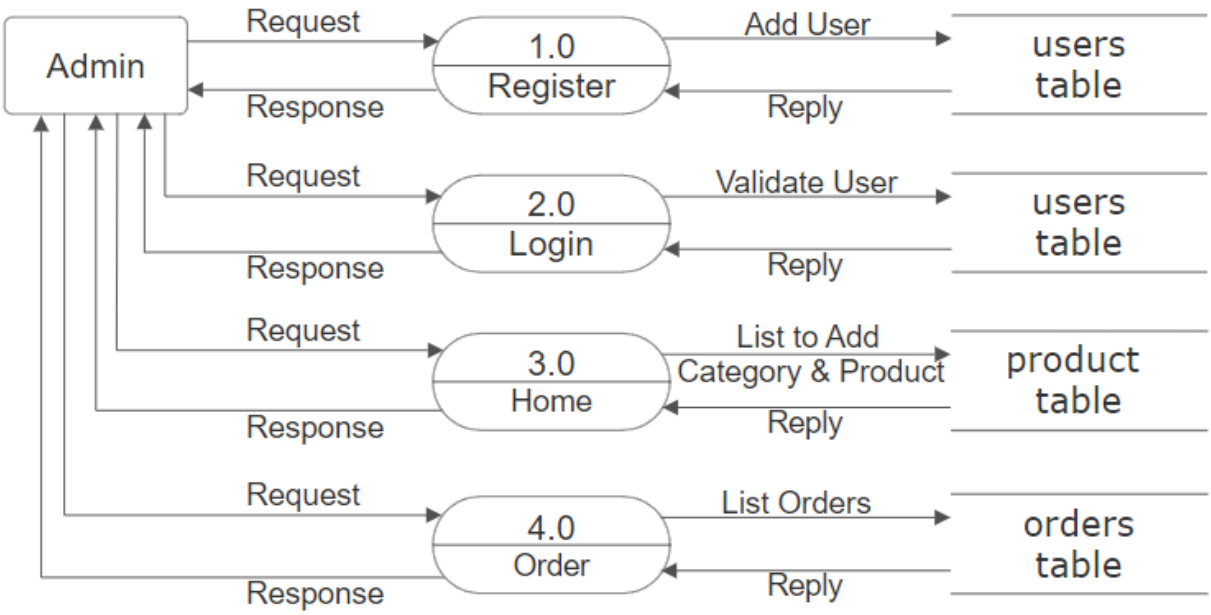
Design:

Data Flow Diagram (DFD):

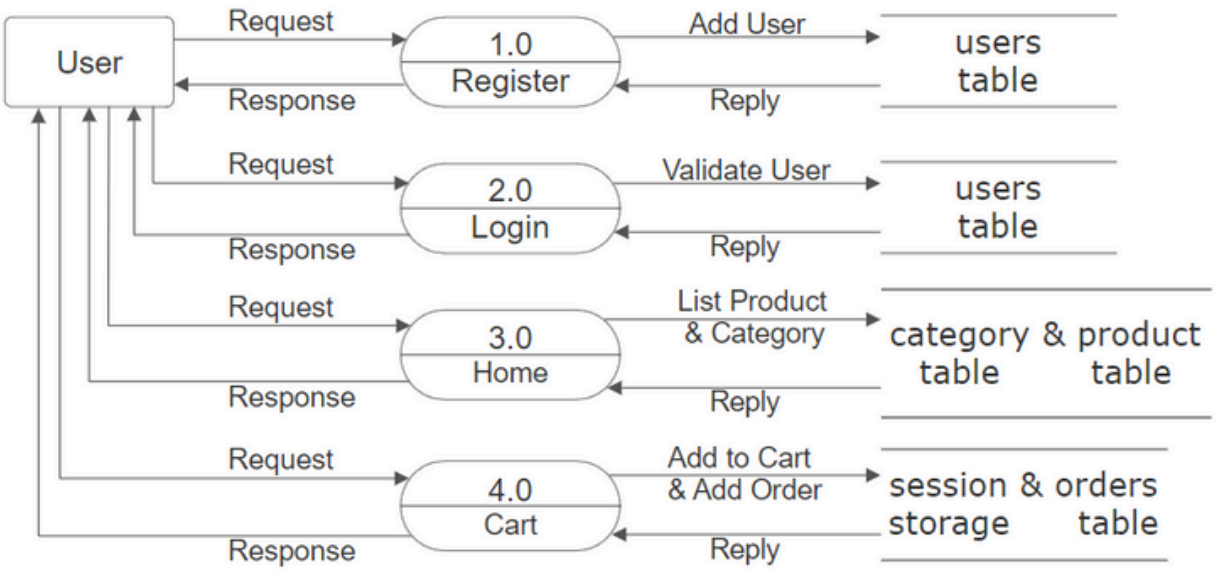
0 Level DFD :



Admin 1 Level DFD :



User 1 Level DFD :



Data Dictionary :

users Table :

Field Name	Data Type	Constraints	Description
id	INT(11)	PRIMARY KEY	Unique identifier for user
username	VARCHAR(255)	NOT NULL	Name of the user
password	VARCHAR(255)	NOT NULL	Password for user and admin
userType	VARCHAR(255)	NOT NULL	Types of user / admin

products Table :

Field Name	Data Type	Constraints	Description
id	INT(11)	PRIMARY KEY	Unique identifier for product
productimage	VARCHAR(255)	NOT NULL	Product’s image
name	VARCHAR(100)	NOT NULL	Name of the product
price	DECIMAL(10,2)	NULL	Product’s price
category_id	INT(11)	FOREIGN KEY	Unique identifier for product category Table - category, Field - id

order_items Table :

Field Name	Data Type	Constraints	Description
id	INT(11)	PRIMARY KEY	Unique identifier for order item
order_id	INT(11)	FOREIGN KEY	Unique identifier for order Table - orders, Field - id
product_name	VARCHAR(100)	NOT NULL	Name of the product
price	DECIMAL(10,2)	NULL	Product's price

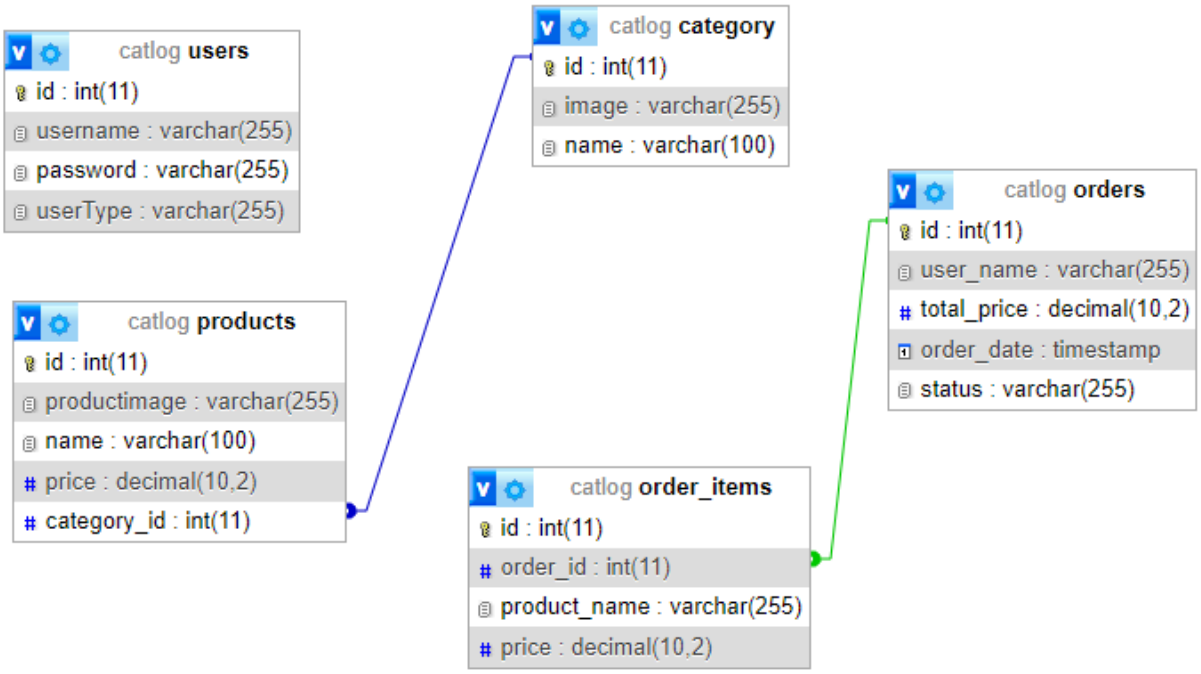
orders Table :

Field Name	Data Type	Constraints	Description
id	INT(11)	PRIMARY KEY	Unique identifier for order
user_name	VARCHAR(255)	NOT NULL	Name of the user
total_price	DECIMAL(10,2)	NULL	Total price of products
order_date	TIMESTAMP	NOT NULL	Date of order purchase by user
status	VARCHAR(255)	NOT NULL	Order status - pending or not

category Table :

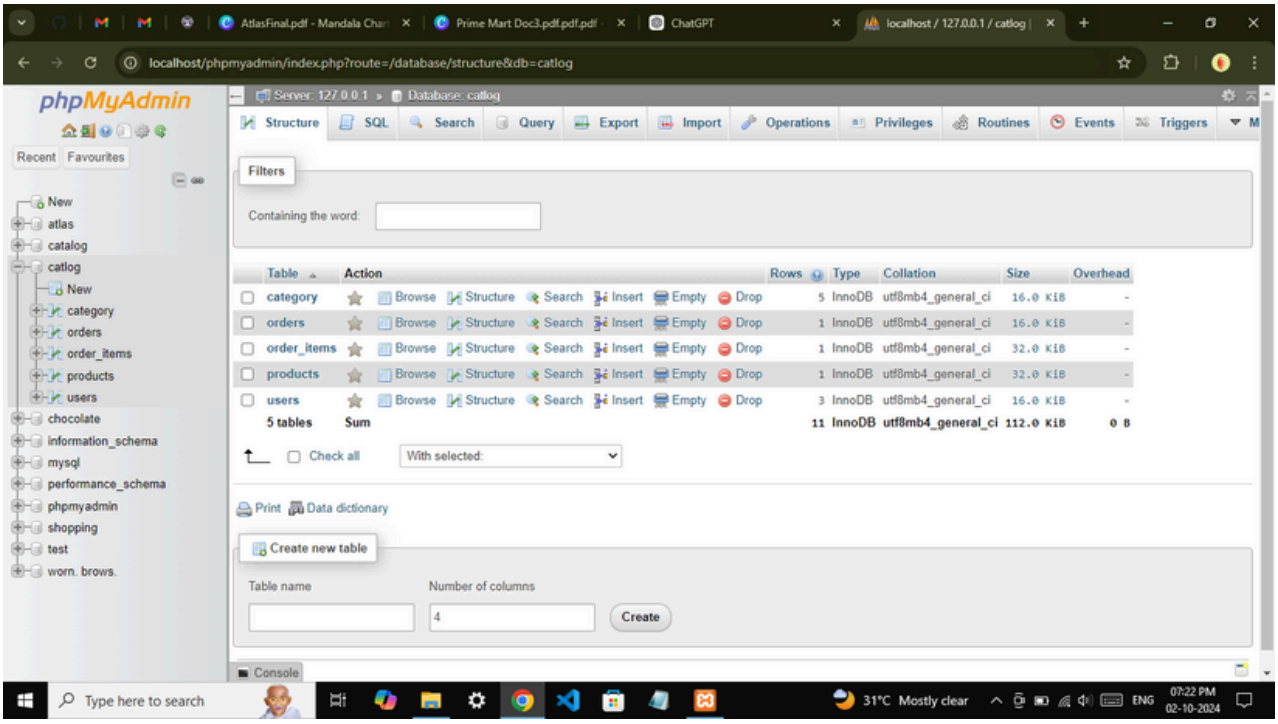
Field Name	Data Type	Constraints	Description
id	INT(11)	PRIMARY KEY	Unique identifier for category
image	VARCHAR(255)	NOT NULL	Image of product's category
name	VARCHAR(100)	NOT NULL	Name of the category

Database Design :

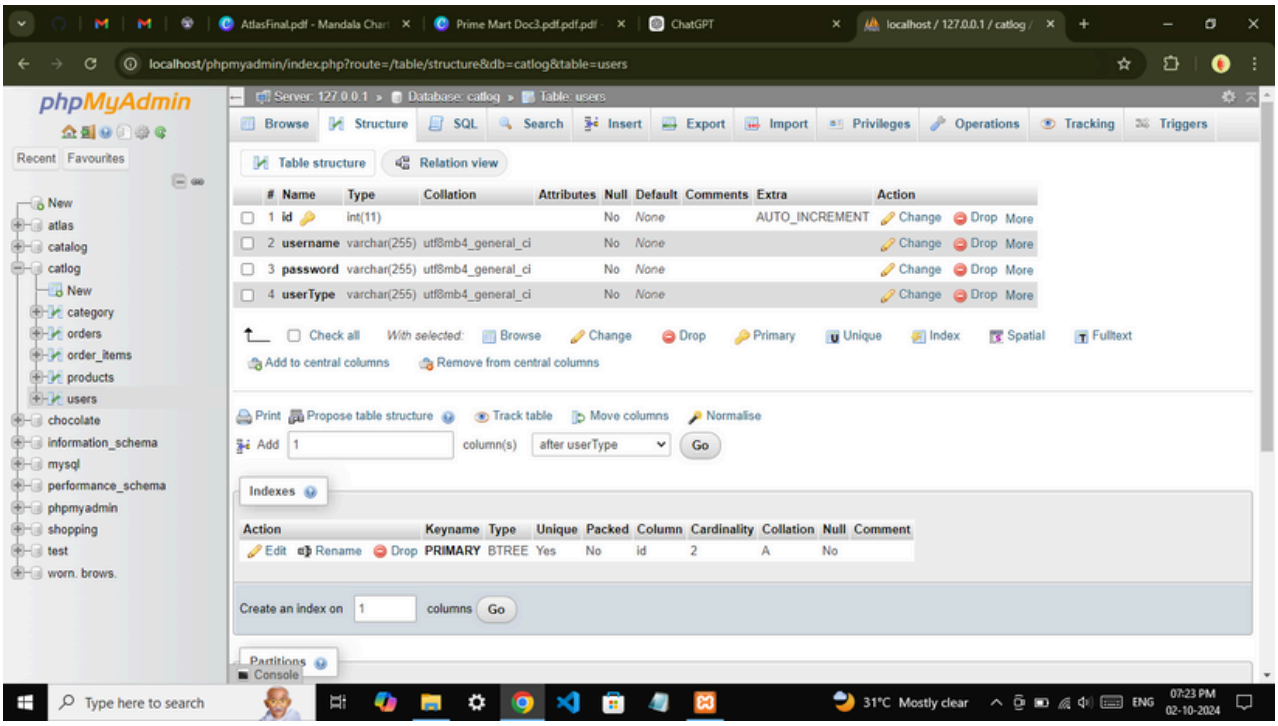


ScreenShot of Database & Tables :

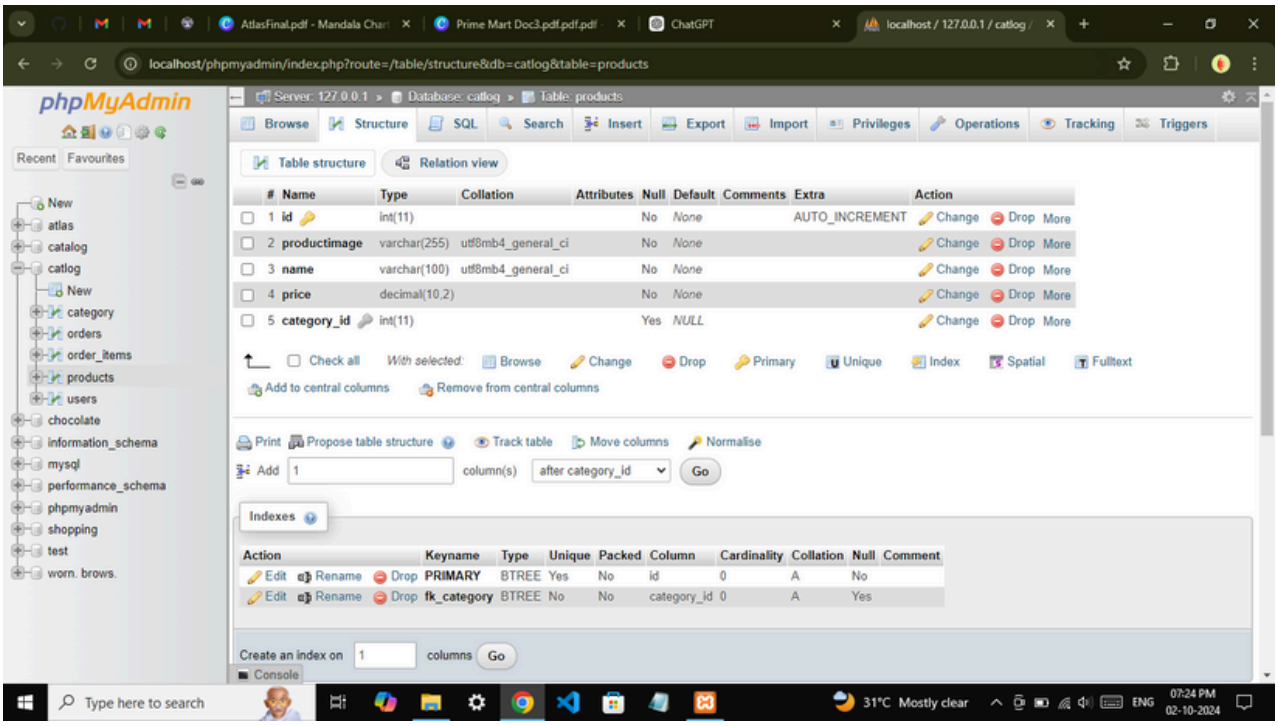
catlog Database :



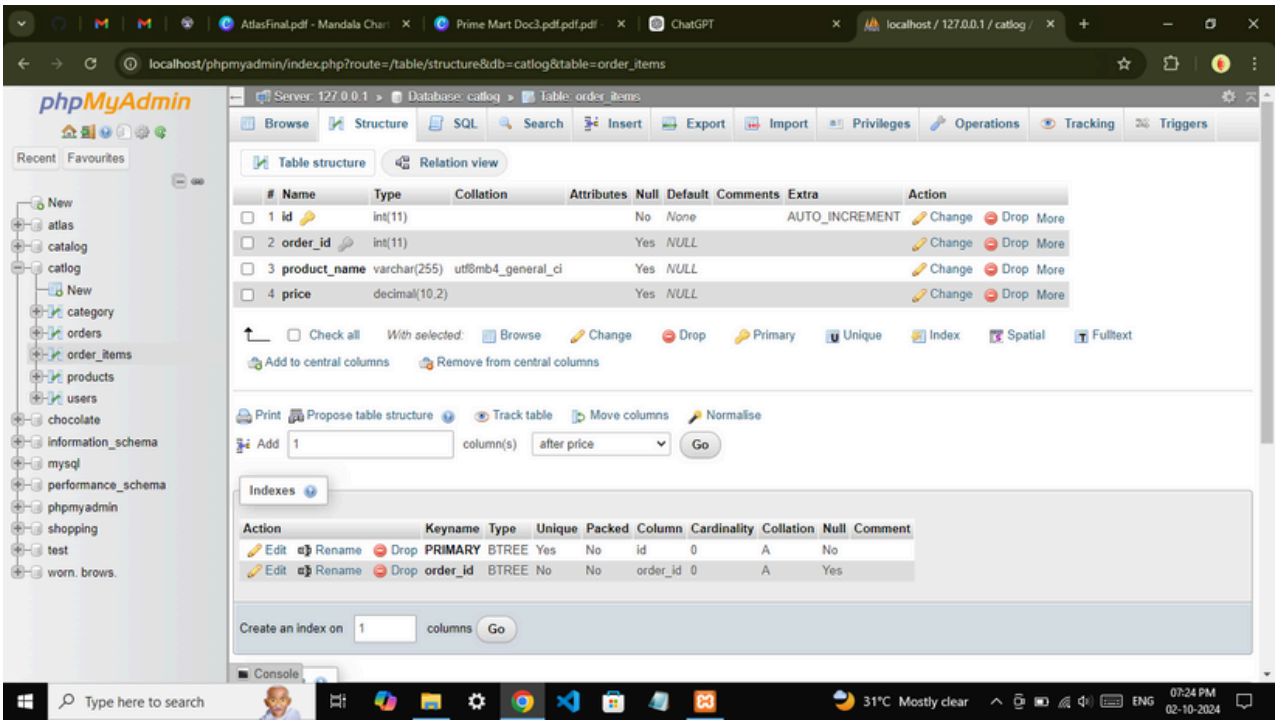
users Table :


phpMyAdmin
Server: 127.0.0.1 » Database: catlog » Table: users
Browse
Structure
SQL
Search
Insert
Export
Import
Privileges
Operations
Tracking
Triggers
Table structure
Relation view
Name Type Collation Attributes Null Default Comments Extra Action
1 id int(11) No None AUTO_INCREMENT Change Drop More
2 username varchar(255) utf8mb4_general_ci No None Change Drop More
3 password varchar(255) utf8mb4_general_ci No None Change Drop More
4 userType varchar(255) utf8mb4_general_ci No None Change Drop More
Check all With selected: Browse Change Drop Primary Unique Index Spatial Fulltext
Add to central columns
Remove from central columns
Print
Propose table structure
Track table
Move columns
Normalise
Add 1 column(s) after userType Go
Indexes
Action Keyname Type Unique Packed Column Cardinality Collation Null Comment
Edit Rename Drop PRIMARY BTREE Yes No id 2 A No
Create an index on 1 columns Go
Partitions
Console
Type here to search
31°C Mostly clear
ENG
07:23 PM
02-10-2024

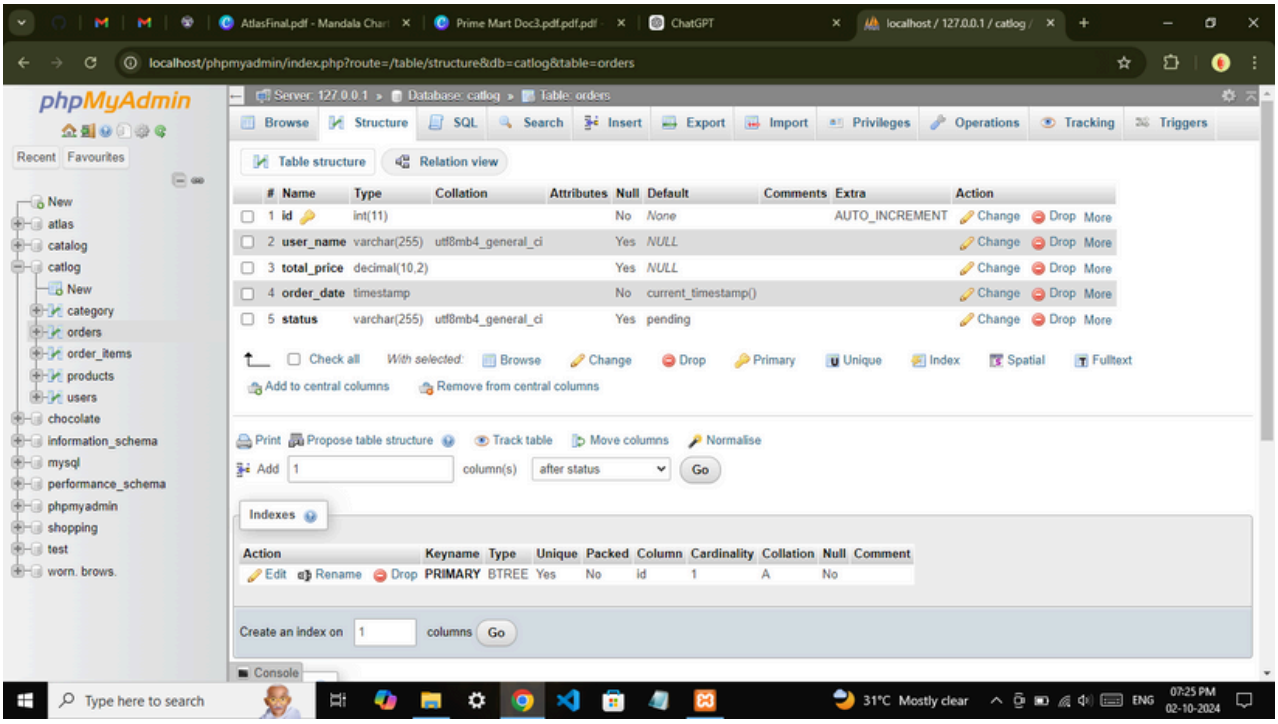
products Table :



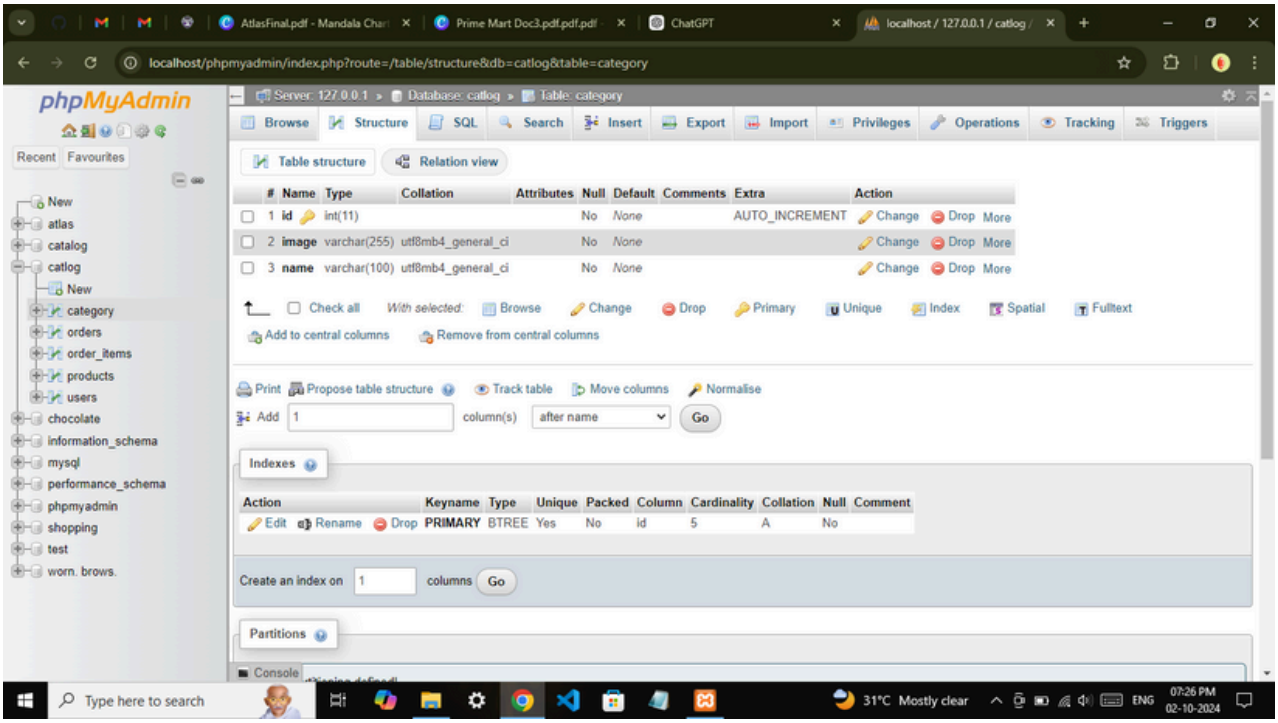
order_items Table :



orders Table :



category Table :



System Architecture :

Frontend, Backend, Database

Project Implementation

Frontend Implementation :

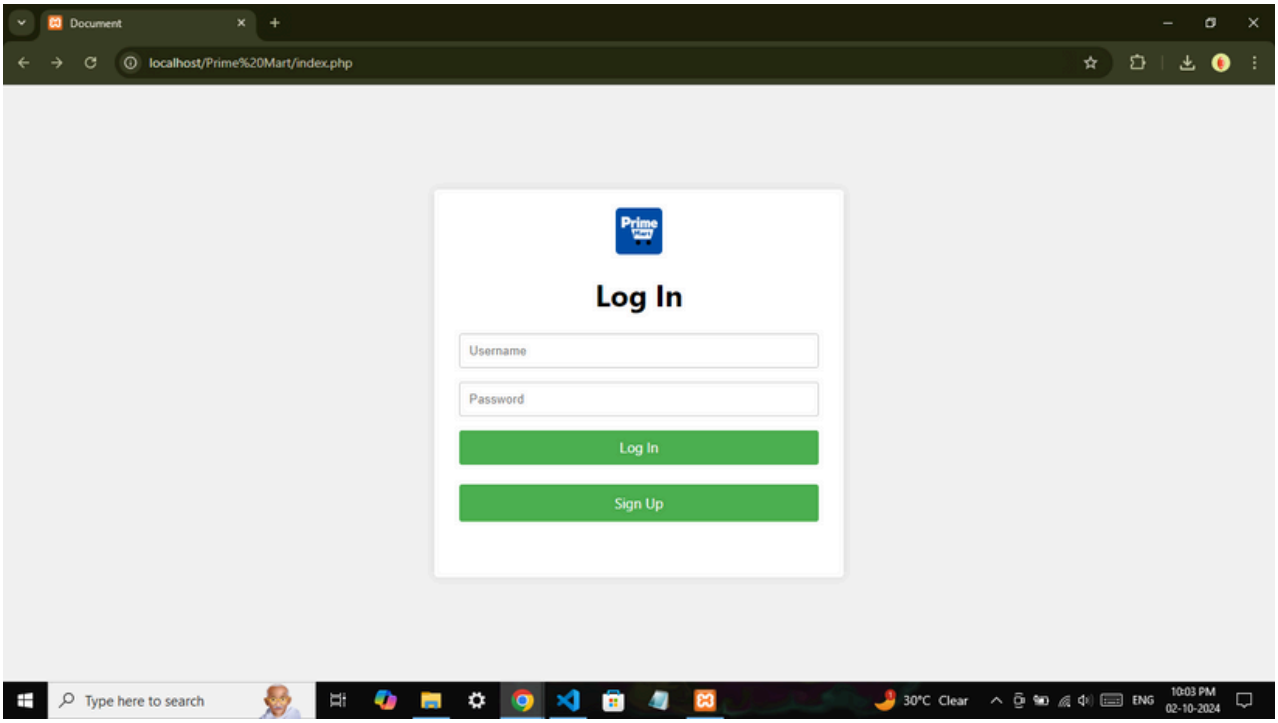
HTML5 : Pages and key elements
CSS3 : Styling and responsive design
JavaScript : Dynamic features and libraries

Backend Implementation :

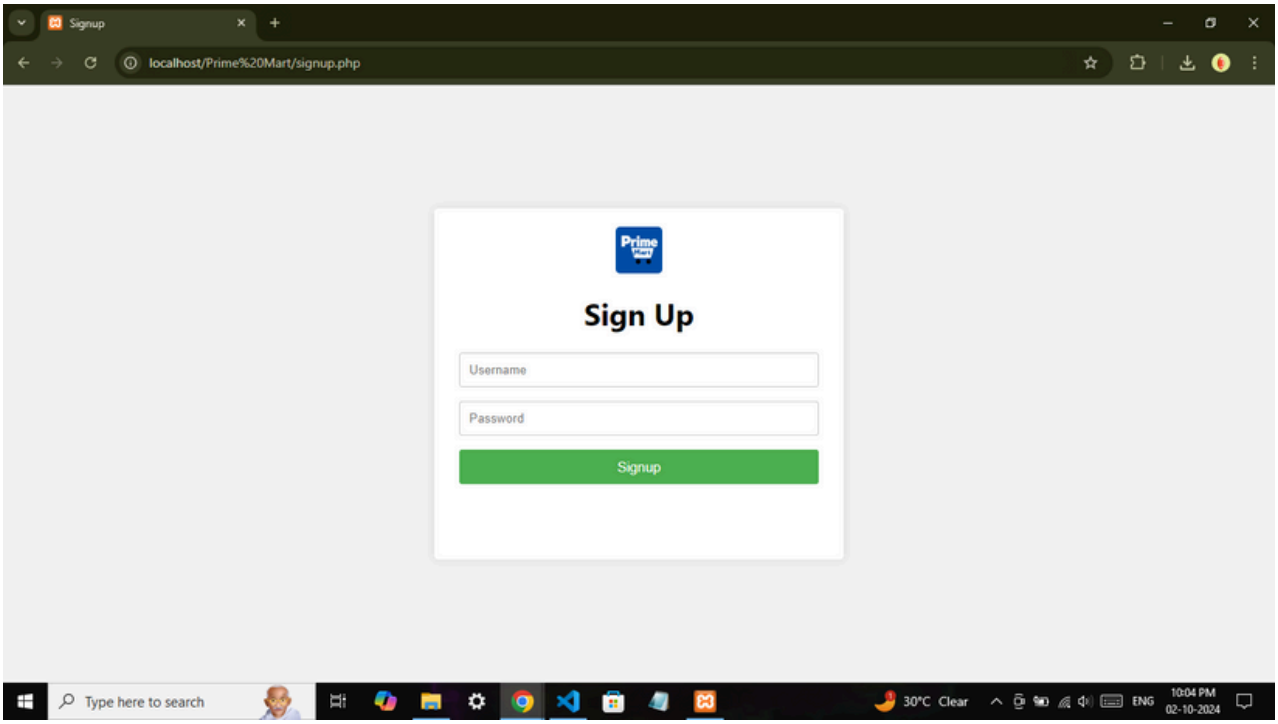
PHP : Server-side logic and security
MySQL : Database setup and queries

Screenshots :

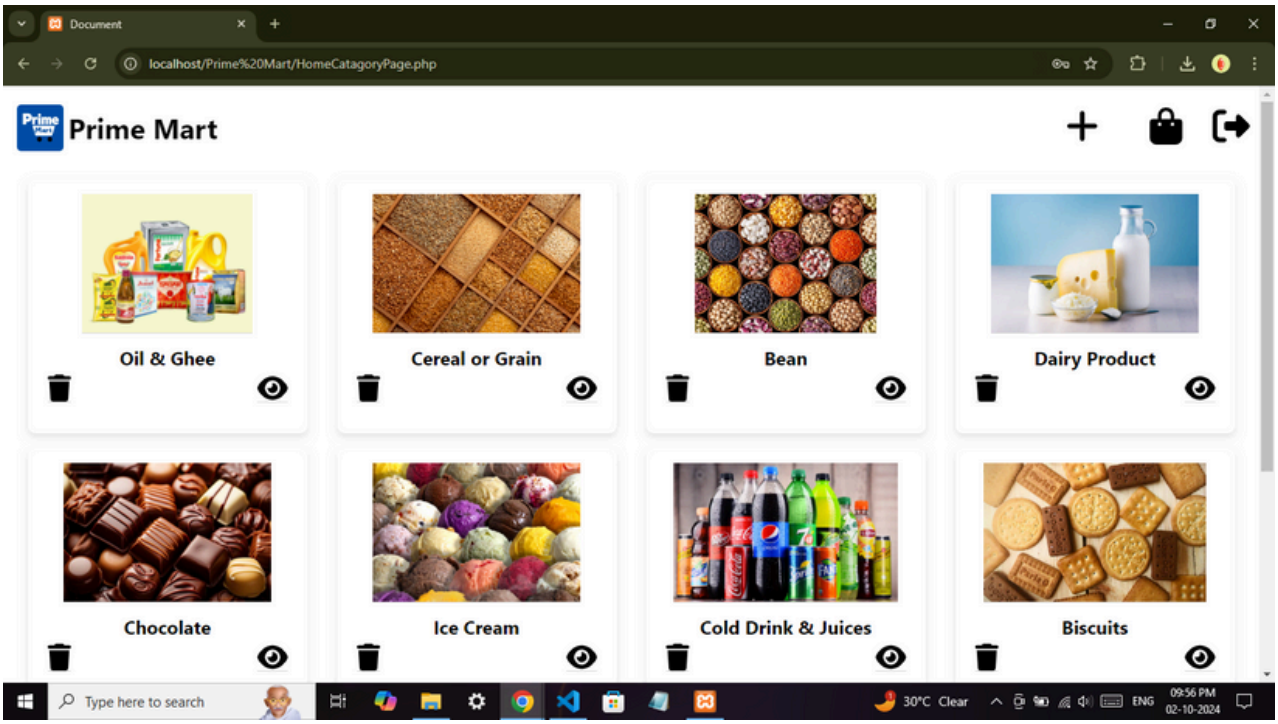
Login Page :



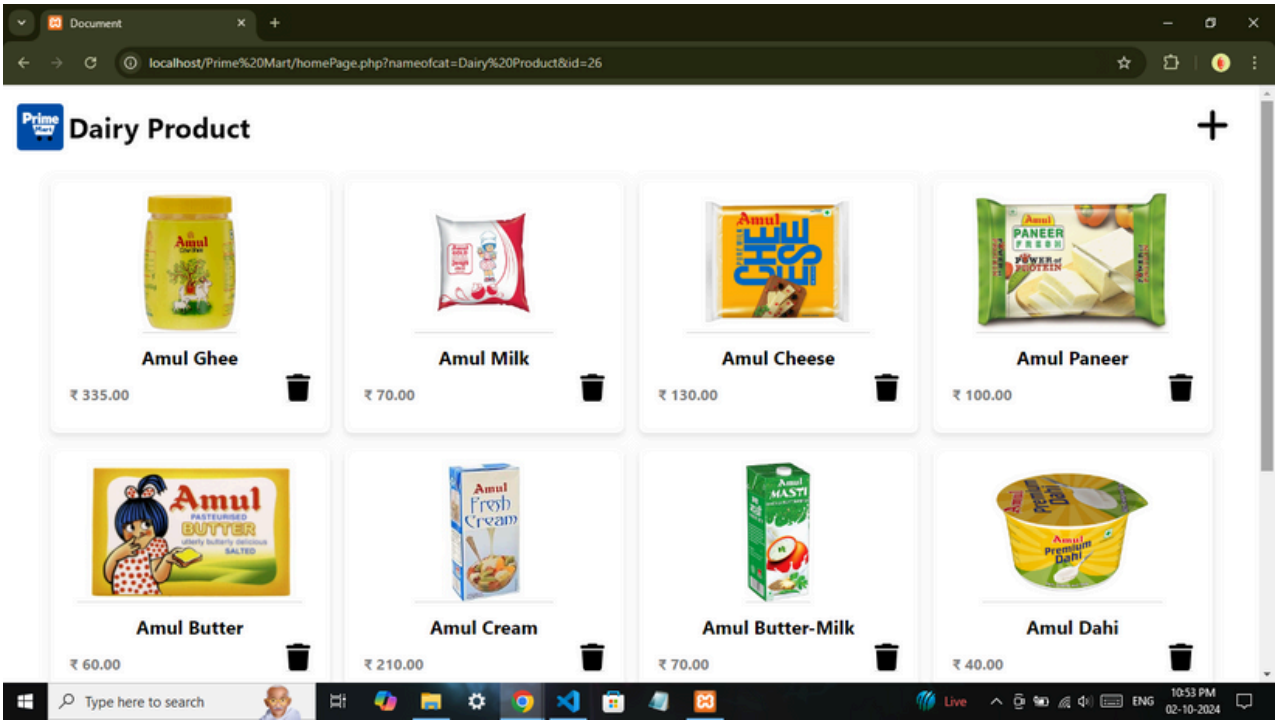
Signup Page :


Signup
localhost/Prime%20Mart/signup.php
Sign Up
Username
Password
Signup
Type here to search
30°C Clear
ENG
10:04 PM
02-10-2024

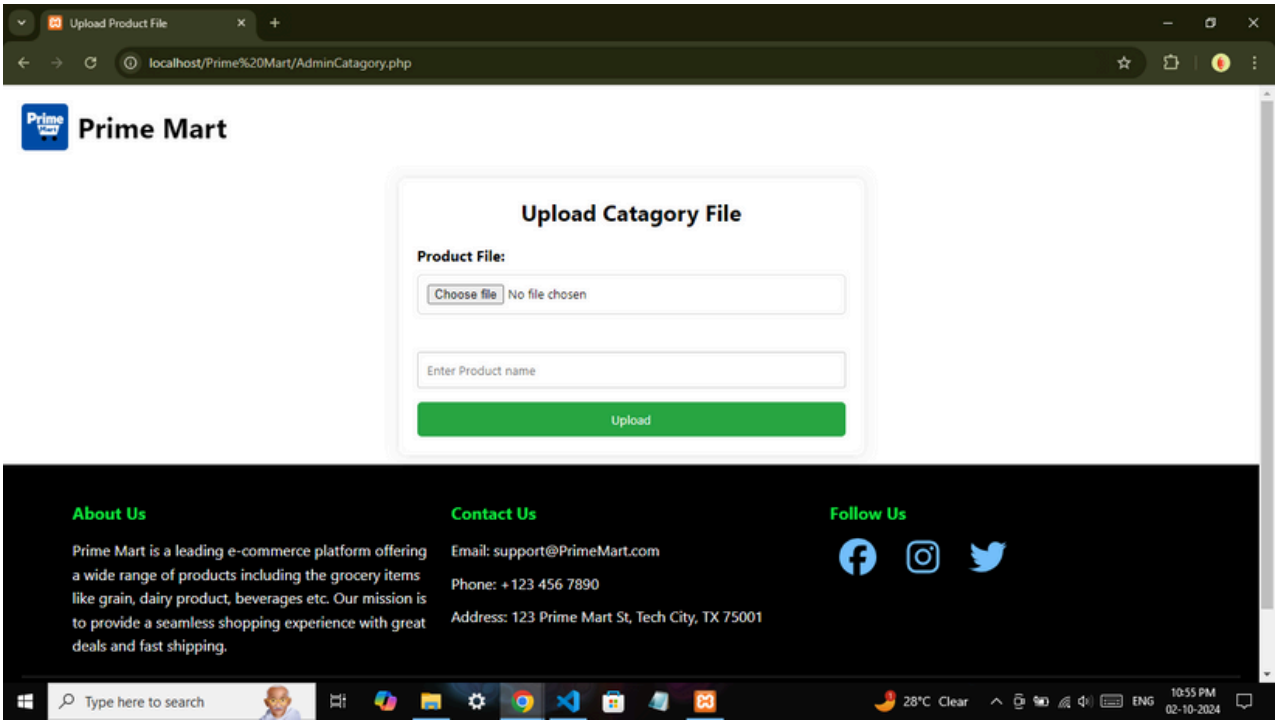
Home Page (Admin) :



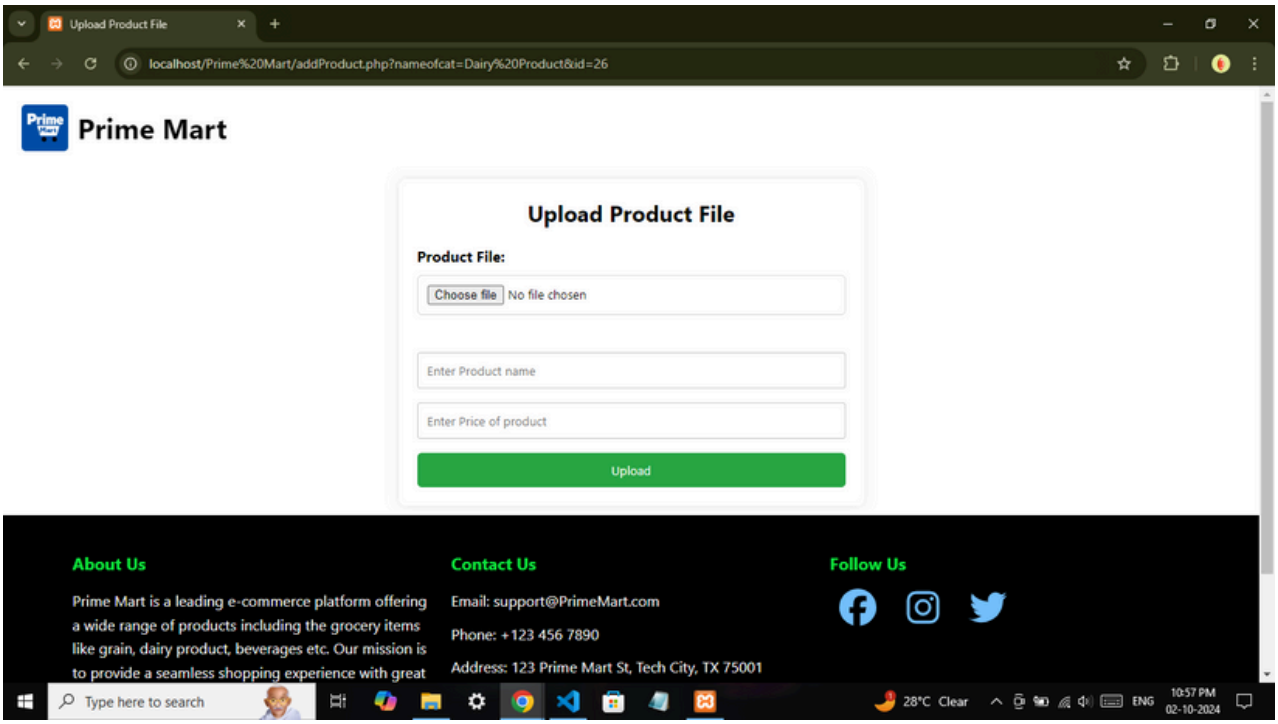
Product Page (Admin) :



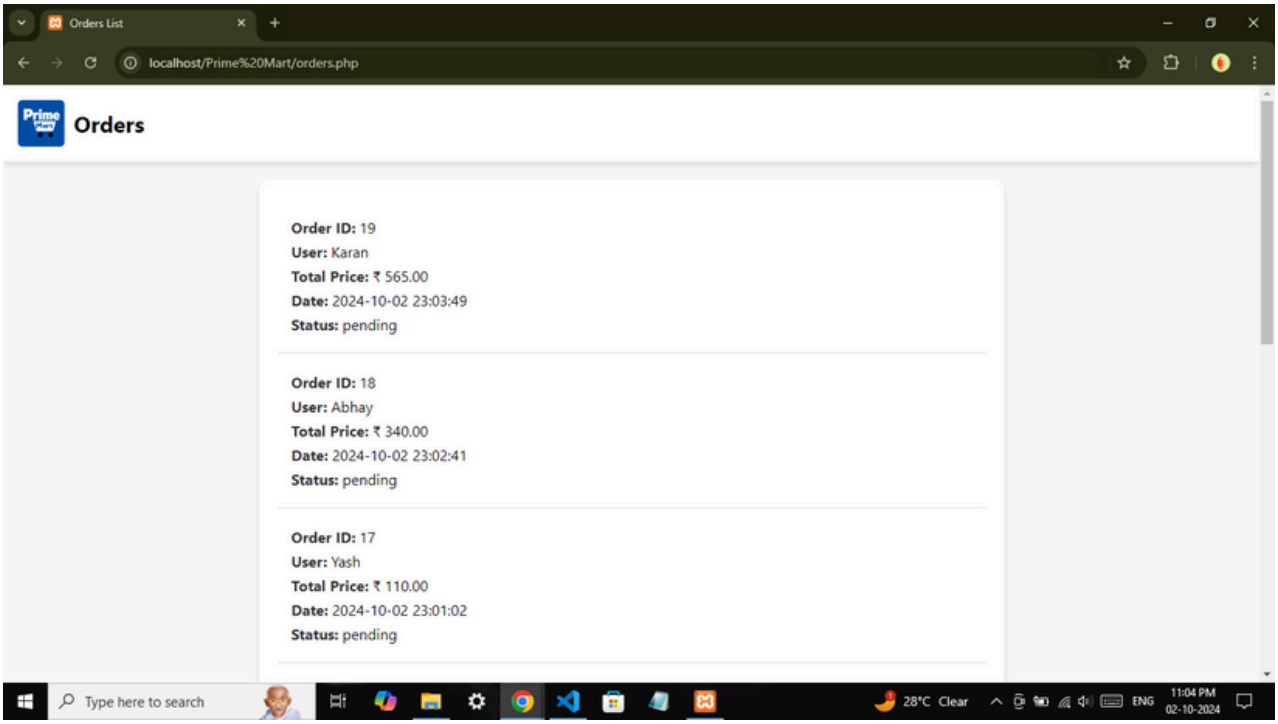
Add Category Page :



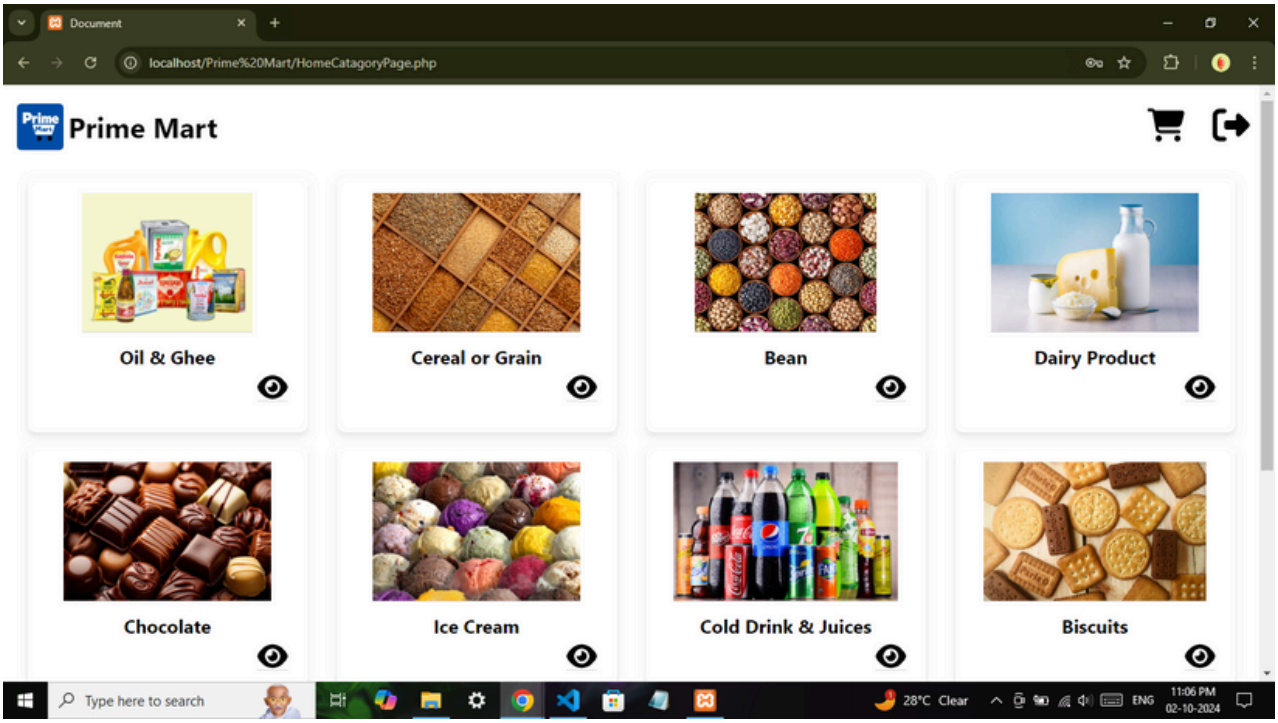
Add Product Page :



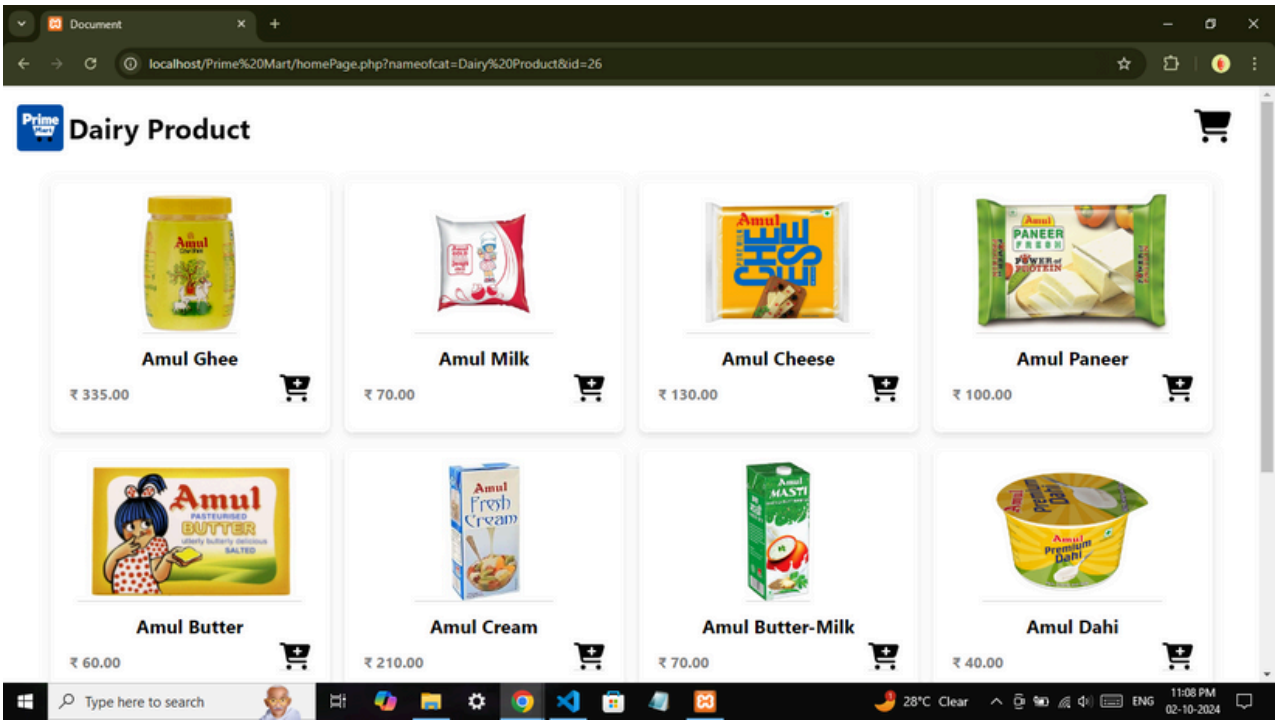
Order Page :


Orders List
localhost/Prime%20Mart/orders.php
Orders
Order ID: 19
User: Karan
Total Price: ₹ 565.00
Date: 2024-10-02 23:03:49
Status: pending
Order ID: 18
User: Abhay
Total Price: ₹ 340.00
Date: 2024-10-02 23:02:41
Status: pending
Order ID: 17
User: Yash
Total Price: ₹ 110.00
Date: 2024-10-02 23:01:02
Status: pending
Type here to search
28°C Clear
ENG
11:04 PM
02-10-2024

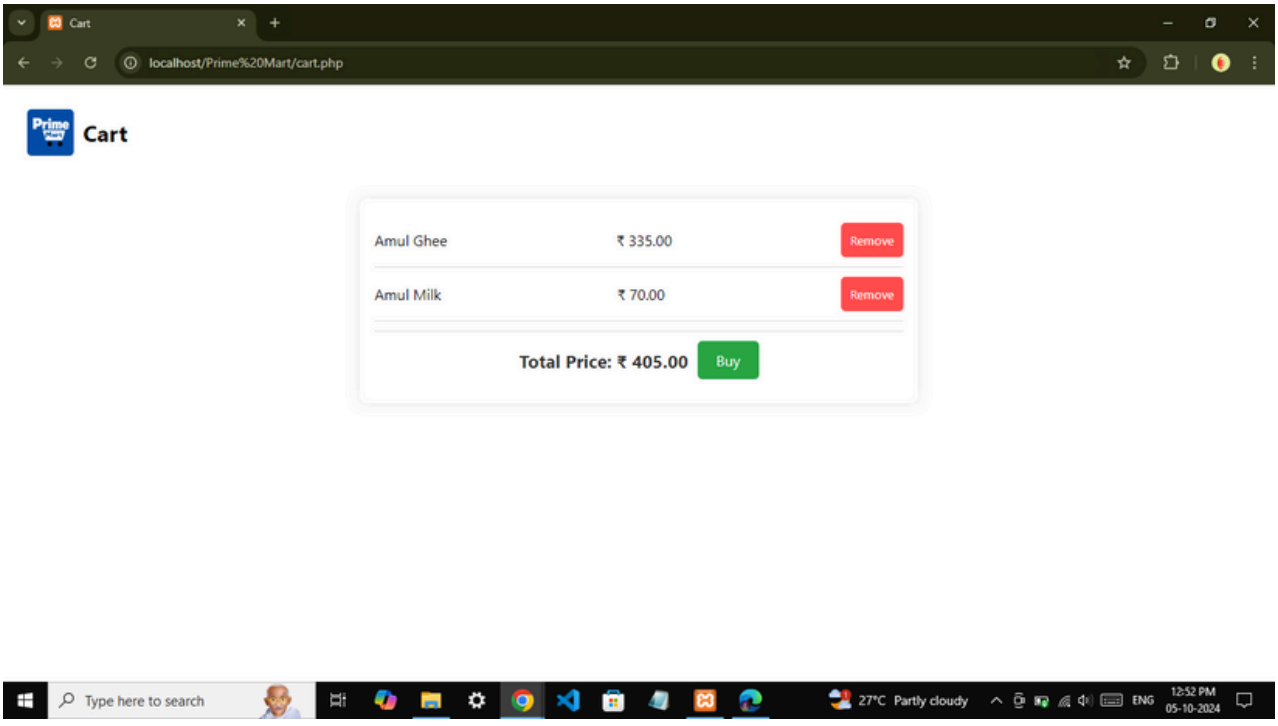
Home Page (User) :



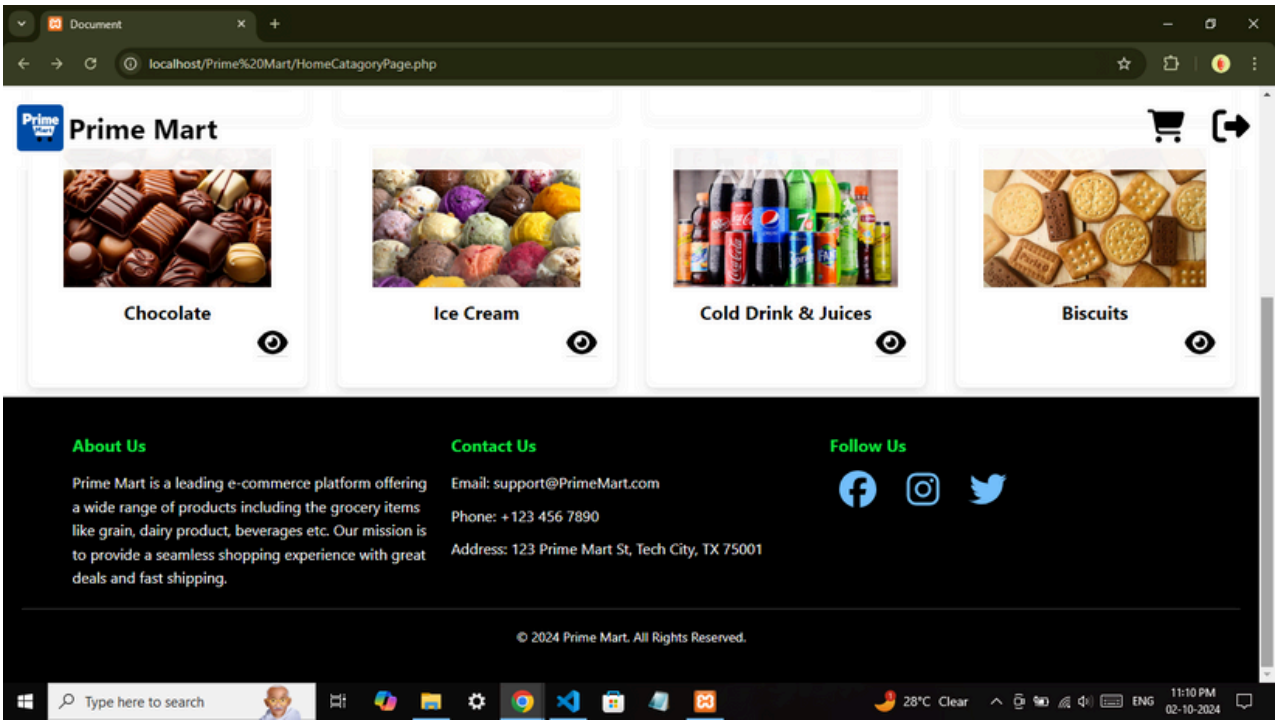
Product Page (User) :



Cart :


Cart
localhost/Prime%20Mart/cart.php
Cart
Amul Ghee
₹ 335.00
Remove
Amul Milk
₹ 70.00
Remove
Total Price: ₹ 405.00
Buy
Type here to search
27°C Partly cloudy
ENG
12:52 PM
05-10-2024

Footer :


Document
localhost/Prime%20Mart/HomeCatagoryPage.php
Prime Mart
Chocolate
Ice Cream
Cold Drink & Juices
Biscuits
About Us
Prime Mart is a leading e-commerce platform offering a wide range of products including the grocery items like grain, dairy product, beverages etc. Our mission is to provide a seamless shopping experience with great deals and fast shipping.
Contact Us
Email: support@PrimeMart.com
Phone: +123 456 7890
Address: 123 Prime Mart St, Tech City, TX 75001
Follow Us
© 2024 Prime Mart. All Rights Reserved.
Type here to search
28°C Clear
ENG
11:10 PM
02-10-2024

Testing

Testing Overview:

Unit Testing : Individual components

Integration Testing : Interaction between modules

System Testing : Overall system functionality

User Acceptance Testing (UAT) : End user validation

Performance Testing : Load and stress testing

Security Testing : Vulnerability checks

Compatibility Testing : Browser & device compatibility

Testing Results :

Unit Testing: No critical issues

Integration Testing: Successful data communication

System Testing: Smooth process

UAT: Positive user feedback

Performance Testing: Effective handling of traffic

Security Testing: Vulnerabilities addressed

Compatibility Testing: Minor adjustments made

Limitations and Future Enhancements

Limitations :

1. Scalability
2. Payment Integration
3. Order Management
4. Security
5. User Interface
6. Mobile Optimization

Future Enhancements :

1. Payment Gateway Integration
2. Order Management Features
3. Enhanced Security
4. UI/UX Improvements
5. Analytics Integration

Bibliography

The Bibliography section lists the references and resources used in the development of the "Prime Mart" e-commerce website. This may include books, articles, websites, and other materials that provided guidance, inspiration, or technical information during the project.

Articles and Online Resources:

1. MDN Web Docs
2. W3Schools
3. PHP Manual
4. MySQL Documentation
5. Stack Overflow

Tools and Libraries:

1. Visual Studio Code
2. XAMPP
3. GitHub

Links :

https://www.w3schools.com

https://stackoverflow.com

https://www.geeksforgeeks.org

Thank You