Chapter 1: Introduction

1.1 Introduction to E-Commerce

E-commerce, or electronic commerce, is the process of buying and selling goods and services over the internet. It encompasses all commercial transactions conducted electronically, fundamentally changing how businesses operate and consumers shop by moving activities from physical stores to online platforms like websites and mobile apps.

This digital marketplace operates through several models, including Business-to-Consumer (B2C) like Amazon, Business-to-Business (B2B) like bulk suppliers, Consumer-to-Consumer (C2C) like eBay, and Consumer-to-Business (C2B) like freelancers selling services. It covers everything from retail products and digital downloads to bookings and financial services.

The essence of e-commerce lies in its ability to offer unparalleled convenience (24/7 shopping), global reach, broader selection, and often lower prices compared to traditional retail. It relies on secure online payments, digital marketing, and efficient logistics to complete transactions and deliver value to customers worldwide.

1.2 Introduction to MIS

Management Information Systems (MIS) is the study and application of people, technologies, and processes within organizations to collect, process, store, and distribute information needed for effective management, operations, and decision-making. It focuses on using information systems—combining hardware, software, data, and networks—to transform raw data into meaningful reports, dashboards, and analyses. The primary goal of MIS is to provide timely, accurate, and relevant information to managers at all levels, enabling them to plan, control operations, solve problems, and make strategic decisions that enhance organizational efficiency, productivity, and competitive advantage across areas like finance, marketing, human resources, and supply chain management.

1.3 The Relationship Between MIS and E-business

The relationship between Management Information Systems (MIS) and E-business is crucial for modern business success. MIS involves the technology, processes, and people that manage and analyze data, serving as the backbone for E-business, which uses digital technologies to conduct business activities. MIS supports E-business by managing

transactions, customer data, and supply chains, ensuring data accuracy, accessibility, and security for informed decision-making and streamlined operations. In turn, E-business generates vast data that MIS uses to enhance strategic planning and efficiency. Together, they form a symbiotic partnership where MIS provides essential tools and insights, while E-business fuels the demand for advanced MIS capabilities in digital commerce.

- **Integration of Systems**: MIS integrates with E-business platforms to ensure smooth operations. For instance, MIS manages internal data like inventory, while E-business handles online sales, requiring real-time coordination between the two systems.
- **Data Management**: E-business generates large volumes of data, such as customer behavior and sales trends. MIS organizes, stores, and analyzes this data to support informed business decisions.
- **Decision Support**: MIS provides analytical tools that help shape E-business strategies. For example, it can analyze customer data to guide personalized marketing efforts or pricing decisions.
- **Security**: Both MIS and E-business depend on strong security. MIS implements and manages protocols to safeguard E-business transactions and protect sensitive information.
- **Efficiency**: By linking MIS with E-business, processes like order processing or customer service can be automated, reducing manual effort and boosting operational efficiency.
- **Scalability**: As E-business expands, MIS provides scalable systems to handle growing data and transaction demands without sacrificing performance.
- **Customer Relationship Management (CRM)**: MIS often includes CRM tools, which E-business uses to manage customer interactions, enhance service quality, and foster loyalty.
- **Supply Chain Management**: MIS optimizes supply chain operations, ensuring E-business can deliver products on time by efficiently managing inventory and logistics.
- **Financial Management**: MIS supports E-business by managing financial data, such as online payments, invoices, and transaction records, ensuring accurate and streamlined financial operations.

- **Reporting and Analytics**: MIS offers reporting tools to evaluate E-business performance, providing insights into metrics like sales, customer engagement, and profitability for strategic planning.

1.3.1 Management

In the context of Management Information Systems (MIS), management refers to the strategic use of technology and data to enhance organizational decision-making and operations. MIS equips managers with timely, accurate information to support essential functions like planning, organizing, leading, and controlling. Through MIS, managers can analyze past performance, track current activities, and predict future trends, enabling efficient resource allocation, effective communication, and performance evaluation. Beyond technology, effective management in MIS ensures data security, privacy, and accessibility, aligning systems with business goals to drive success.

1.3.2 Information

In the context of Management Information Systems **(**MIS**)**, information is processed data that provides managers with meaningful insights to support decision-making. Unlike raw data, it is analyzed and presented in useful formats like reports, dashboards, or forecasts, helping managers understand trends, identify issues, and develop solutions. This information is vital for core management functions such as planning, organizing, leading, and controlling, ensuring managers can allocate resources effectively and monitor organizational performance. For example, sales data transformed into a report can reveal top-performing products, guiding marketing decisions. The success of MIS depends on delivering accurate, timely, and relevant information.

In MIS, management relies on this high-quality information to drive organizational success. Managers use it to set goals, coordinate teams, direct operations, and assess outcomes, making informed choices that align with strategic objectives.

1.3.3 System

In the context of Management Information Systems **(**MIS**)**, a system refers to an organized set of components—hardware, software, data, processes, and people—that work together to collect, process, store, and distribute information to support decision-making, coordination, and control in an organization. It ensures efficient data flow, enhances

operational efficiency, and helps achieve business objectives through structured information management.

Management in MIS involves planning, organizing, directing, and controlling the use of information systems to optimize business performance. It ensures that technology aligns with organizational goals, resources are effectively utilized, and accurate information is available for strategic and operational decisions. Effective management in MIS drives productivity, competitive advantage, and informed decision-making.

1.4 Introduction to My Project: Mobile Store

Mobile Store is an ecommerce store that I have developed as part of my Management Information System and E-business project. The platform is built using HTML, CSS, JavaScript, PHP & MYSQL. This project aims to showcase how an e-commerce business can be efficiently managed through an integrated system that combines advanced features for both business operations and customer's interactions.

Key features of Mobile Store are given below:

- The project allows users to create an account, log in, and log out, making it easy for customers to access their personal shopping space.
- Users can view and manage their profiles, including updating their personal information.
- The website has a homepage that displays products or services available for users to browse and explore.
- There is a payment system that helps verify and process online payments.
- An admin section is included to help manage products, users, and orders behind the scenes.
- A database is used to store important information, such as user accounts, product details, orders, and payment records.

Chapter 2: Planning

2.1 Project Planning

The planning of the "Mobile Store" project involved identifying the key features required to create a functional and user-friendly e-commerce platform for purchasing mobile phones. The project was designed to include essential elements such as user registration, product browsing, secure login, checkout, and payment verification. Special attention was given to organizing the website structure for both users and administrators, ensuring smooth navigation and management. The use of a database was planned to store all relevant data like user details, product information, and order history, supporting the overall goal of delivering a seamless online mobile shopping experience.

2.2 E-commerce Project Planning Process for Mobile Store

The e-project planning process for the Mobile Store began with defining the project's purpose to build a user-friendly online platform for browsing and purchasing mobile phones. The first step involved analyzing user needs and identifying key features such as product listing, user registration, secure login, shopping cart, checkout, and payment processing. A basic layout and navigation structure were sketched to ensure a smooth user experience. Next, tasks were divided into modules like front-end design, database setup, user system, admin panel, and payment integration. Tools and technologies such as HTML, CSS, PHP, and MySQL were chosen to develop the platform. A timeline was established for completing each phase, from design to deployment. Proper planning ensured that all necessary functionalities were implemented in a structured and efficient way, resulting in a functional e-commerce solution tailored for mobile product sales.

- **Choosing the E-commerce Platform:** Decided to build a custom e-commerce website using core web technologies like HTML, CSS, PHP, and MySQL to have full control over features and design.
- **Selecting a Theme and Layout:** A simple, clean layout was planned to highlight mobile phone listings and ensure easy navigation for users.
- **Setting Up the Local Development Environment:** Tools like XAMPP or WAMP were used to create a local server for development and testing before deployment.

- **Choosing the Hosting Provider:** Though the project is currently developed locally, future deployment plans include using a reliable hosting provider like Hostinger or InfinityFree for going live.
- **Selecting Essential Functional Modules**: Core functionalities such as user login/registration, product display, checkout, and payment verification were planned and coded manually instead of using pre-built plugins.
- **Database Planning:** A structured MySQL database was designed to store product details, user accounts, orders, and payment records efficiently.
- **Domain Name and Future Launch Plans**: A suitable domain name like *mobilestore.com* or similar is planned for future launch, focusing on brand relevance and user recall.
- **Testing and Bug Fixing:** The project will be tested locally for functionality, responsiveness, and security issues. User actions like login, product browsing, checkout, and payment will be verified thoroughly.
- **Launch Preparation**: Once fully tested and finalized, the project will be deployed to a live server, ensuring it is accessible to users. Final checks will include performance testing and basic SEO setup.

2.4 Budget

S.N.	Name	Pricing	Duration
1	Free domain(.com.np)	Free	Life-time
2	Top-Level-Domain(.com)	Rs.1260	Yearly(Renew)
3	Web Cloud Hosting	Rs.7000(Budget will increase during use of resources)	Yearly(renew)
4	Maintenance	Rs.500 to 1000 /hours	Hour / Monthly

Table 2.4: Budget to make E-commerce System live/online

Administrator owner can choose the any domain free and top-level domain as own requirement. For Nepal user(.com.np) domain has free for business.

2.4 Feasibility Analysis

Feasibility analysis is the process of evaluating whether a project is practical and achievable from different perspectives. It helps determine if the project can be successfully developed and implemented with the available resources. In the Mobile Store project, feasibility analysis covered technical, operational, economic, legal, and time aspects to ensure the system is workable, user-friendly, cost-effective, legally safe, and can be completed within a set timeline.

Following feasibility analysis was performed prior working on the ecommerce project:

- **Technical feasibility:** The Mobile Store project is technically feasible because it uses standard web technologies like HTML, CSS, PHP, and MySQL, which are easy to implement and well-supported. These tools are capable of handling essential e-commerce functions such as product listings, user login systems, and payment verification. A local development environment using XAMPP or WAMP makes it simple to test and run the project before hosting.
- **Operational feasibility:** The project is operationally practical, as it is designed to be user-friendly for both customers and administrators. Users can easily browse products, create accounts, and place orders, while the admin section allows for smooth management of products and users, ensuring the system functions efficiently in daily use.
- **Economic feasibility:** This project is cost-effective since it uses free and open-source tools, requiring no expensive software or licenses. Hosting and domain costs are affordable, and future upgrades can be planned according to available budget, making it suitable for small-scale online business operations.
- **Legal feasibility:** There are no legal barriers to developing or launching the Mobile Store project. It involves selling mobile phones, which is legally permitted, and it does not include any copyrighted material. In the future, privacy policies and terms of service will be added to ensure full compliance with e-commerce regulations.

Chapter 3: Network Infrastructure

Network infrastructure in e-commerce refers to the system of hardware, software, and communication technologies that support online business operations. It includes servers, databases, internet connectivity, security systems, and cloud services that ensure smooth functioning of websites, secure data transfer, and reliable access for users and administrators. A strong network infrastructure is essential for fast, safe, and efficient online transactions.

A network can be defined as:

- Building block of E-commerce.
- Technologies to integrate Business Process.
- Meditator for Digital transmission of Digital.
- Content/Message/File/DATA.
- The interaction between entities of business.
- Like Supplier/Distributor/partner etc…
- A framework with security & case.

Internet

The internet is a global network that connects millions of computers and devices, allowing people to share information, communicate, and access services from anywhere in the world. It plays a vital role in everyday life, from browsing websites and using social media to online shopping and digital learning. The internet works through interconnected servers, cables, and wireless systems, making fast and easy communication possible across the globe.

WWW

The World Wide Web (WWW) is a system of interlinked web pages and content accessed through the internet using web browsers. It was invented by Tim Berners-Lee in 1989 and allows users to view text, images, videos, and other multimedia through websites using URLs. The web uses technologies like HTML, HTTP, and web browsers to deliver and display content, making it one of the most important parts of the internet for communication, information sharing, and online services.

3.1.1 Connecting to the internet

- **Dial-up Connection:** A dial-up connection is an early method of accessing the internet using a telephone line and a modem. It connects to the internet by dialing a phone number provided by an Internet Service Provider (ISP). Dial-up is much slower compared to modern broadband, with limited speed and the inability to use the phone and internet at the same time. Though mostly outdated today, it was widely used in the 1990s and early 2000s.
- **Leased Line Connection:** A leased line connection is a dedicated, high-speed, and always-on internet connection used mostly by businesses. Unlike dial-up or broadband, it provides a fixed bandwidth solely for the user, ensuring stable and uninterrupted data transfer. Leased lines are symmetrical, meaning upload and download speeds are equal, making them ideal for activities like video conferencing, hosting servers, or large data transfers. Although more expensive, they offer high reliability and performance.

3.1.2 Component of I-way

- Consumer access equipment
- Local on-ramps,
- Global information distribution networks.

Consumer Access Equipment refers to the devices and hardware used by individuals to access the internet, such as smartphones, laptops, desktops, modems, and Wi-Fi routers. These are essential for connecting to online services and websites.

Local On-Ramps are the access points provided by local Internet Service Providers (ISPs) that allow users to connect to the internet. These include DSL lines, fiber connections, or wireless signals that serve as the first step in reaching the wider internet.

Global Information Distribution Networks are large-scale systems like international fiber optic cables, satellite networks, and data centers that work together to transfer digital content across the world. They ensure fast and reliable access to online information globally.

Chapter 4: System Analysis and Design

4.1 Introduction

It is a process of planning a new business system or replacing an existing system by defining its components or modules to satisfy the specific requirements.

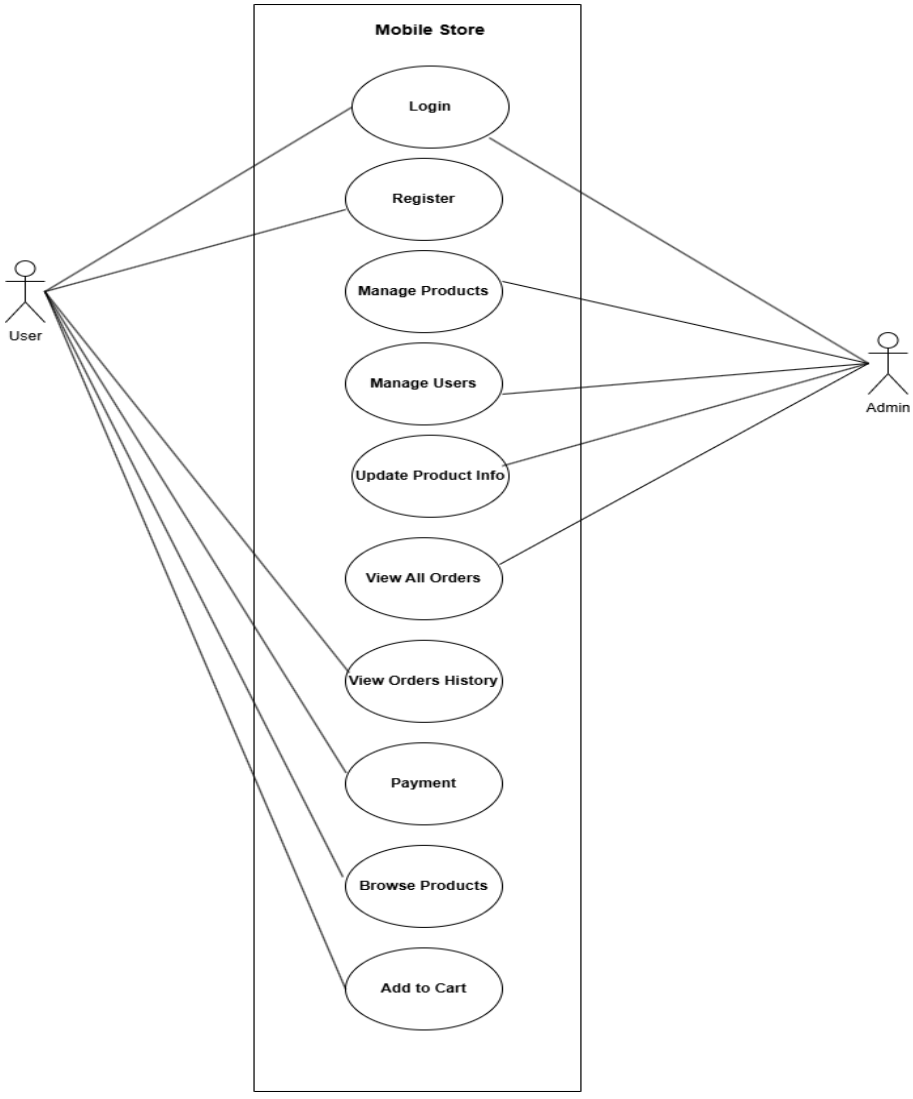


Figure 4.1: Use Case Diagram

4.2 E-R Diagram

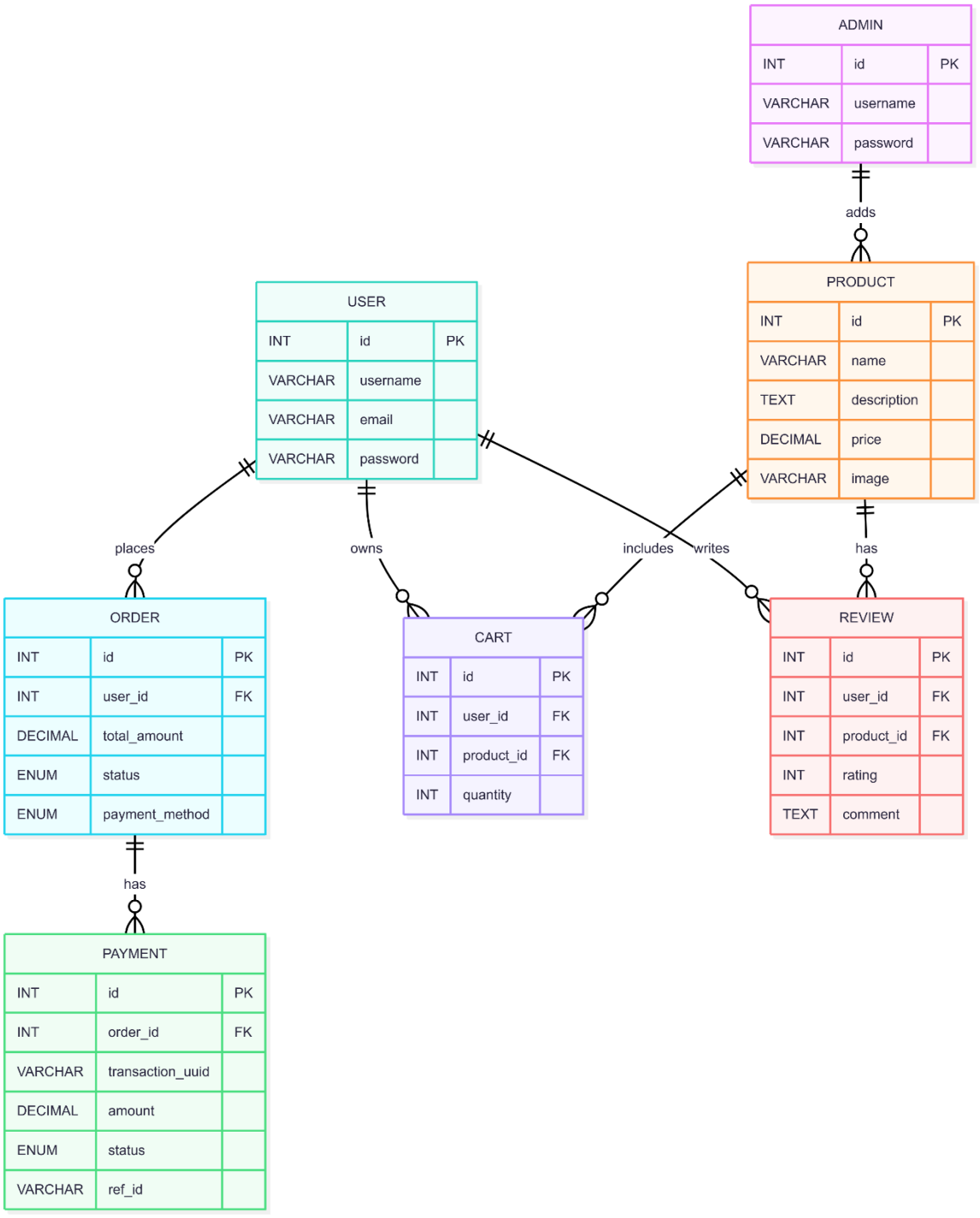


Figure 4.2: E-R diagram

Chapter 5: Process of building Website

- Used HTML for webpage structure.
- Used CSS for styling and layout.
- Used JavaScript for interactivity and form validation.
- Used PHP for server-side logic and processing.
- Used MySQL to store and manage data.
- Used XAMPP to run Apache server and MySQL database locally.

Step by step Website development

- Installed XAMPP on the local machine.
- Started Apache and MySQL using XAMPP Control Panel.
- Created project folder named project inside htdocs directory.
- Created MySQL database named ecommerce using phpMyAdmin.
- Designed frontend using HTML, CSS, and JavaScript.
- Developed backend using PHP for user, product, and order management.
- Connected PHP pages to MySQL database using MySQL.
- Created user registration and login functionality.
- Displayed products from database and added cart system.
- Created admin panel for adding, editing, and deleting products.
- Tested all modules on localhost.
- Exported the database and finalized the project.

Chapter 6: Payment Gateway

6.1 Payment Gateway

A payment gateway is a technology that securely processes online payments by transferring payment information between the customer, the merchant, and the bank. It ensures that transactions are safe, quick, and efficient, providing a seamless checkout experience for users. In our Mobile Store project, we have integrated eSewa, a popular digital wallet in Nepal, to allow users to make instant online payments easily. Additionally, we have included the Cash on Delivery (COD**)** option to cater to customers who prefer to pay only when they receive their products, ensuring flexibility and convenience in the payment process.

Chapter 7: Handling Security Issue

7.1 Handle Security Issue

In our website admin panel, handle the security by different layer in any one try to login and access to in our admin panel must be:

- Enter the correct Username/Email and password which is stored in database and then after only can access.
- If username/ Email Id correct and password doesn't match from database unable to login.
- Consumer also be the same process for login own dashboard panel for buy a Products.

Chapter 8: Screenshot of the Website

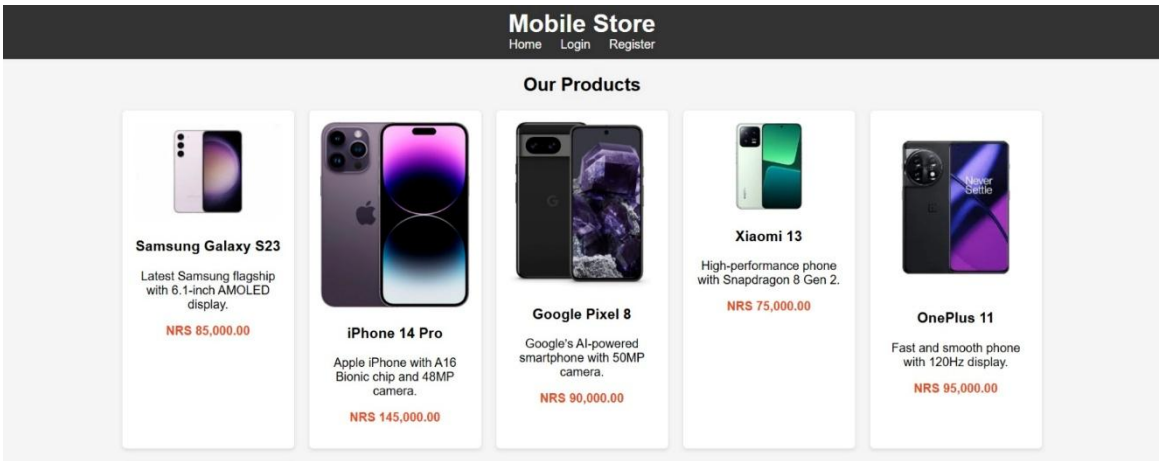


Figure 8.1: Homepage

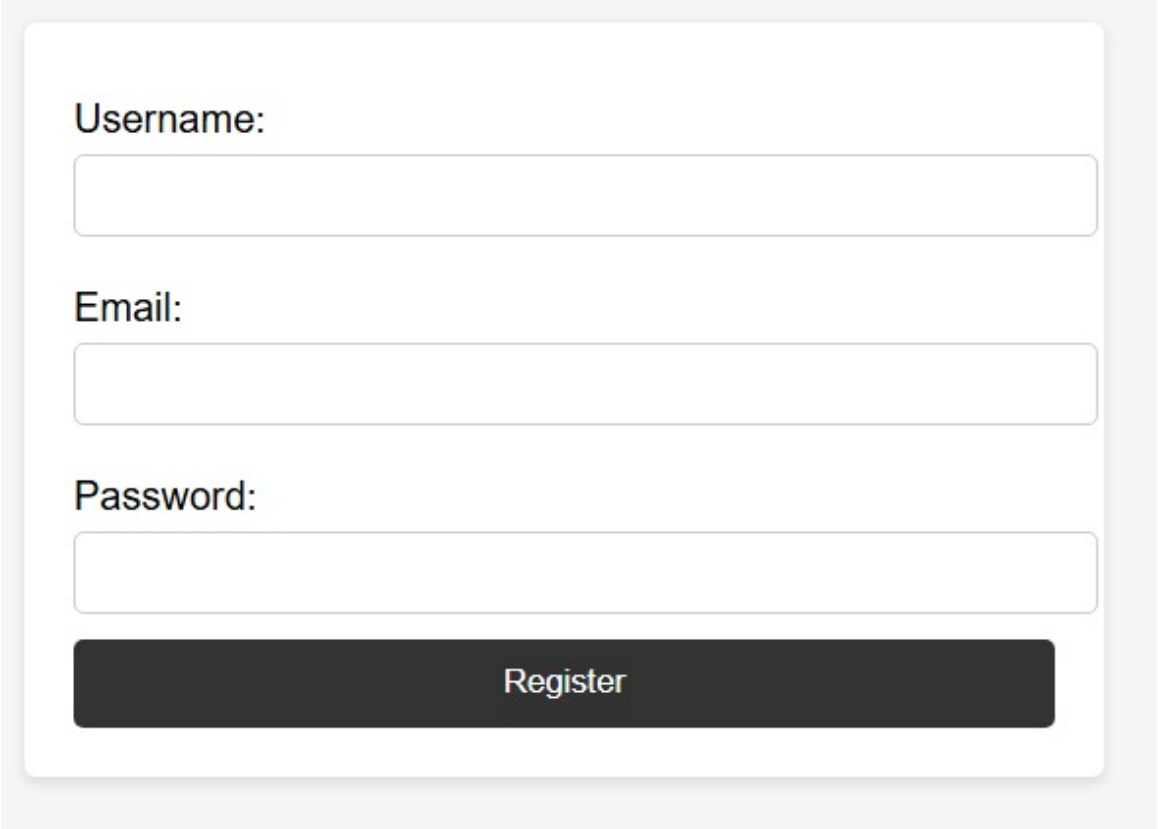


Figure 8.2: Registration Page

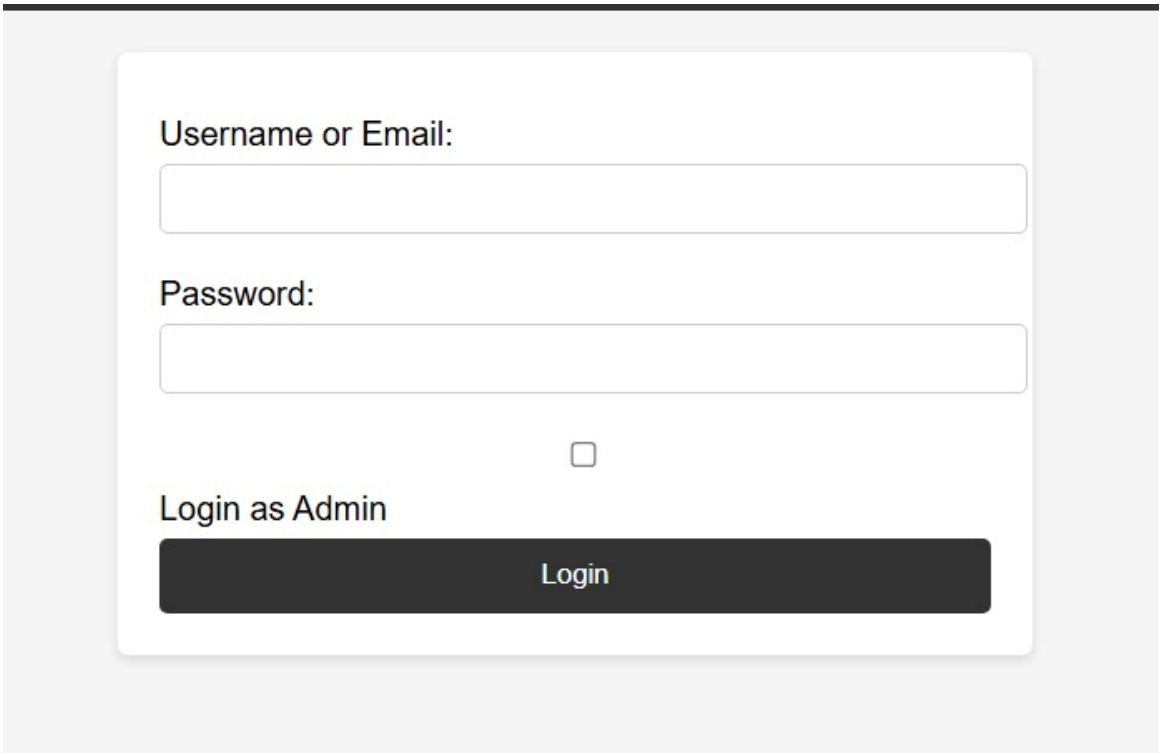
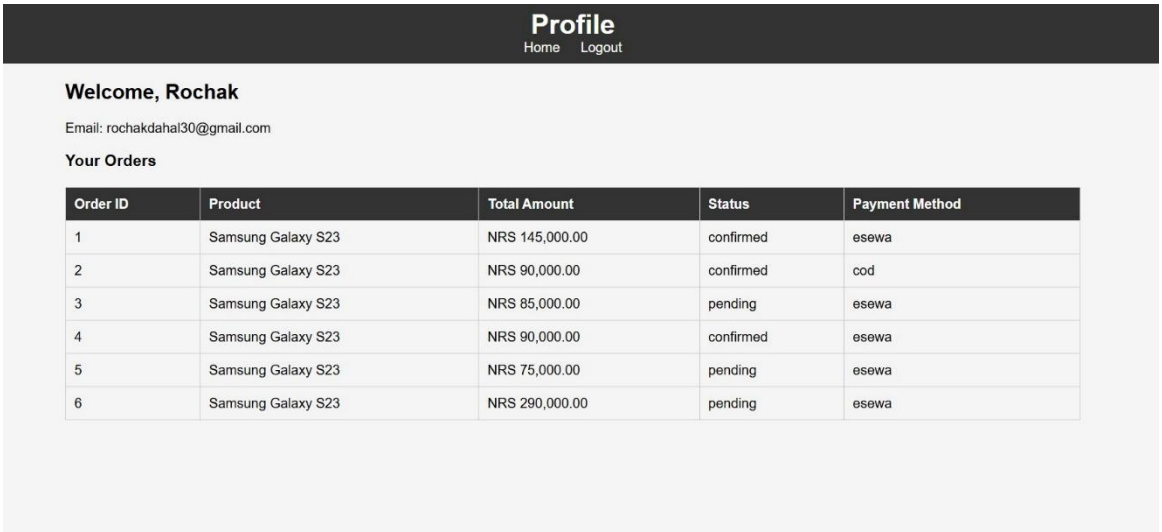


Figure 8.3: Login Page



Order ID	Product	Total Amount	Status	Payment Method
1	Samsung Galaxy S23	NRS 145,000.00	confirmed	esewa
2	Samsung Galaxy S23	NRS 90,000.00	confirmed	cod
3	Samsung Galaxy S23	NRS 85,000.00	pending	esewa
4	Samsung Galaxy S23	NRS 90,000.00	confirmed	esewa
5	Samsung Galaxy S23	NRS 75,000.00	pending	esewa
6	Samsung Galaxy S23	NRS 290,000.00	pending	esewa

Figure 8.4: Users Profile

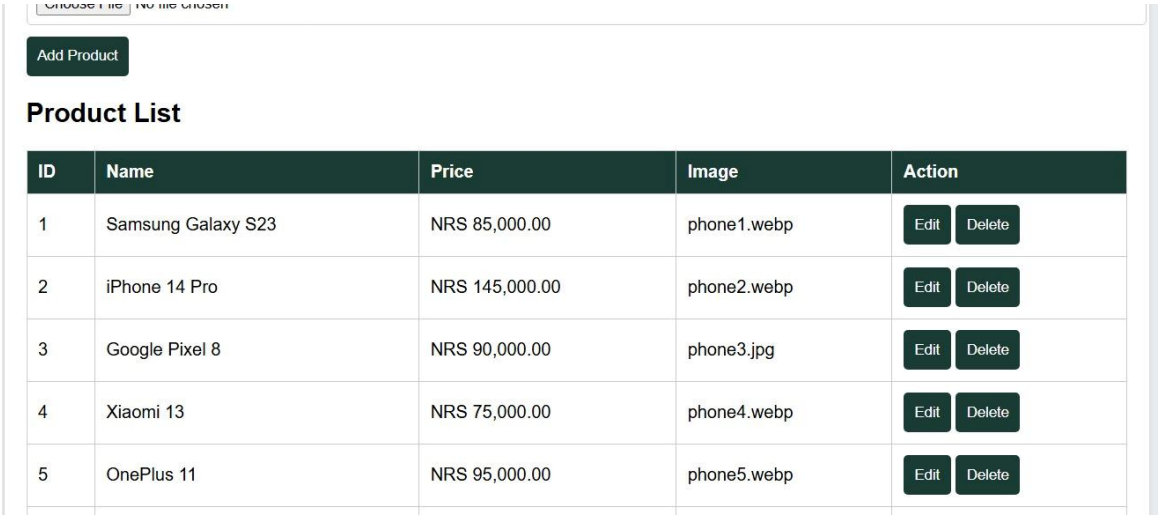


Figure 8.5: Product Page

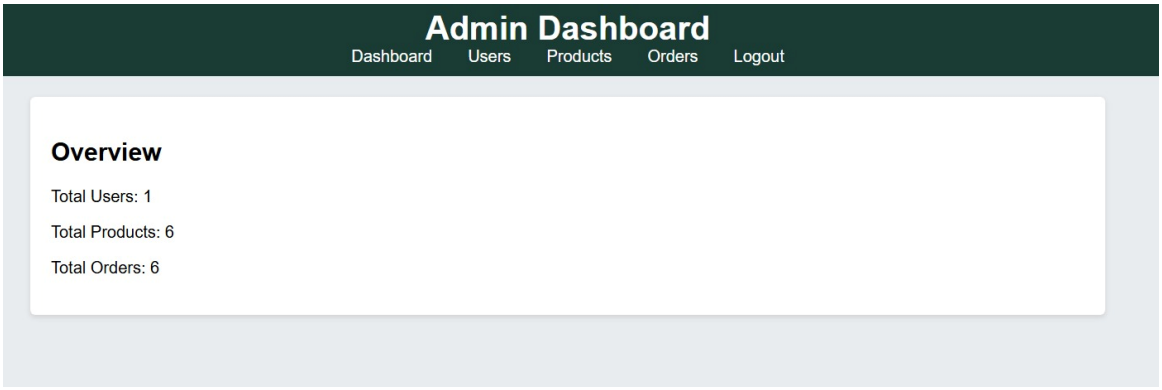


Figure 8.6: Admin Dashboard

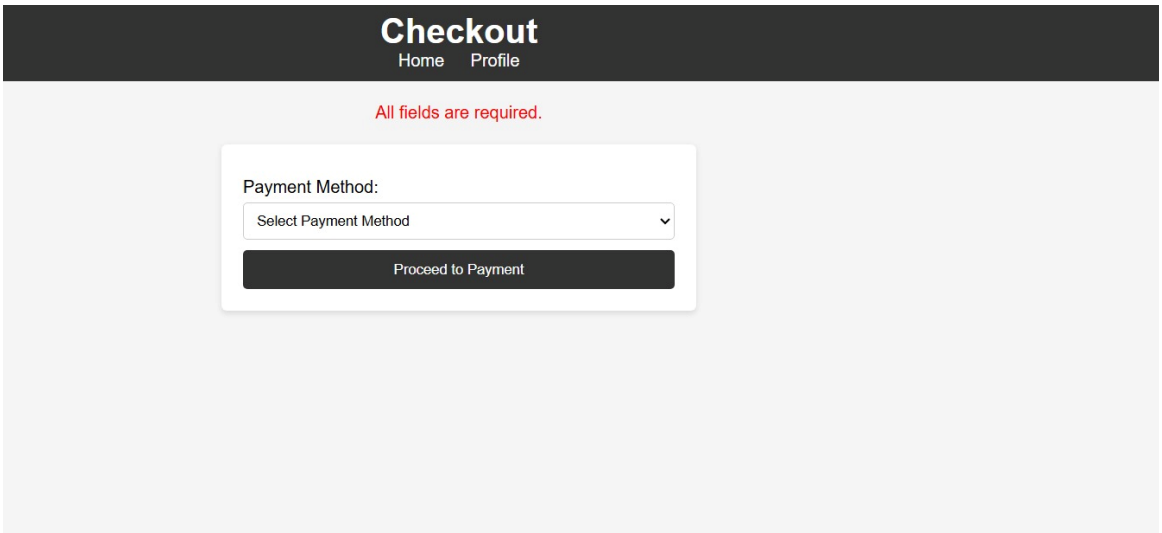


figure 8.7: Payment Method

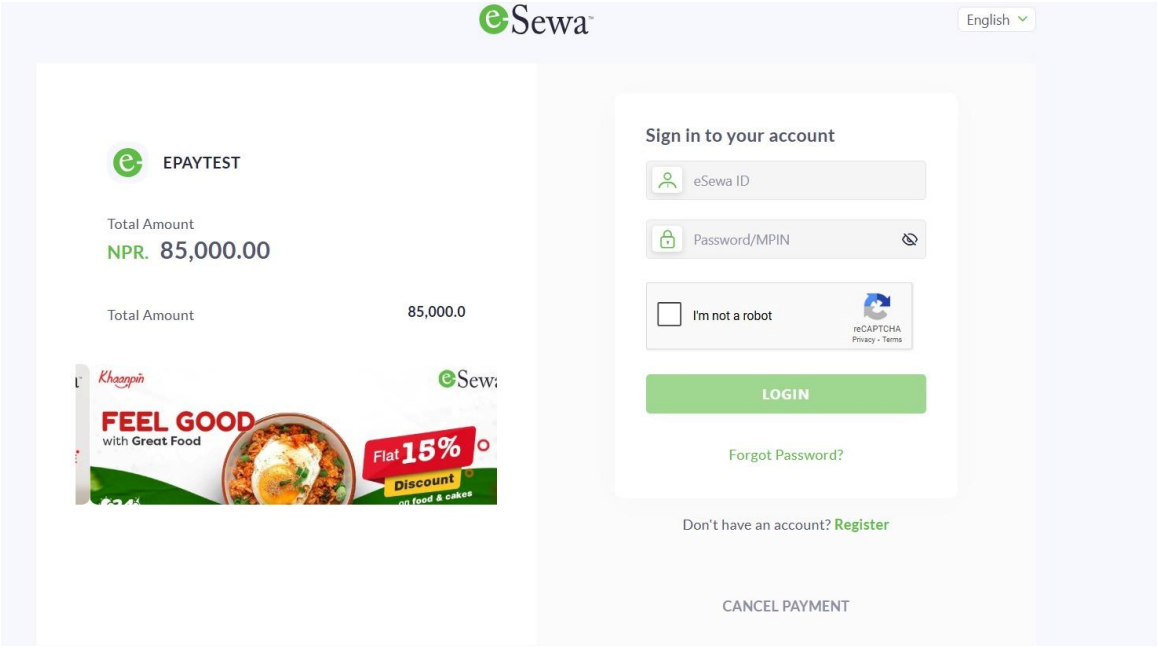


figure 8.8: E-Sewa for Payment

Chapter 9: Conclusion

9.1 Conclusion

In conclusion, the Mobile Store project has been successfully developed using HTML, CSS, JavaScript, PHP, and MySQL**,** providing a dynamic and user-friendly platform for browsing and purchasing mobile devices. The frontend ensures an attractive and responsive design, while the backend efficiently manages data storage, user interactions, and product transactions. Features like eSewa integration and Cash on Delivery offer flexible payment options, enhancing the overall shopping experience. This project not only demonstrates the practical application of web development technologies but also highlights the potential for further expansion and improvement in the field of e-commerce.