Tribhuvan University

Faculty of Humanities and Social Sciences

A PROJECT REPORT

"MOBILE ORDERING SYSTEM"

Submitted to

Department of Computer Application

Hetauda School of Management and Social Science

In partial fulfillment of the requirements for the Bachelor's in Computer Application

Submitted by

Abhi Shrestha

REG NO: 6-2-479-2-2022

Under the Supervision of

Mr. Sujan Devkota

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Hetauda School of Management and Social Science

Supervisor's Recommendation

We hereby recommend that this project prepared under supervision by **Mr. Abhi Shrestha (6-2-479-2-2022)**entitled "**Mobile Ordering System"** in partial fulfillment of the requirements of Fourth Semester (Project I) for the degree of Bachelor of Computer Application is recommended for the final evaluation.

……

SIGNATURE

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SUPERVISOR

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Hetauda School of Management and Social Science

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Tribhuvan University

Faculty of Humanities and Social Sciences

Hetauda School of Management and Social Sciences

LETTER OF APPROVAL

This is to certify that this project prepared by **Mr. Abhi Shrestha** and entitled "**MOBILE ORDERING SYSTEM"** in partial fulfillment of the requirements of Fourth Semester (Project I) for the degree of bachelor's in computer application has been evaluated. In our opinion it is satisfactory in the scope and quality as a project for the required degree.

SIGNATURE of Supervisor Mr. Sujan Devkota Department of Computer Application Hetauda-4, Makwanpur, Nepal	**SIGNATURE of Coordinator**
SIGNATURE of Internal Examiner	**SIGNATURE of External Examiner**

Acknowledgement

We are grateful to everyone who contributed to the completion of this project. Firstly, we extend our heartfelt thanks to Hetauda School of Management and Social Science for providing us with invaluable resources, unparalleled guidance, and an enriching learning environment. It is through their unwavering support that we were able to delve into our research and acquire knowledge that shaped the project's outcomes.

Our gratitude extends to our esteemed project coordinator, Mr. Sujan Devkota, whose constant support and insightful guidance played a pivotal role in steering this project towards success. His wisdom and astute feedback significantly influenced the direction and development of our work, for which we are deeply thankful.

We owe a profound debt of gratitude to our instructors and mentors. Without their tireless efforts and encouragement, navigating through the complexities of this project would have been an insurmountable challenge. Their steadfast support fueled our determination to strive for excellence.

We also thank our friends for their understanding, encouragement, and belief in us, making the project's challenges easier to overcome.

Lastly, we express our deepest gratitude to our families. Their love, patience, and support sustained us through every stage of this project, giving us the strength to persevere.

In conclusion, we sincerely thank everyone who contributed to this project. Your help and encouragement have been invaluable, and we are truly grateful for this opportunity.

Yours Sincerely,

Abhi Shrestha

Abstract

Mobiz Store is an innovative online mobile ordering system designed to revolutionize the purchasing experience of smartphones and related accessories. This system aims to provide users with an intuitive interface and a seamless browsing experience, featuring a selection of mobile brands and accessories, detailed product descriptions, customer reviews, and secure payment options. The platform streamlines the entire purchasing process, ensuring that customers can browse, compare, and order their desired products with ease. With features such as personalized recommendations, order tracking, and customer support, Mobiz Store offers a comprehensive solution for mobile shopping needs.

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List of Abbreviations

Keywords	Full Form
CSS	Cascading Stylesheet
DFD	Data Flow Diagram
ER	Entity Relationship
HTML	Hyper Text Markup Language
JS	Java Script
OS	Operating System
PHP	Hyper Text Preprocessor
RAM	Random Access Memory
SQL	Structured Query Language
UI	User Interface
VS	Visual Studio
XAMPP	X-operating system, Apache, MySQL, PHP, Perl

Chapter 1: Introduction

1.1 Introduction:

Mobiz Store - Mobile Online Ordering System, is a comprehensive digital platform designed to redefine the way individuals purchase mobile phones and accessories. This innovative system offers a seamless online shopping experience, allowing users to browse, explore, and order their desired smartphones with utmost convenience. By incorporating advanced features and an intuitive user interface, Mobiz Store ensures that selecting the perfect mobile device is both effortless and enjoyable.

Users can explore an extensive range of mobile phones from various renowned brands, each accompanied by detailed specifications that provide comprehensive product insights. These details include essential attributes such as brand, model, technical specifications, pricing, and availability, empowering customers to make well-informed purchasing decisions. Whether a user is looking for a budget-friendly smartphone or a high-end flagship device, the system caters to diverse preferences and needs. The platform's powerful search and filter options allow users to efficiently narrow down their choices and find the perfect phone that suits their lifestyle and requirements.

1.2 Problem Statement:

Purchasing mobile phones through traditional methods presents several challenges that hinder the overall shopping experience. Customers and store owners face various issues that impact convenience, efficiency, and satisfaction.

- Lack of detailed information
- Inconvenience of store visits
- Limited product availability

1.3 Objectives:

The primary objective of Mobiz Store - Mobile Online Ordering System is to provide a seamless and efficient online platform for purchasing mobile phones and accessories. The system aims to improve the shopping experience for customers. The main objectives of our system include:

- To provide a user-friendly online shopping experience
- To offer comprehensive product details
- To provide an accessible platform

1.4 Scope and Limitations:

1.4.1 Scopes:

The Mobiz Store - Mobile Online Ordering System aims to provide a comprehensive and efficient platform for both customers and administrators by offering the following features and capabilities:

User Registration and Authentication:

- Customers can create accounts, log in securely, and manage their profiles.
- Admins can access the system to manage product listings and orders.

Product Browsing and Filtering:

- Customers can explore a wide range of mobile phones and accessories.
- Advanced search and filtering options help users find products based on brand, specifications, and price.

Order Management:

- Customers can place orders, track their purchase status, and receive updates.
- Admins can confirm, modify, or cancel orders efficiently.

1.4.2 Limitations:

Despite its extensive features, the system has certain limitations that must be considered:

Internet Dependency:

- The system requires a stable internet connection for users to access its features and complete transactions.

Limited Payment Options:

- Initially, the platform may support only a few payment methods, which could limit customer choices.

1.5 Report Organization:

- **Chapter 1: "Introduction"** – This chapter introduces the Mobiz Store - Mobile Online Ordering System, highlighting the problem statement, objectives, scope, and limitations of the project.
- **Chapter 2: "Background Study and Literature Review"** – This chapter provides an overview of the background study and relevant literature reviews, analyzing existing mobile ordering systems and identifying the need for the proposed solution.
- **Chapter 3: "System Analysis and Design"** – This chapter details the system requirements, both functional and non-functional, along with feasibility analysis, system architecture, and design models such as ER diagrams and data flow diagrams.
- **Chapter 4: "Implementation and Testing"** – This chapter outlines the implementation process of the system, the technologies used such as PHP, SQL, and CSS, and the testing methodologies applied to ensure system functionality and reliability.
- **Chapter 5: "Conclusion and Future Recommendations"** – This chapter summarizes the project's outcomes, lessons learned, and recommendations for future improvements and to enhance the system's capabilities.

Chapter 2: Background Study and Literature Review

2.1 Background Study

In its current state, the e-commerce landscape for purchasing mobile phones faces several challenges. Existing platforms often lack an organized and comprehensive inventory, making it difficult for users to find the products they need efficiently. One of the significant shortcomings lies in the insufficient specification of products, where crucial details such as model specifications, features, and compatibility are inconsistently presented or missing. Additionally, sellers encounter difficulties in managing product listings, leading to delays in updating accurate information for potential buyers.

The Mobiz Store project aims to address these issues by offering a well-structured and feature-rich platform where users can easily browse and locate mobile phones based on their requirements. By integrating advanced product management functionalities, the platform ensures that both customers and administrators experience a seamless and efficient interface.

2.2 Literature Review

Throughout the research phase, we explored related journals and studies that provided insights into developing robust e-commerce systems. The findings are summarized as follows:

A user-friendly interface and streamlined order management are critical components of successful e-commerce platforms. Customers save time and effort with platforms that integrate features such as advanced search and filtering options. However, gaps such as limited payment methods and a lack of real-time order tracking can reduce the platform's efficiency and user satisfaction. [1]

With the growing reliance on online shopping, ensuring compatibility with multiple devices and browsers is essential. The integration of responsive design and cross-

platform compatibility significantly enhances the user experience. Studies emphasize the need for platforms to cater to diverse user needs through scalable and adaptive interfaces. [2]

Effective inventory management systems are key to maintaining accurate and updated product listings. By leveraging technologies such as MySQL databases and PHP scripting, platforms can offer reliable and efficient solutions for product management and order processing. [3]

Security and performance optimization are non-negotiable requirements for e-commerce platforms. Secure login systems and data encryption safeguard user information, while optimized response times enhance usability. Research highlights the importance of balancing these technical aspects to build trust and improve user retention. [4]

Incorporating detailed product descriptions and high-quality images improves customer confidence and purchasing decisions. Platforms with transparent and comprehensive product specifications perform better in terms of user engagement and sales. [5]

Studies indicate that administrative functionalities, such as order confirmation, inventory updates, and customer communication, are crucial for efficient platform operation. Administrators play a key role in maintaining the quality and reliability of the system, ensuring a seamless experience for customers. [6]

The Mobiz Store platform builds on these findings to deliver a robust and feature-rich solution tailored to the needs of mobile phone enthusiasts. By addressing the shortcomings identified in existing systems and incorporating best practices, the project aims to set a new benchmark in e-commerce for mobile phones.

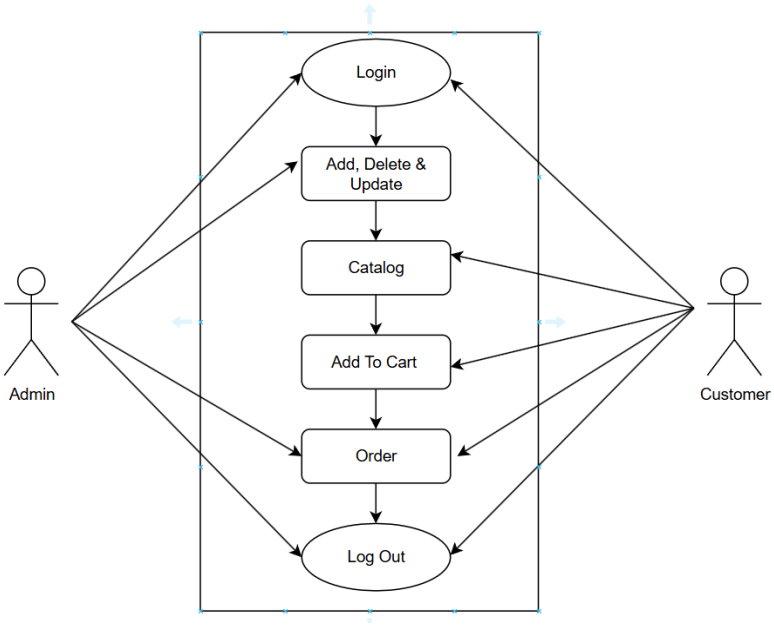
Chapter 3: System Analysis and Design

3.1 System Analysis

3.1.1 Requirement Analysis

1. **User Registration and Authentication:**
    - New users can register by providing valid credentials (name, email, and password).
    - Existing users and administrators can log in with their credentials.
2. **Product Catalog:**
    - Display an organized catalog of available mobile phones with detailed specifications (model, brand, price, features).
    - Include search and filter options to help users locate desired products efficiently.
3. **Shopping Cart:**
    - Allow customers to add products to the cart.
    - Enable users to modify the cart by adding, removing, or updating quantities of products.
4. **Order Management:**
    - Customers can place orders and view order history.
    - Administrators can confirm or reject orders.
5. **Admin Panel:**
    - Administrators can add, edit, delete, and replace product listings.
    - View and manage customer orders.

Fig 3.1: Use Case Diagram of Mobiz Store



i. **Non-Functional Requirements:**

- Security: Member login has been secured by user ID and password using encryption.
- Performance: The system should load product catalogs and respond to user interactions within 3 seconds.
- Compatibility: Ensure compatibility with different operating systems, web browsers, and devices to reach a broader audience.

3.1.2 Feasibility Analysis

i. Technical Feasibility:

The platform uses PHP and MySQL for backend development and HTML, CSS, for the frontend, ensuring a reliable and scalable solution. These technologies are widely supported and provide the flexibility needed for this project.

ii. Operational Feasibility:

Mobiz Store offers an intuitive and user-friendly design. Customers can easily navigate the product catalog, while administrators have straightforward tools for managing inventory and orders. The platform's simplicity ensures a smooth adoption process for all users.

iii. Economic Feasibility:

Using open-source technologies significantly reduces development and operational costs. The platform's web-based nature eliminates the need for specialized hardware or software, further minimizing expenses.

iv. Schedule Feasibility:

The project follows a phased development approach with clear milestones and timelines. Using a Gantt chart helps monitor progress and ensures timely completion of each phase.

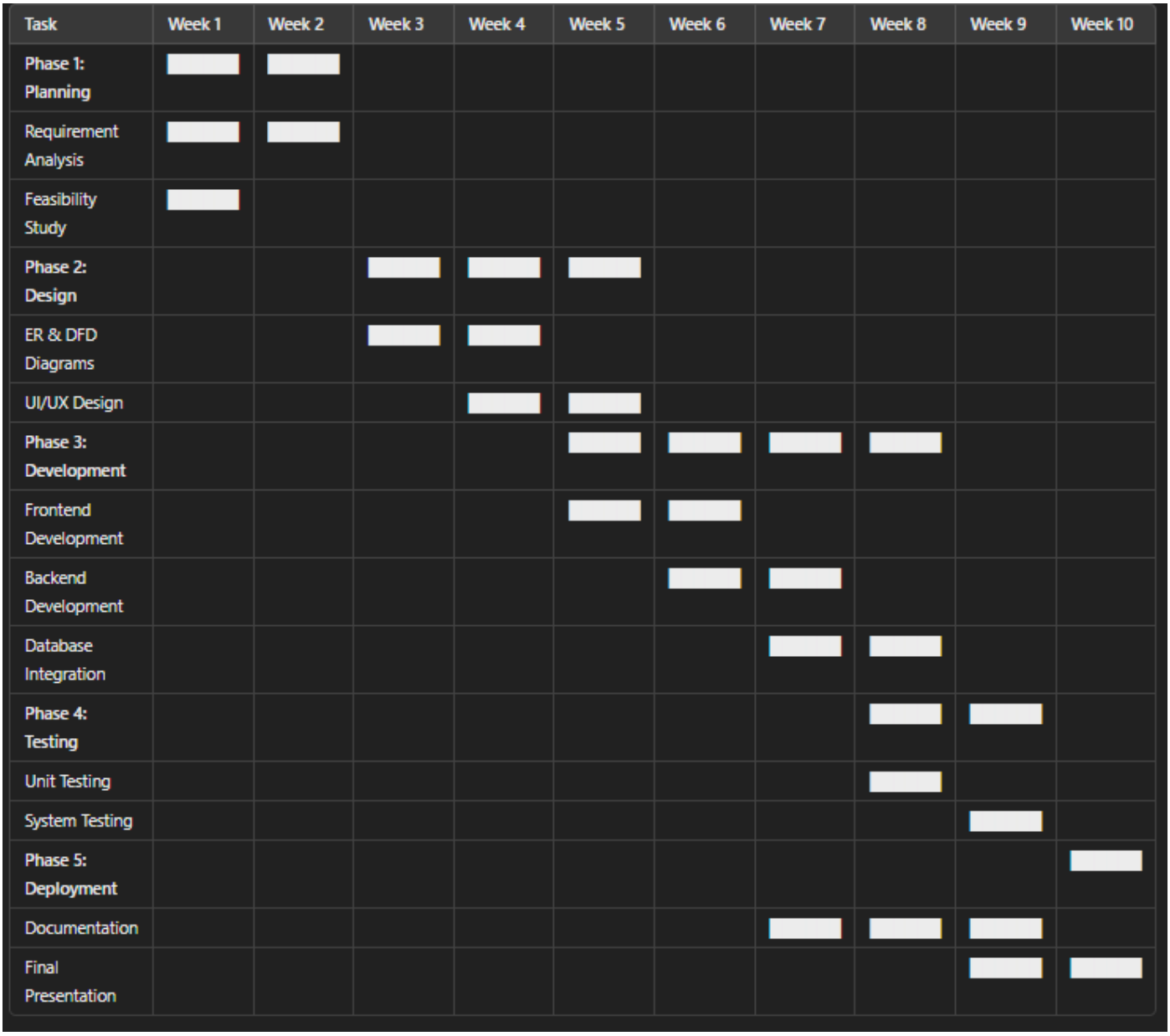


Fig 3.2: Gantt Chart of Mobiz Store

3.1.3 Data Modeling

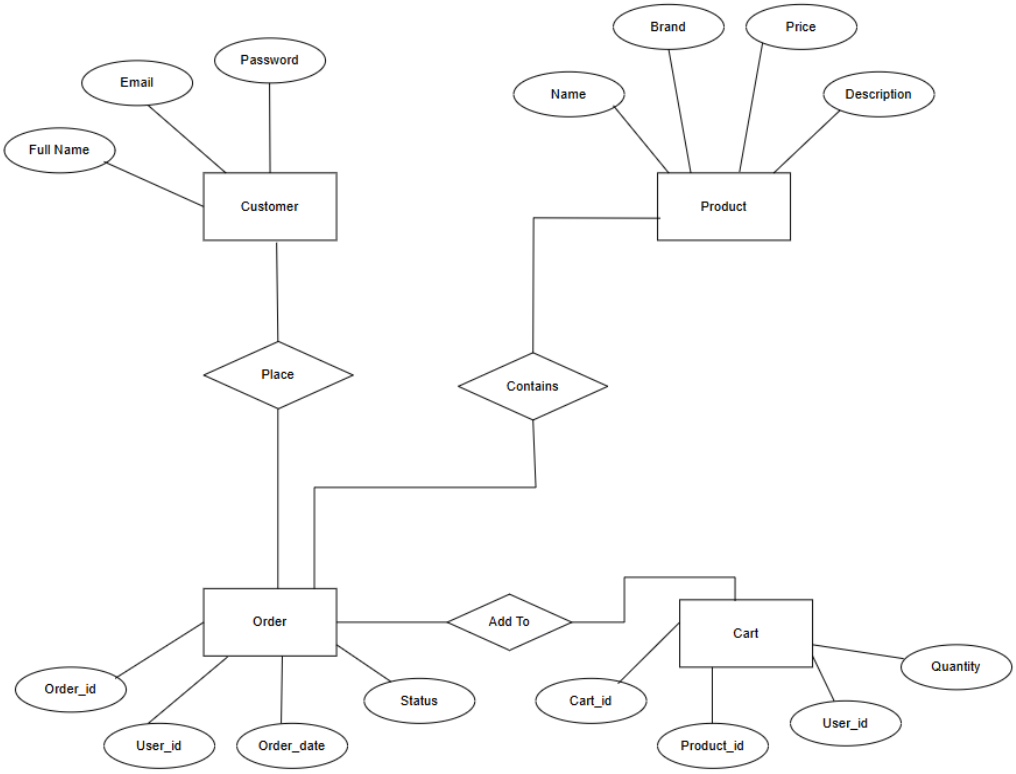


Fig 3.3: ER Diagram of Mobile Ordering System

i. Level 1 DFD:

Fig 3.5: Level 1 DFD of Mobile Ordering System

ii. Level 2 DFD:

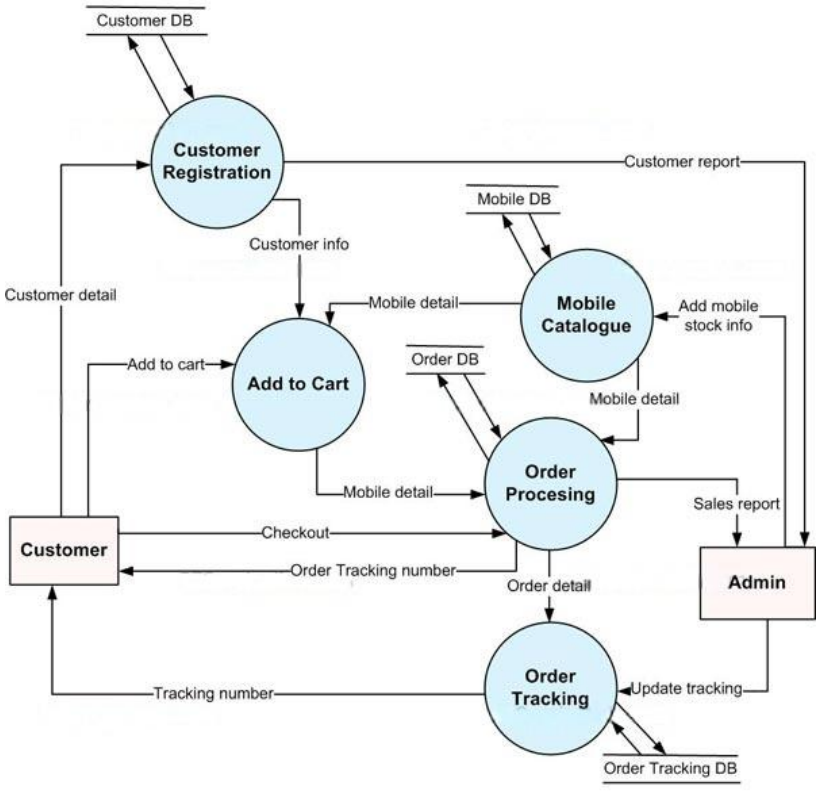


Fig 3.6: Level 2 DFD of Mobile Ordering System

3.2 System Design

3.2.1 Architectural Design

Architectural Design entails the systematic identification of a system's constituent sub- systems and the establishment of a framework governing the control and communication among these sub-systems.

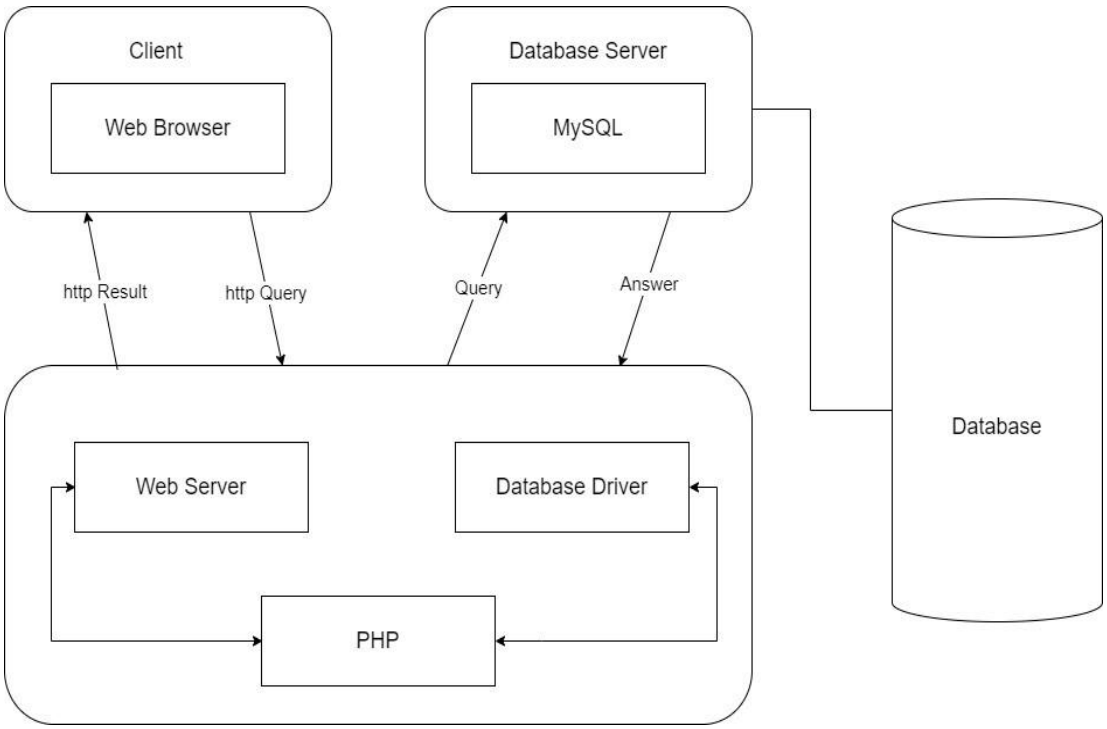


Fig 3.7: Architectural Design

Database Schema Design

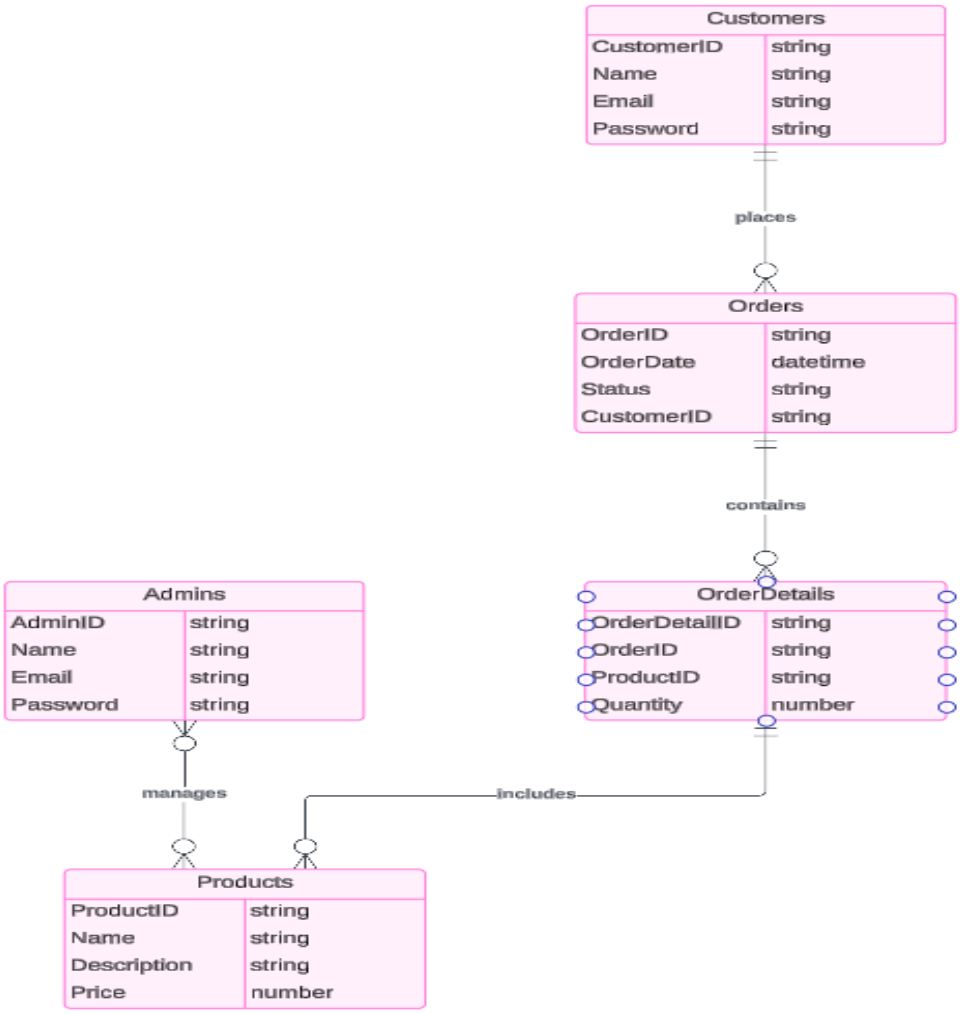


Fig 3.8 : Database Schema Diagram of Mobile Ordering System

3.2.2 Interface Design

Interface design, commonly known as user interface (UI) design, involves creating the visual layout and interactive elements of digital products such as websites, mobile apps, and software applications. The aim is to optimize the user experience by making interactions with the product intuitive, efficient, and enjoyable.

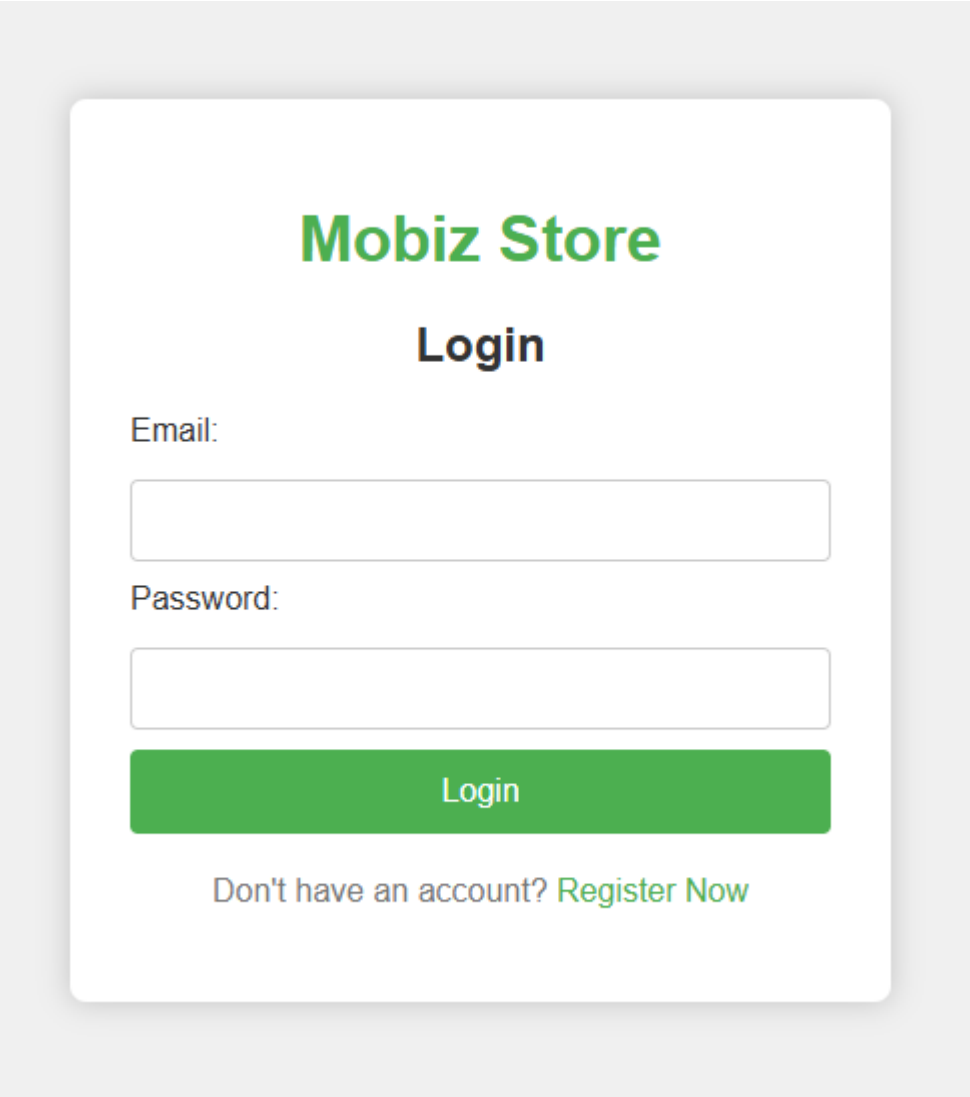


Fig 3.9: User Login Page

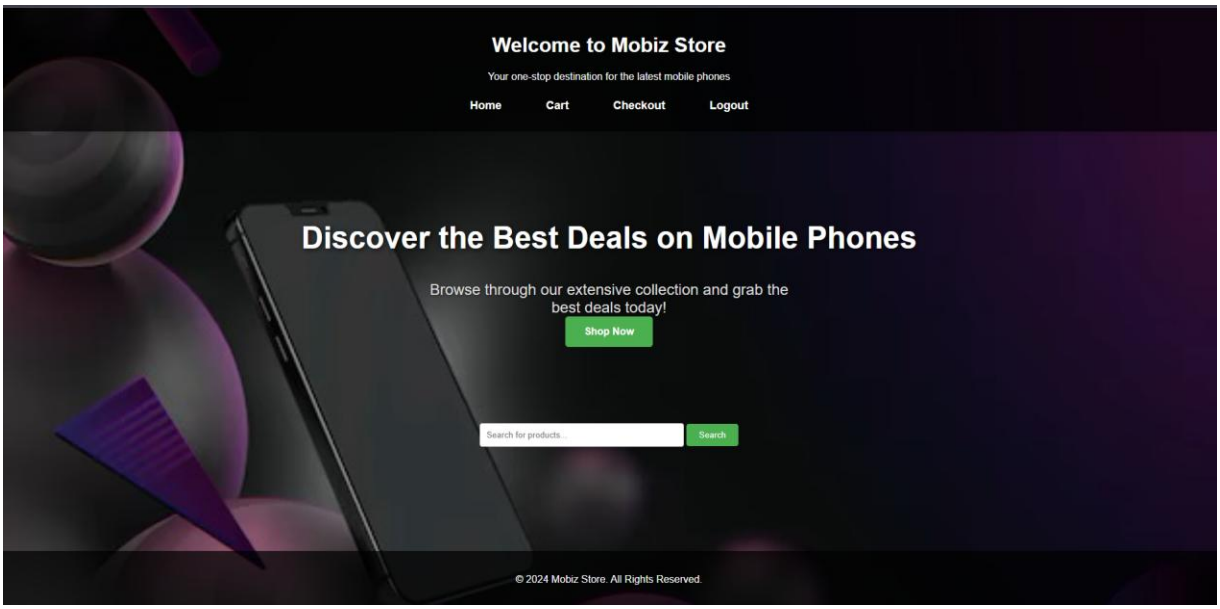


Fig 3.10: Customer Dashboard

Chapter 4: Implementation and Testing

4.1 Implementation

The implementation phase is a crucial stage in the waterfall method, where the planned system or software solution is transformed from a conceptual design into a tangible reality.

4.1.1 Tools Used

A variety system tools have been used in developing both the front-end and back-end of the system. The tools and technologies that we used for developing the system are mentioned below:

i. **Programming Languages:**

- **HTML (Hyper-Text Markup Language):** HTML is used in out project as HTML is universally supported by all web browsers, ensuring consistent rendering of web pages across different devices and platforms.
- **CSS (Cascading Style Sheets):** CSS is used in our project as CSS enhances the visual appeal and user experience of the web pages by providing a consistent and attractive design.
- **PHP:** We have used PHP for server-side scripting because PHP allows for the creation of dynamic web pages that can display different content based on user interactions or other inputs and can easily integrate with various databases, making it ideal for developing data-driven applications and websites.

ii. Integrated Development Environment (IDE):

- **VS Code (Visual Studio Code):** VS Code is used as text-editor in our project because it is a free source code editor with robust features, extensions and a powerful debugger for coding in HTML, CSS, JS and PHP.

iii. Database:

- **MySQL:** We have used MySQL for database as it is an open-source relational database management system used for storing and managing structured data and it is also reliable, scalable and easy to use.

iv. Diagrams:

- **Draw.io:** To create various diagram for documentation we have used darw.io which is a free online diagramming tool with wide ranges of templates, shapes for creating diagrams like ER Diagram and DFD diagrams.

4.1.2 Implementation of Module

Incorporating modules into the Mobiz Store entails designing and seamlessly integrating distinct features and functionalities into the e-commerce platform. This section outlines various modules of the project:

Users Module

The Users Module is fundamental for delivering a streamlined experience, enabling users to engage with the platform's e-commerce features. Key functionalities include:

1. Registration Process

Sign-Up: Users must create an account to access the platform's features, whether buying or managing products.

Personal Credentials: Users provide necessary information such as name, email, password, and role (Customer/Admin).

Validation: The system ensures valid credentials during sign-up to maintain data integrity and security.

2. Login Process

Access Control: Registered users log in with their credentials to access their personalized accounts.

User Roles: Role-based access determines whether the user acts as a customer or an admin.

3. Profile Management

Edit Profile: Users can update their personal information, such as email, phone number, and password.

View Profile: Users can view their profile details, including order history and saved preferences.

4.2 Testing

Testing is an essential phase in software development that entails the assessment and verification of a software application to guarantee it aligns with its specified requirements, operates as intended, and remains devoid of defects or glitches.

4.2.1 Test Case for Unit Testing

Unit testing is a foundational practice within software development, focusing on the examination of discrete code components or units in isolation to confirm their proper operation.

Table 4.1: User Registration and Authentication Test Cases

S.no	Test case	Input	Expected result	Actual result	Status
1.	User Registration	User provides valid registration details (username, email, password)	User account is created successfully, and they are redirected to the login page.	User account is created successfully, and they are redirected to the login page.	PASS
2.	User Login	User provides valid login credentials (username and Password).	User is successfully authenticated and redirected to the user dashboard.	User is successfully authenticated and redirected to the user dashboard.	PASS
3.	Authentication Failure	User provides incorrect login credentials.	Authentication fails, and an error message is displayed.	Authentication fails, and an error message is displayed.	PASS

Table 4.2: Add to cart Test Cases

S.no	Test case	Input	Expected result	Actual result	Status
1.	Add to cart	User clicks on add to cart button.	The item is added to the cart.	The item is added to the cart.	PASS
2.	View Cart	User clicks on cart button.	User cart's items are displayed.	User cart's items are displayed.	PASS
3.	Delete cart	User clicks on delete button.	User cart item is deleted.	User cart item is deleted.	PASS

Table 4.3: Order Test Cases

S.no	Test case	Input	Expected result	Actual result	Status
1.	Create an order	User clicks on the Proceed to Checkout button after adding items to the cart.	An order is created and the user is redirected to home page.	An order is created and the user is redirected to home page.	PASS
2.	View order	Users click on orders button.	User is redirected to order page with list of all orders.	User is redirected to order page with list of all orders.	PASS
3.	Cancel order	Users click on cancel order button.	The order is marked as canceled and removed from the active orders list..	The order is marked as canceled and removed from the active orders list..	PASS

Table 4.4: Admin Order-Management Test Cases

S.no	Test case	Input	Expected result	Actual result	Status
1.	Approving a pending order	Admin clicks on pending order inside order button.	List of all pending orders are displayed.	List of all pending orders are displayed.	PASS
2.	View Completed orders	Admin clicks on Completed Orders under the Orders menu.	List of all completed orders are displayed.	List of all completed orders are displayed.	PASS
3.	View Cancelled orders	Admin clicks on Cancelled order inside order button.	List of all cancelled orders are displayed.	List of all cancelled orders are displayed.	PASS

Table 4.5 Mobiz Store Test Cases

S.no	Test case	Input	Expected result	Actual result	Status
1.	Add product	Admin clicks on add product button.	Admin is redirected to add page.	Admin is redirected to add product page	PASS
2.	List product	Admin navigates to dashboard	Admin is displayed with a list of products.	Admin is displayed with a list of products.	PASS
4.	Delete product	Admin clicks on Delete Product button.	Admin is redirected to delete product page	Admin is redirected to Delete Product page.	PASS
5.	Update product	Admin clicks on Update product button.	Admin is redirected to Update product page	Admin is redirected to update product page	PASS

4.2.2 Test Case for System Testing

System testing is a type of software testing that evaluates the overall functionality and performance of a complete and fully integrated software solution.

Table 4.6: Session Test Cases

S.N.	Test Case Description	Input	Expected Result	Actual Result	Pass / Fail
1	Verify user registration with valid details.	Valid details	User is registered successfully.	User is registered successfully.	PASS
2	Verify that valid credentials allow the user to log in	Valid credentials	User is logged in	User is logged in	PASS
3	Verify that invalid credentials result in an error message	Invalid credentials	Error message is displayed	Error message is displayed	PASS
4	Verify that all the buttons on the home page work as expected	N/A	All the buttons work as expected	All the buttons work as expected	PASS
5	Verify user can add product to cart and place order. .	Product name: iPhone	Item added and order placed	The item is added and order is placed	PASS
6	Verify that order can be Cancelled.	User presses cancel button.	The order is cancelled.	The order is cancelled.	PASS
7	Verify that a new Product can be added.	New product details.	Product added successfully.	Product added successfully.	PASS
8	Verify that a Product can be edited.	New product details.	Product is Edited.	Product is Edited.	PASS
9	Verify that a product can be deleted.	N/A	The product is removed from the database.	The product is removed from the database.	PASS

10	Verify that order can be completed.	Admin presses complete button.	The order is completed.	The order is completed.	PASS

Chapter 5: Conclusion and Future Recommendation

5.1 Lesson Learnt and Outcome

Lesson Learnt:

- Acquire proficiency in full-stack web development.
- Gain expertise in using JavaScript, HTML, and CSS for crafting the website's frontend.
- Explore the significance of PHP as a programming language and its role in database connectivity.
- Study relational databases, particularly MySQL.
- Familiarize oneself with various testing methodologies such as unit testing and system testing.
- Ensure thorough documentation to facilitate future troubleshooting and potential expansion.

Outcome:

The "Mobiz Store" project successfully developed an e-commerce platform that facilitates online purchases of mobile phones. Admins can manage product listings by adding, editing, deleting, and replacing items, as well as overseeing customer orders. The admin panel provides an overview of products, orders, and customer details. Users can browse available products, add items to their cart, and complete the ordering process online. They can also monitor the status of their orders and cancel them if necessary.

5.2 Conclusion

Mobiz Store is more than just an e-commerce platform; it's a step forward in simplifying the process of purchasing mobile phones. By providing a seamless online shopping experience, the platform empowers users to make informed purchasing decisions with ease. Beyond its functional benefits, Mobiz Store showcases the potential of technology to enhance user convenience and operational efficiency. With its well-organized product catalog, robust admin functionalities, and intuitive interface, Mobiz Store sets a benchmark for e-commerce platforms.

5.3 Future Recommendations

- **Multiple Payment Options:** Incorporate diverse payment methods such as digital wallets, credit cards, and net banking to improve user convenience.
- **Market Expansion:** Expand the platform's reach to cater to a larger audience by integrating multilingual and multi-currency support.
- **Order Tracking:** Enable real-time order tracking to enhance transparency and improve the user experience.

5.2 Future Recommendations

- Multiple payment options
- Market Expansion
- Order Tracking

Appendices

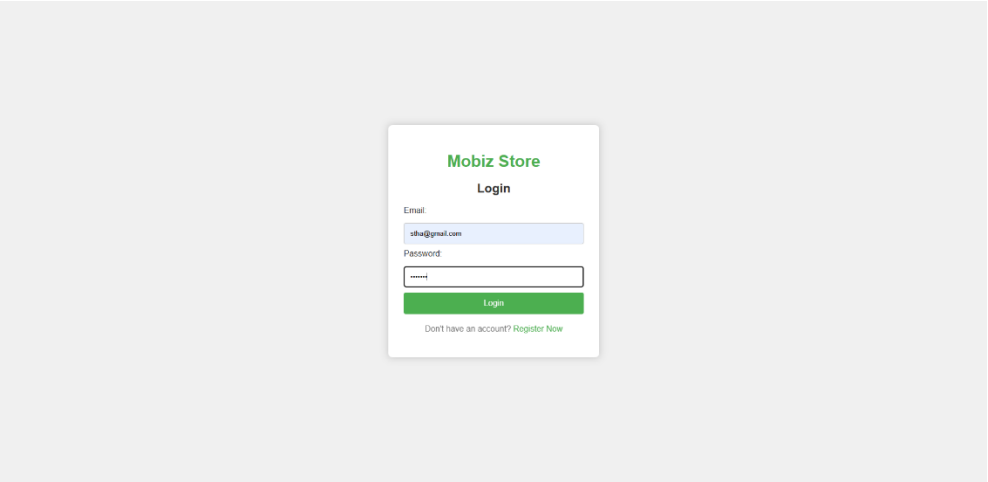


Figure 1: Admin Login

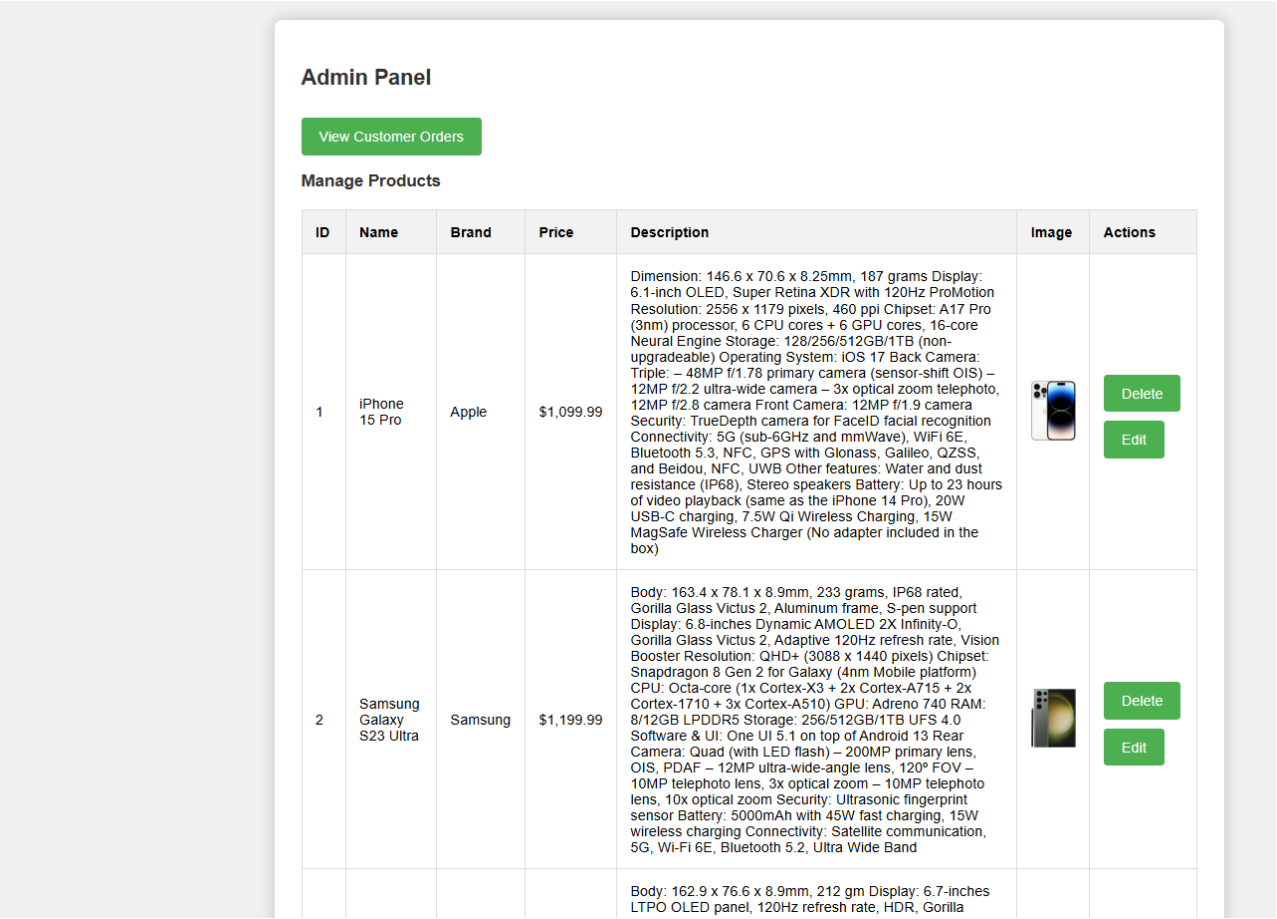


Figure 2: Admin Dashboard

Figure 3: Admin Add page

Figure 4: Admin Update page

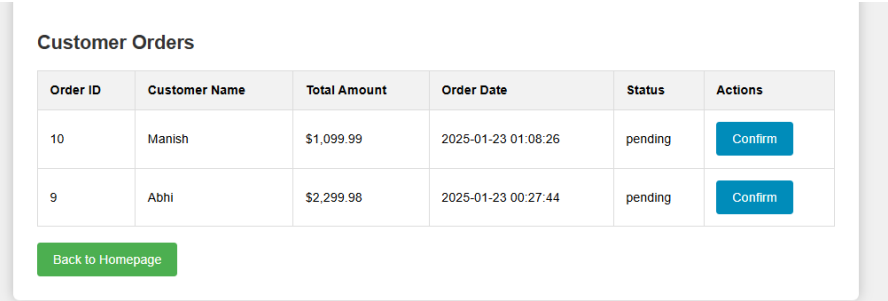


Figure 5: Pending orders Page

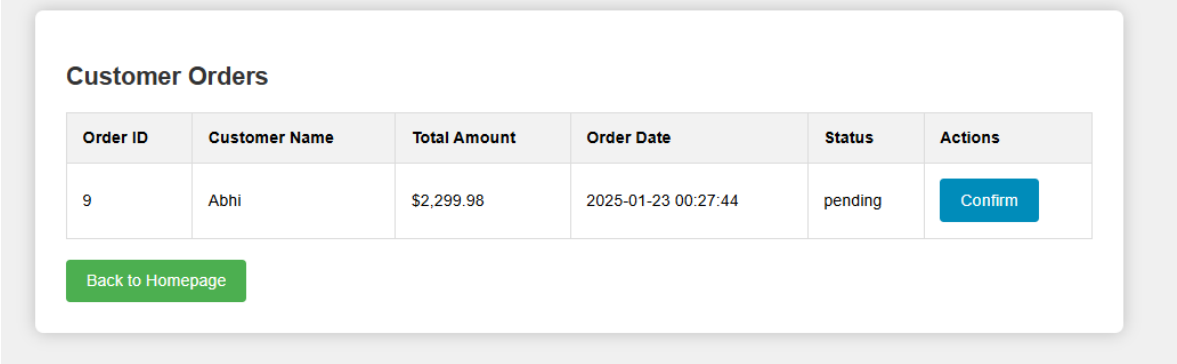


Figure 7: Completed order Page

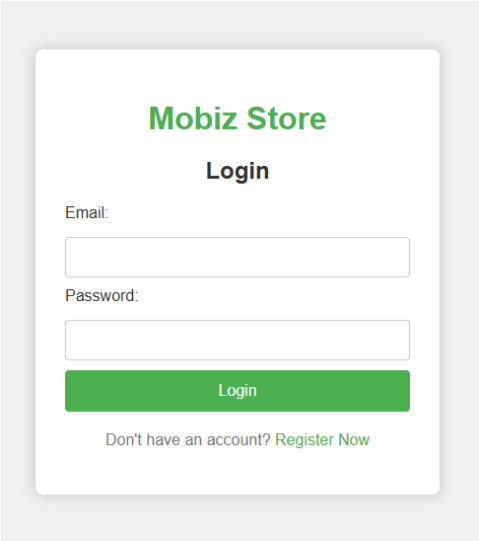


Figure 9: User Login Page

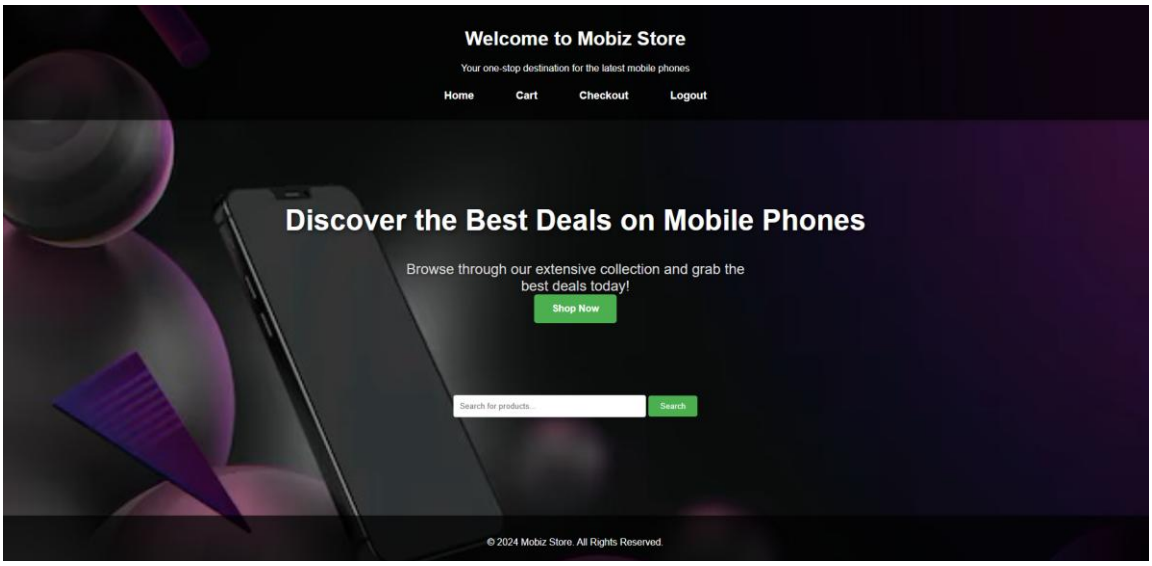


Figure 10: User Dashboard Page

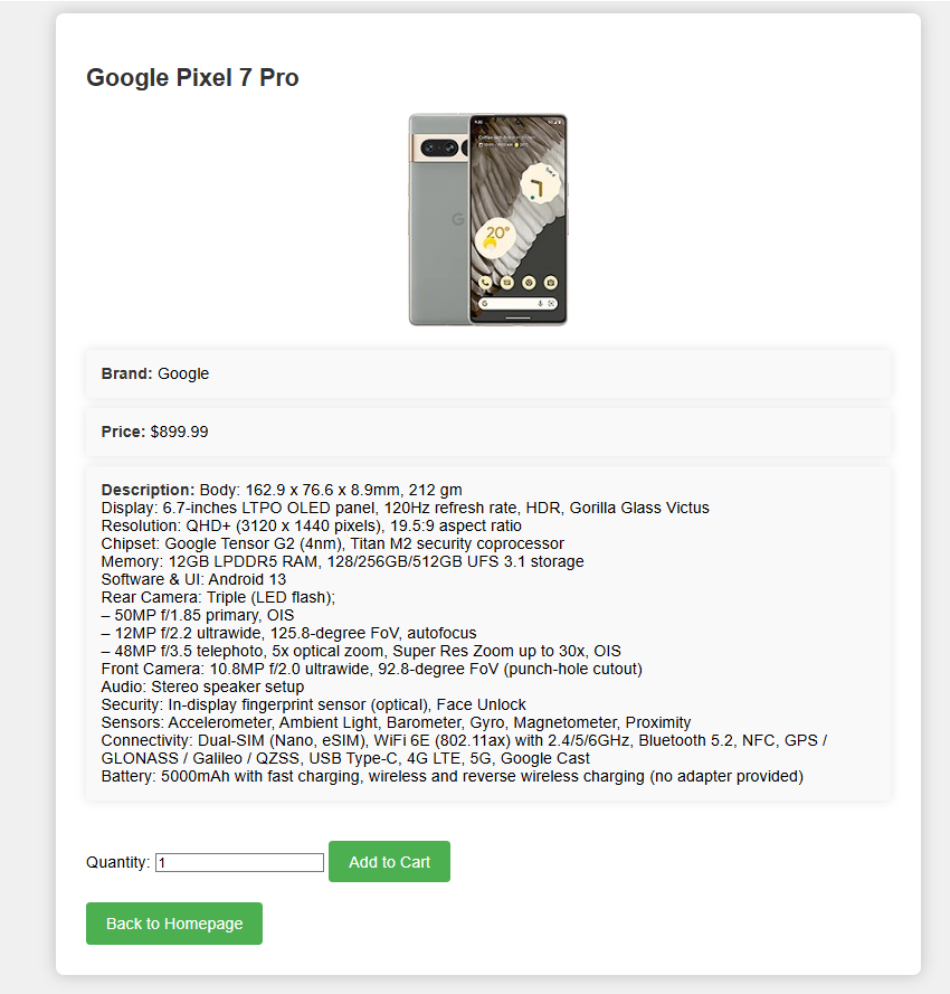


Figure 12: View page

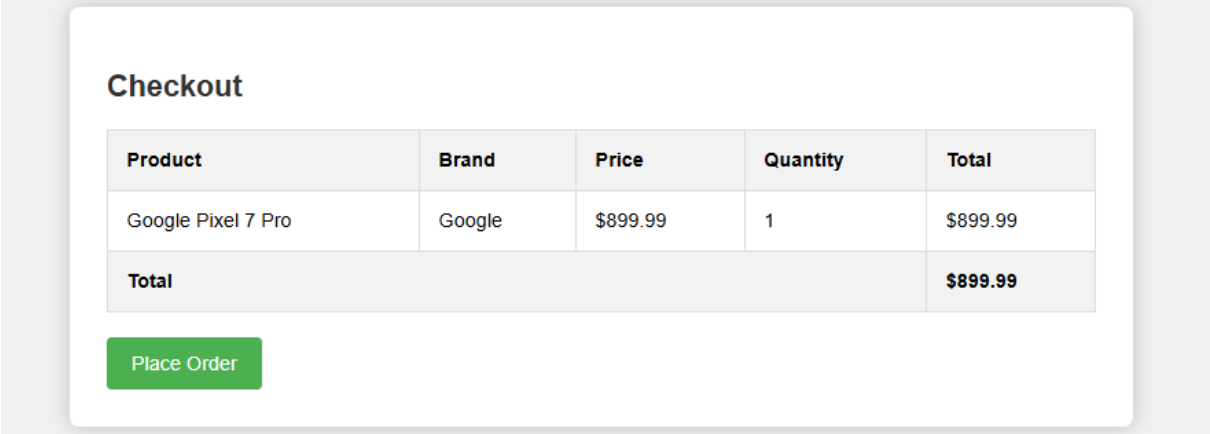


Figure 13: Checkout page

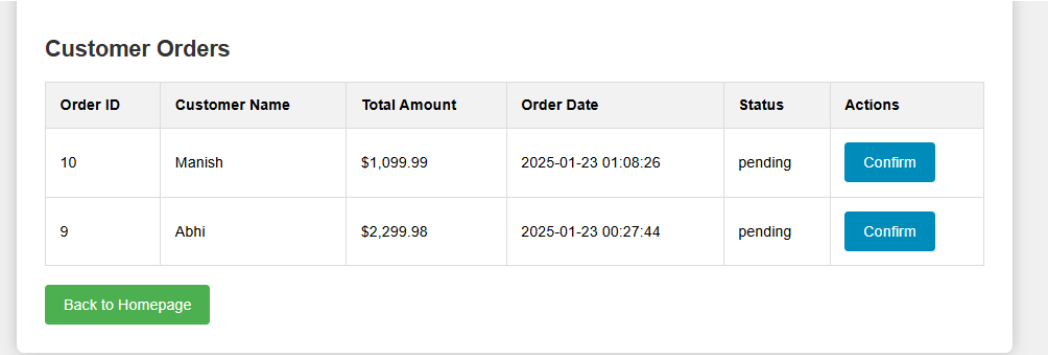


Figure 15: Customer Order page

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[1] M. Arshad, "Mobile Store Management System," **Applied Information Technology**, vol. 18, no. 2, pp. 23-29, 2022.

[2] J. R. Yeow, "E-commerce in Mobile Retail," **International Journal of Web Applications**, vol. 25, no. 4, pp. 13-17, 2023.