A

Mini Project Report

on

MoShop: E-Commerce Store

Submitted in fulfillment of the requirements for the degree

Second Year Engineering – Computer Science Engineering(Data Science)

by

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Academic year: 2024 - 2025

CERTIFICATE

This to certify that the Mini Project report on **MoShop: E-Commerce Store** has been submitted by **Mr. Siddharth Kumar (23107044), Mr. Sarvesh Deve (23107021) and Mr. Yash Patil (23107007) and Mr. Arjun Talekar (23107005)** who are bonafide students of A. P. Shah Institute of Technology, Thane, as a partial fulfillment of the requirement for the degree in **Computer Science Engineering (Data Science)** during the academic year **2024-2025** in a satisfactory manner as per the curriculum laid down by the University of Mumbai.

Ms. Poonam Pangarkar
Guide

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External Examiner:

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Place: A. P. Shah Institute of Technology, Thane
Date:

ACKNOWLEDGEMENT

This project would not have come to fruition without the invaluable help of our guide **Ms. Poonam Pangarkar.** Expressing gratitude towards our HoD, **Ms. Anagha Aher,** and the Department of Computer Science Engineering (Data Science) for providing us with the opportunity as well as the support required to pursue this project. We would also like to thank our project coordinators **Prof. Rajashri Chaudhari** and **Prof. Vaibhav Yavalkar** who gave us their valuable suggestions and ideas when we were in need of them. We would also like to thank our peers for their helpful suggestions.

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Chapter 1

Introduction

In the dynamic landscape of online shopping, consumers are increasingly seeking a platform that not only offers mobile devices, but also enhances their buying experience. "MoShop" is designed to not only be an e-commerce site for mobile phones; it is a gateway to a whole new domain of convenience, technology, and personalized services that meets the needs of today's tech-savvy shoppers. MoShop is a novel platform that is dedicated to provide an extensive selection of mobile devices that caters to a diverse and exhaustive range of preferences and budgets.

At MoShop, we recognize that buying a mobile device is more than just a mere transaction; it is about making informed choices that align with individual lifestyles. That is why we have developed an intuitive online platform that emphasizes user experience and accessibility. With a simple registration and login process, users can easily navigate through our curated inventory of latest mobile technologies.

Our commitment to customer satisfaction is visible in every aspect of our platform. The user-friendly home page showcases a variety of mobile options, while our "Add to Cart" and "Buy now" pages simplify the purchasing journey. Cash-on-delivery options further enhance the convenience, ensuring that our esteemed customers feel secure in their transactions.

In summary, MoShop is dedicated to redefining the online mobile shopping experience by prioritizing user needs, streamlining navigation, and integrating innovative features that empower consumers to make confident and informed purchases.

1.1. Purpose

The purpose of this project report is to document the development and implementation of MoShop, a comprehensive e-commerce platform, for mobile devices. Our webpage aims to provide a user-friendly and efficient platform for online shopping, hosting a diverse range of mobile products while enhancing the overall shopping experience of our customers.

MoShop prioritizes intuitive design ensuring that users can effortlessly navigate and find the perfect mobile devices that suit their needs. We understand the importance of a seamless purchasing journey, which is why our interface is thoughtfully crafted to help our customers explore our product offerings with ease.

Moreover, we leverage advanced technology to personalize our valuable customers' shopping experience. With MoShop, customers can shop with confidence knowing that our platform utilizes cutting-edge technology to enhance their experience and assist them in finding the mobile devices that best fit their lifestyle.

1.2. Objectives

The objectives of the MoShop Project Outline its key goals for creating an effective e- commerce platform:

1. To design and develop a user-friendly and intuitive e-commerce website.
2. To provide a comprehensive platform for customers to browse and purchase mobile phones from various brands.
3. To allow customers to view detailed product information and add products to their shopping cart.
4. To provide customers with the option to login or checkout as a guest.

1.3. Scope

The scope of the MoShop project involves creating an e-commerce platform that showcases a diverse range of mobile devices, enhancing brand visibility and online sales. It will feature an intuitive user interface for a seamless shopping experience, targeting budget-conscious consumers, including students. Additionally, the platform will support small businesses by providing a cost-effective solution for establishing an online presence.

1. **Mobile Devices:** The website's adaptable framework provides a robust platform for showcasing a wide range of mobile devices, thereby enhancing brand promotion and online sales.

2. **User Experience:** The versatile and intuitive features serve as an efficient online shopping platform, offering a seamless shopping experience across various mobile categories and customer preferences.

3. **Small Business Support:** The scalable framework provides small-scale virtual stores with an accessible cost-effective solution to establish an online presence, enabling them to showcase and sell their mobile products efficiently.

4. **Customer Demographics:** The platform provides an accessible avenue for students and budget-conscious consumers to access stylish mobile devices at affordable prices.

Chapter 2

Proposed System

The proposed MoShop system is designed to deliver a seamless and user-friendly experience for both customers and administrators. Key components include an intuitive user registration and profile management system that enhances personalization, allowing users to tailor their shopping experience. The product catalog will feature a comprehensive range of mobile devices, organized for easy navigation, ensuring customers can quickly find what they need. With a responsive design, MoShop will provide an optimal experience across all devices, from desktops to smartphones. Furthermore, the streamlined checkout process aims to enhance customer satisfaction by minimizing friction during purchases, making it easier for users to complete their transactions effortlessly. Overall, MoShop is focused on creating a holistic shopping experience that prioritizes user convenience and satisfaction..

2.1 Features and Functionality

Implementing MoShop includes several key features that significantly enhance the user experience. The platform boasts a user-friendly interface with a responsive design, ensuring optimal display across various devices. Intuitive navigation allows users to easily find products, while a well-organized product management system enables browsing based on individual preferences. High-quality images and detailed descriptions facilitate informed decision-making, and a streamlined checkout process minimizes steps to complete purchases, reducing cart abandonment. Collectively, these features create a seamless and engaging shopping experience that fosters customer loyalty. The key features of our MoShop are:

1. **User-Friendly Interface:** The responsive design of MoShop ensures that the platform looks great and functions well on any device, whether it's a smartphone, tablet, or desktop computer. This adaptability minimizes frustration for users, as they won't have to zoom in or scroll excessively to navigate the site. A clean and organized layout allows users to focus on shopping rather than figuring out how to use the platform.
2. **Intuitive Navigation:** MoShop features a simple and logical navigation structure that allows users to find products quickly and easily. Menus are clearly labeled, and search functionality is prominent, enabling users to filter products by categories, brands, or other criteria. This streamlined approach enhances user satisfaction by reducing the time spent searching for items, making the shopping process more enjoyable.
3. **Organized Product Management:** The platform organizes products into well-defined categories based on various attributes, such as type, price range, and user preferences. This organization allows users to browse efficiently, tailoring their shopping experience to their specific needs. Advanced filtering options also help users narrow down their choices, making it easier to find exactly what they're looking for without feeling overwhelmed.
4. **High-Quality Images & Descriptions:** MoShop prioritizes high-resolution images that showcase products from multiple angles, allowing customers to visualize their purchases clearly. Detailed product descriptions provide essential information, including features, specifications, and usage instructions. This transparency helps customers make informed decisions, reducing uncertainty and the likelihood of returns.

Chapter 3

Project Outcomes

The expected outcomes of the MoShop project will fundamentally transform the online shopping experience for customers while driving growth for the business. By creating a functional e-commerce website, MoShop aims to deliver a seamless and efficient platform that meets the needs of modern consumers. This enhanced user experience is expected to lead to increased customer satisfaction and loyalty, as shoppers find the site easy to navigate and responsive to their preferences. As a result, the business anticipates a boost in sales and revenue, driven by higher conversion rates and repeat purchases. These outcomes not only reflect the project's success but also establish MoShop as a competitive player in the e-commerce market.

1. **A functional E-commerce website-** The project will result in a fully operational online store that provides a user-friendly experience. Customers will benefit from a platform that is easy to navigate, with quick load times and a design that works well on mobile and desktop devices. This functionality is crucial for attracting and retaining users, ensuring that they can browse and make purchases without frustration.
2. **Increased customer satisfaction and loyalty-** With a focus on enhancing the user experience, MoShop aims to create a positive shopping environment that fosters customer satisfaction. Features like personalized recommendations, responsive customer service, and a streamlined checkout process will help build trust and encourage repeat visits. As customers feel valued and understood, their loyalty to the brand will strengthen, leading to long-term relationships.
3. **Increased sales and revenue for the business-** The combination of a functional website and high customer satisfaction is expected to drive higher sales. As users experience fewer barriers to purchasing—thanks to an intuitive interface and efficient checkout—they are more likely to complete transactions. Additionally, as customer loyalty grows, MoShop can anticipate an increase in repeat purchases, which contributes to sustained revenue growth.

Chapter 4

Software Requirements

The software requirements section of the MoShop project report outlines the essential technical specifications needed for the e-commerce platform. It includes functional requirements, detailing specific features like user authentication and product management, as well as non-functional requirements that address performance, security, and usability.

Front-end Development:

1. **Java JDK (Version 22.0.2)-** Java will be used to build a robust and user-friendly interface, leveraging its object-oriented features to create scalable and maintainable code. Java's versatility allows for the development of interactive web applications that enhance the overall user experience.

Back-end Development:

1. **MySQL (Version 8.0.1)-** MySQL will serve as the database management system, handling user profiles, product data, and transaction records. Its relational database structure allows for efficient data retrieval and storage, ensuring the integrity and security of the information.

Additional Technologies:

1. **Java JDK (Java Development Kit)-** The Java JDK is a comprehensive suite of tools for developing Java applications. It includes the Java Runtime Environment (JRE), development tools, and libraries necessary for building, testing, and deploying Java applications, making it essential for the MoShop project.
2. **NetBeans Apache Software (Version22.0)-** NetBeans is an integrated development environment (IDE) that supports Java and other languages. It provides a user-friendly interface for coding, debugging, and testing applications, making it easier for developers to manage the MoShop project efficiently

Chapter 5

Project Design

The design of our e-commerce store project is structured to facilitate a seamless user experience while providing comprehensive administrative controls. At the core of the system is a block diagram that outlines the main functionalities for both users and administrators.

Block Diagram:

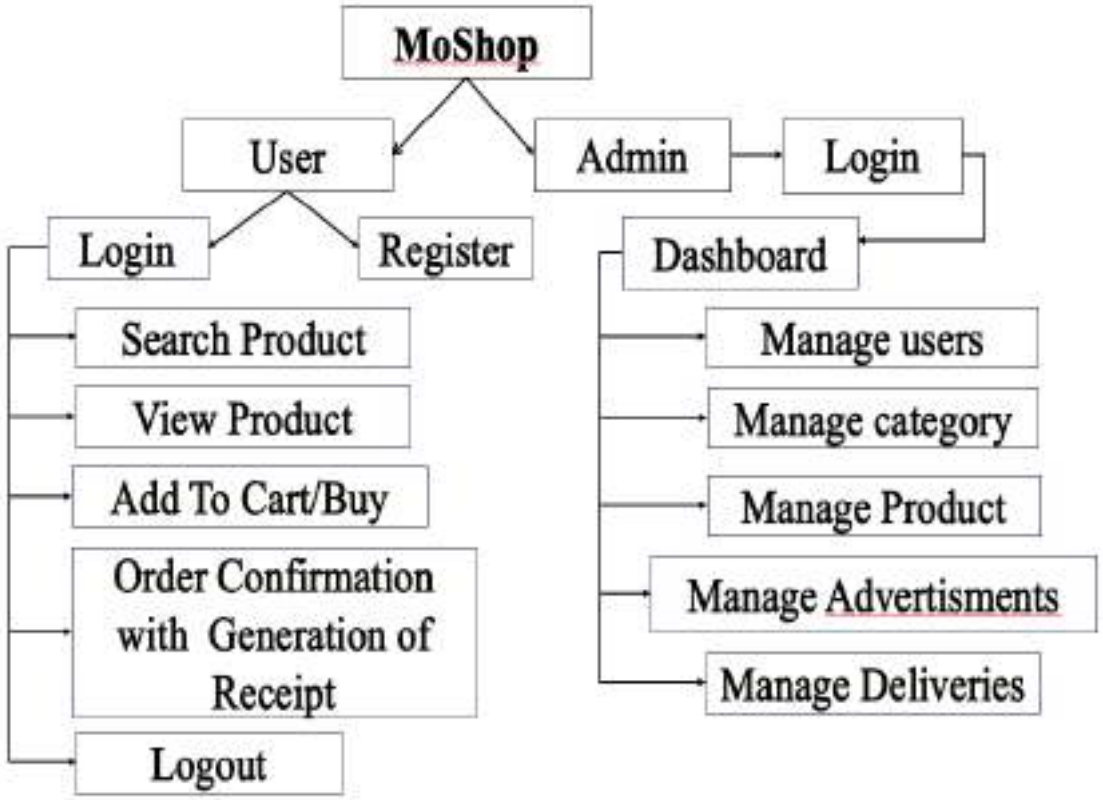

Figure 5.1 Block Diagram for MoShop: E-Commerce Store

For users, the process begins with a user login feature, allowing new customers to register and returning customers to log in securely. Once logged in, users can easily search for products using a search functionality, view detailed product information, and add desired items to their shopping cart. The user journey culminates in the generation of a receipt upon checkout, confirming the order and providing essential details for future reference.

On the administrative side, the project features a robust dashboard designed for efficient management. Administrators have the ability to manage user accounts, oversee product listings, organize product categories, and handle advertisements to enhance store visibility. Additionally, the dashboard includes receipt management capabilities, enabling admins to track and manage customer orders effectively. This dual functionality ensures that both user and admin needs are met, promoting a streamlined and efficient e-commerce environment.

Chapter 6

Project Scheduling

Project scheduling is a crucial aspect of effective project management, providing a roadmap for the timely completion of tasks and milestones within a defined timeframe. To visualize this schedule, a Gantt chart is employed, providing a graphical representation of task durations, start and finish dates, and interactivity. Additionally, Gantt charts help illustrate the project's work breakdown structure and the relationships between activities, ensuring effective project management and progress tracking. The detailed explanation of the Gantt chart is explained below after Figure 6.1.

GANTT CHART

Smartsheet Tip: A Gantt chart's visual timeline allows you to see details about each task as well as project dependencies.

PROJECT TITLE: MoShop: E-Commerce Store

PROJECT GUIDE: Ms. Poonam Pangarkar

INSTUTUTE & DEPARTMENT NAME: AP SHAH INSTITUTE OF TECHNOLOGY(CSE-Data Science)

DATE: 10/8/24

WBS NUMBER	TASK TITLE	TASK OWNER	START DATE	DUE DATE	DURATION(Weeks)	PERCENTAGE OF TASK COMPLETE
1	**Project Conception and Initiation**					
1.1	Group formation and Topic finalization. Identifying the scope and objectives of the Mini Project	Siddharth Kumar	7/9/24	7/23/24	2	100%
1.2	Identifying the functionalities of the Mini Project	Sarvesh Deve	7/23/24	8/6/24	2	100%
1.3	Discussing the project topic with the help of paper prototype.	Siddharth Kumar, Sarvesh Deve, Arjun Talekar, Yash Patil	8/6/24	8/20/24	2	100%
1.4	Designing the Graphical User Interface(GUI)	Sarvesh Deve	8/20/24	9/10/24	3	100%
1.5	Presentation I	Siddharth Kumar, Sarvesh Deve, Arjun Talekar, Yash Patil	9/10/24	9/17/24	1	100%
2	**Project Design and Implementation**					
2.1	Database Design	Sarvesh Deve, Arjun Talekar	9/17/24	9/24/24	1	100%
2.2	Database Connectivity of all modules	Sarvesh Deve, Arjun Talekar	9/24/24	10/1/24	1	100%
2.3	Integration of all modules and Report Writing	Siddharth Kumar, Yash Patil	10/1/24	10/8/24	1	100%
2.4	Presentation II	Siddharth Kumar, Sarvesh Deve, Arjun Talekar, Yash Patil	10/8/24	10/15/24	1	100%

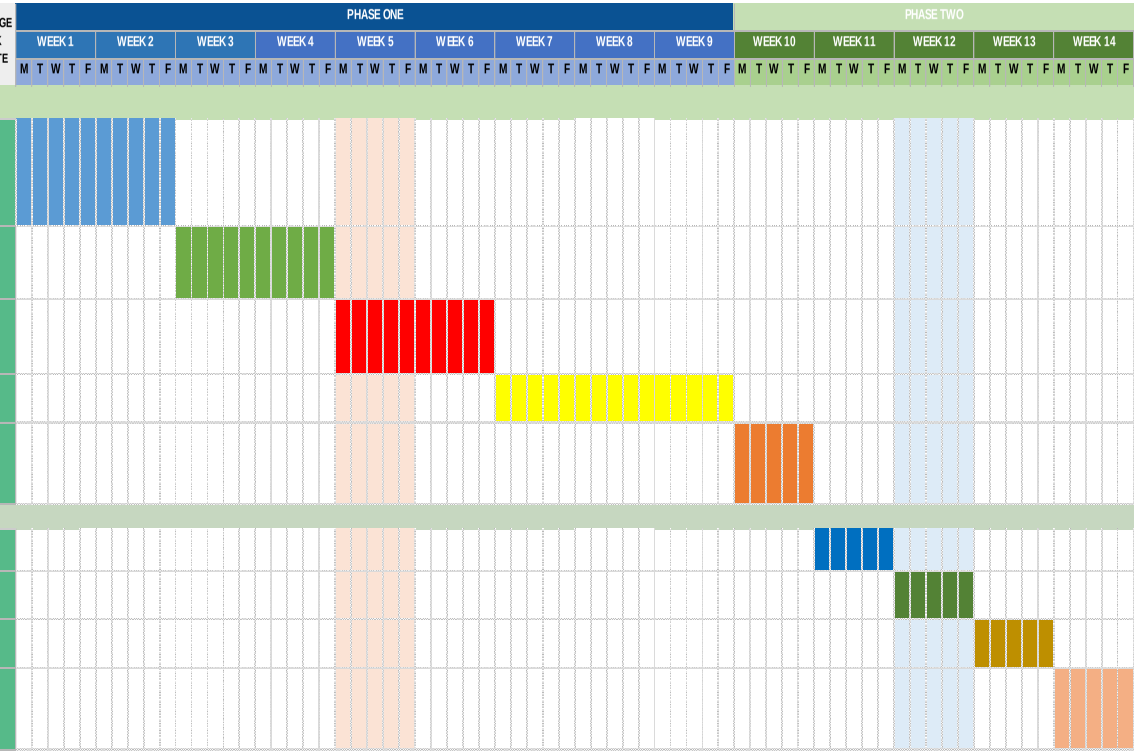

Figure6.1: Gantt Chart of MoShop: Ecommerce Store

Following is the detail of the Gantt chart – In the third week of July, Siddharth Kumar, Yash Patil, Sarvesh Deve, and Arjun Talekar formed a group for their mini project. They discussed and finalized the project's topic, scope, and objectives during this meeting. In the following weeks, Siddharth Kumar, Yash Patil, Sarvesh Deve, and Arjun Talekar used a paper prototype to explore and refine project ideas, completing this phase by the 2nd week of August.

In late September, they executed the design and integration of the graphical user interface (GUI). Afterward, on the 12th of September, the first project review took place, and the faculty suggested some changes to the GUI, which were subsequently approved.

Following this, Sarvesh Deve and Arjun Talekar collaborated in designing the GUI and connecting the database to the project, while Yash Patil and Siddharth Kumar focused on documentation and report writing. This database work was completed by the end of September. Finally, the team integrated all modules and completed the report writing, resulting in their final presentation on the 19th of October, which was approved by the faculty.

Chapter 7

Results

The results section showcases the successful implementation of our project through a series of detailed photographs. These images highlight key stages of development, including the design of the graphical user interface, database integration, and the overall functionality of the MoShop platform. By visually documenting our progress, we provide clear evidence of our efforts and the effectiveness of our solutions. The photos serve not only to illustrate our work but also to demonstrate the seamless user experience and the robust architecture of the e-commerce system we have created.

Figure 7.1 : Home Page

Figure 7.1 above showcases the home page layout, highlighting the focus on the login button and the carefully curated ads that enhance visual appeal. This combination creates a cohesive environment that encourages user interaction and sets the stage for exploring the e-commerce offerings.

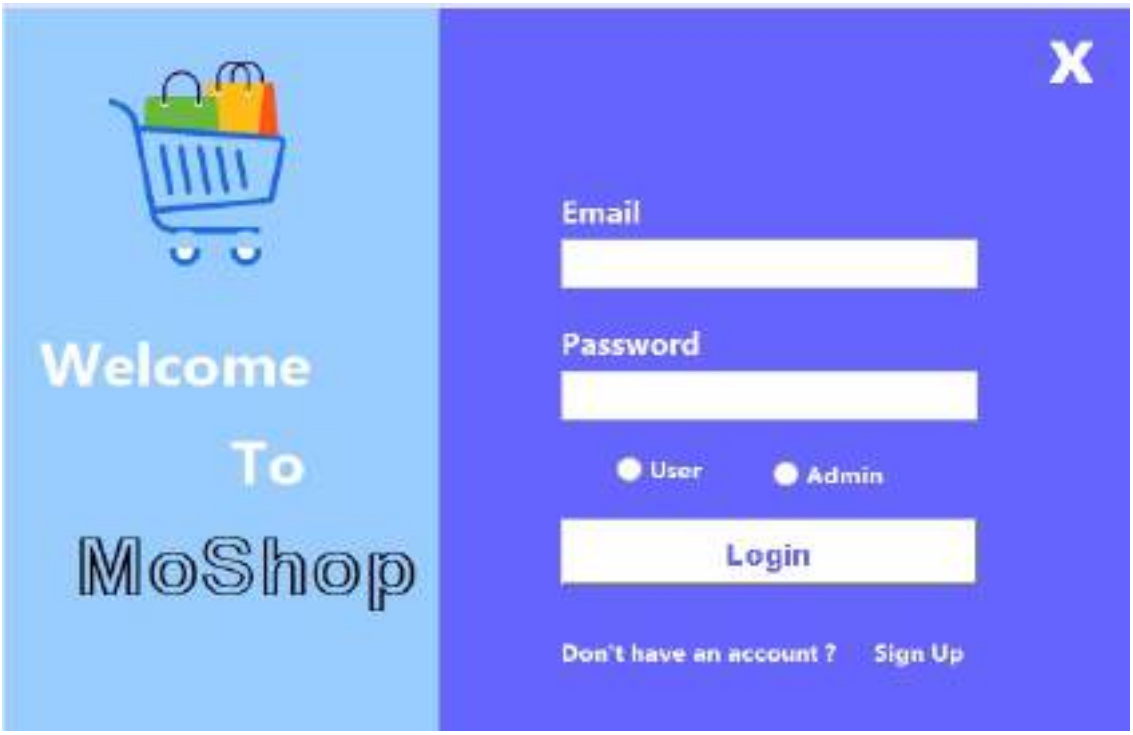

Figure 7.2: Sign In Page

Figure 7.2 above shows the login page, which serves as the gateway for both users and administrators to access their respective accounts on the e-commerce platform. It features separate input fields for entering a username and password for each type of login. Users can register for new accounts, while administrators can log in to access management tools. The design prioritizes user-friendliness and security, ensuring a smooth authentication process while protecting sensitive data.

Figure 7.3: Registration Page

Figure 7.3 above shows the signup page, where new users can easily create accounts on the e-commerce platform. This page features fields for entering essential information, such as name, email, and password, along with options for additional details as needed. The straightforward design ensures that the registration process is quick and user-friendly, enabling users to get started with their shopping experience without unnecessary hurdles. Once registered, users gain access to personalized features, enhancing their overall engagement with the platform.

Figure 7.4: Admin Dashboard

Figure 7.4 above shows the admin dashboard, which serves as the central hub for managing categories, users, products, suppliers, and transactions. This intuitive interface allows administrators to efficiently organize categories, ensuring accurate product classification. User management features enable quick addition, deletion, and searching of users, enhancing control. Additionally, administrators can manage product listings and supplier information seamlessly, while transaction management tools provide insights into sales and inventory.

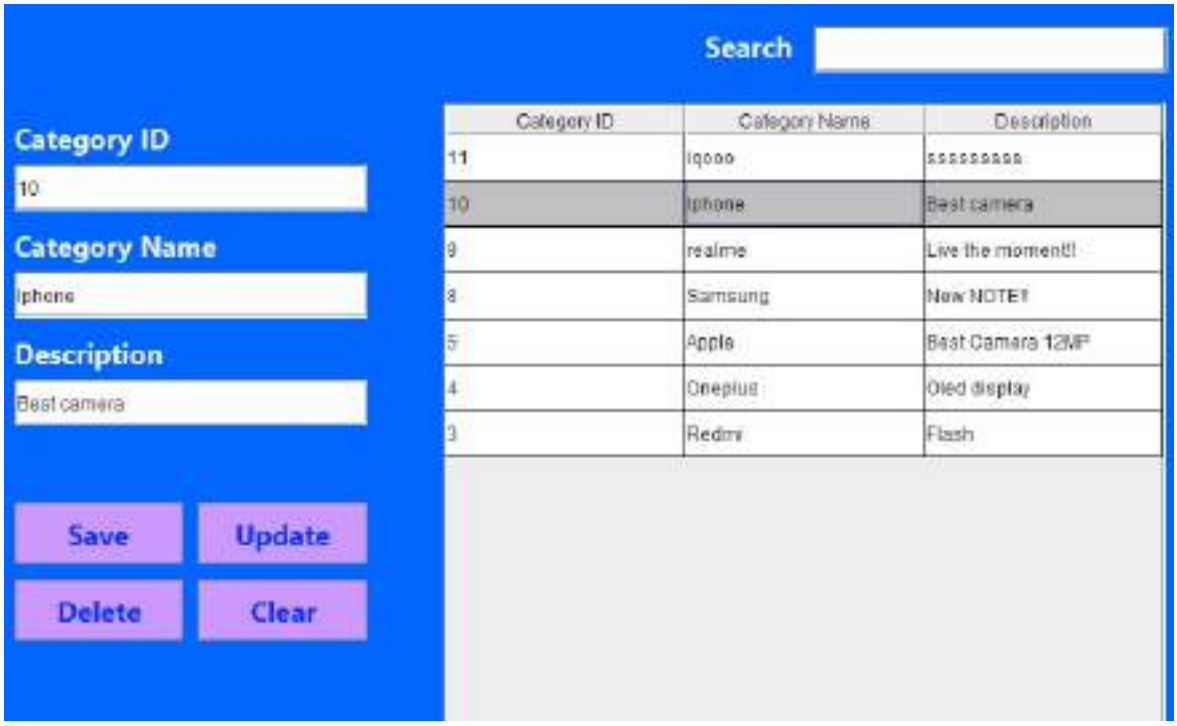

Figure 7.5: Managing Categories Page

Figure 7.5 above shows the page dedicated to managing the categories of mobile devices we provide. Administrators can easily save new categories, update existing ones, and delete categories as needed. This functionality ensures that the product listings remain organized and up-to-date, allowing for a streamlined shopping experience for users. The interface is designed to be intuitive, making it simple for administrators to navigate and manage mobile categories effectively.

Figure 7.6: Managing Products Page

Figure 7.6 above shows the managing products page, where administrators can oversee the stock and types of mobile devices. This page allows for the addition of new products, updates to existing stock levels, and the categorization of various mobile types. Administrators can efficiently manage inventory, ensuring that product availability is accurately reflected on the platform. The user-friendly interface facilitates quick navigation, making it easier for administrators to maintain an organized and comprehensive product catalog.

Figure 7.7: Managing User Page

Figure 7.7 above shows the managing customer list page, where administrators can add, delete, or update customer data. This functionality enables efficient management of user information, ensuring that the customer database is accurate and current. The intuitive interface allows administrators to quickly navigate through customer records, making it easy to address any changes or inquiries. Overall, this page enhances control over customer relationships and supports effective communication with users.

Figure 7.8: Managing Deliveries Page

Figure 7.8 above shows the page displaying the list of products that have been ordered. This section provides administrators with a comprehensive overview of all orders placed on the platform. It allows for easy tracking of order statuses, including pending, completed, and canceled orders. Administrators can view detailed information about each order, such as customer details and product quantities. The user-friendly design facilitates quick access to order data, streamlining the management process and enhancing overall operational efficiency.

Figure 7.9: Managing Advertisements Page

Figure 7.9 above shows the managing advertisements page, where administrators can create, update, and delete advertisements for the platform. This page provides tools for managing promotional content, allowing for targeted campaigns that attract users and boost sales. Administrators can easily schedule advertisements, set their visibility duration, and monitor their performance.

Figure 7.10: User Home Page

Figure 7.10 above shows the user dashboard page, which features prominently displayed buttons for key actions: "Purchase," "Purchase Details," and "My Account." The "Purchase" button directs users to explore available products, while "Purchase Details" allows them to view their order history.

Figure 7.11: User Details Updating Page

Figure 7.11 above shows the user profile page, where users can update their personal details. This page allows users to edit essential information, such as their name, email address, password, and shipping details. The intuitive interface ensures that making changes is straightforward and efficient. Users can review their information and save updates seamlessly, enhancing their overall experience on the platform. By keeping their profiles current, users can ensure that their shopping experience is tailored to their preferences and needs.

Figure 7.12: Purchase Page

Figure 7.12 above shows the purchase page, which features a table listing the available products along with their details. Each product has buying options, including input boxes for selecting quantity and additional specifications. Below the product table, there is a cart table that allows users to add products they wish to purchase. This setup provides a clear and organized view of the products, making it easy for users to select and manage their desired items before proceeding to checkout. The layout is designed for a smooth and efficient shopping experience.

Figure 7.13: Purchase Details Page

Figure 7.13 above shows the purchase details page, where users can review their selected products after adding them to the cart. This page allows users to confirm their order details, including product quantities and any additional options. Users can proceed to the next step of the purchasing process, ensuring that all information is accurate before finalizing their order. The intuitive design enhances usability, making it easy for users to navigate through their purchase and complete the transaction smoothly.

In summary, the implemented pages create a robust structure for both administrators and users on the e-commerce platform. The login page provides secure access, while the admin dashboard centralizes management of categories, users, products, and transactions. Administrators can efficiently manage mobile categories, products, and customer data through dedicated pages. Users benefit from a dashboard that includes purchasing options and order details. The purchase page lists products with buying options, and the purchase details page allows users to confirm their orders. Overall, these pages enhance functionality and streamline the user experience.

Chapter 8

Conclusion

In conclusion, the development and execution of MoShop represents a sophisticated blend of technical innovation and user-centric design, creating a seamless and engaging online shopping environment. By utilizing Java for front-end development and MySQL for back-end management, we aim to deliver a robust platform that meets the needs of present and future mobile consumers.

This comprehensive approach not only serves as a digital marketplace, but also focuses on providing personalized experiences for users. As technology and user expectations evolve, continuous adaptation and innovation will be vital to maintain our competitive edge in the fast-paced e-commerce landscape.

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