Tribhuvan University

Faculty of Humanities and Social Sciences

E-commerce System (Shoe Store)

A PROJECT REPORT

Submitted to

Department of Computer Application

Bajra International College

Jorpati, Kathmandu

In partial fulfillment of the requirements for the Bachelors in Computer Application

Submitted by:

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Bachelor in Computer Applications (BCA)

SUPERVISOR'S RECOMMENDATION

I hereby recommend that this project prepared under my supervision by **Rakesh Theeng** entitled "**E-commerce (Shoe Store)"** in the Partial Fulfillment of requirement for the degree of Bachelor in Computer Application is recommended for that final evaluation.

Prajjwal Sharma

Project Supervisor

BCA Department

Bajra International College

Tribhuvan University

Faculty of Humanities and Social Sciences

Bajra International College

Jorpati, Kathmandu

Bachelor in Computer Applications (BCA)

LETTER OF APPROVAL

This is to certify that this project prepared by **Rakesh Theeng** entitled "**E-commerce (Shoe Store)"** in the Partial Fulfillment of requirement for the degree of Bachelor in Computer Application has been evaluated. In our opinion it is satisfactory in the scope and quality as a project for the required degree.

Prajjwal Sharma
Supervisor
BCA Department

Anjal Sharma
Program Coordinator

Name of the external Examiner
Designation
External Examiner

Name of the internal Examiner
Designation
Internal Examiner

ACKNOWLEDGEMENT

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Yours sincerely,
Rakesh Theeng

ABSTRACT

The "E-commerce Shoe Store System" presents a dynamic platform tailored for the seamless purchase of footwear online. This system revolutionizes the traditional shoe shopping experience by integrating intuitive design with cutting-edge technology. Users can effortlessly browse a vast collection of shoes, select desired items, and securely complete transactions with ease.

This system operates through a user-friendly interface, ensuring a hassle-free shopping journey for customers of all backgrounds. With streamlined navigation and efficient search functionalities, finding the perfect pair of shoes becomes a swift and enjoyable process.

Key features include a comprehensive product catalog, personalized recommendations, and secure payment gateways, enhancing user convenience and satisfaction. The system's robust architecture ensures reliability and scalability, accommodating a growing user base and expanding product inventory.

Keywords: *[E-commerce, Shoe Store, User-Friendly Interface]*

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LIST OF ABBREVIATIONS

CRUD	Create, Read, Update and Delete
DFD	Data Flow Diagram
ERD	Entity Relationship Diagram
MS	Microsoft Office
SMS	Short Message Service.
SQLite	Structured Query Language
UI	User Interface
URL	Uniform Resource Locator

CHAPTER: 1

INTRODUCTION

1.1 Introduction

Welcome to Shoes Store Nepal, where style meets comfort and quality! Our online shoe store is your one-stop destination for all your footwear needs. Whether you're looking for the latest trends in fashion-forward sneakers, timeless classics in leather loafers, or sturdy boots for outdoor adventures, we've got you covered.

At Shoes Store Nepal we believe that the perfect pair of shoes can elevate any outfit and boost your confidence. That's why we curate a diverse collection of footwear from top brands and designers, ensuring that you have access to the best styles and highest quality craftsmanship.
Shopping with us is not just about finding the right shoes; it's about enjoying a seamless and satisfying experience from start to finish. Our user-friendly website makes browsing and purchasing your favorite styles a breeze, with detailed product descriptions and high-resolution images to help you make informed decisions.

With a commitment to customer satisfaction, we prioritize your comfort and convenience every step of the way. From our secure payment options to our fast and reliable shipping services, we strive to make your shopping experience as enjoyable and hassle-free as possible.
Whether you're shopping for yourself or searching for the perfect gift, we're confident that you'll find exactly what you're looking for at Shoes Store Nepal. So why wait? Step into style and step up your shoe game with us today!

1.2 Problem Statement

In the realm of e-commerce shoe store systems, several challenges persist, hindering optimal functionality and user experience. These include:

- Limited Size Availability
- Lack of Detailed Product Information
- It hard to find shoes because there aren't many options to filter or sort your search.

1.3 Objectives

The objective of Shoe Store Nepal is to offer high-quality footwear products to customers at affordable prices, fostering an easy and comfortable interaction. We aim to create an inviting environment where customers feel welcomed and valued, encouraging them to return for their footwear needs.

The main objectives are listed below:

- To make it easy for customers to return if they are not happy with provided product.
- To provide highest standards footwear of quality, durability and comfort to enhance customer satisfaction.
- To create a welcoming atmosphere where customers feel valued and appreciated, encouraging them to return and fostering long-term relationships.
- We ensure our products are affordable for everyone by offering competitive prices without sacrificing quality.

1.4 Scope and Limitation

1.4.1 Scope

The e-commerce shoe store system aims to provide a user-friendly platform with a diverse product catalog, efficient order management, secure payments, and responsive customer service. It focuses on seamless navigation, timely delivery and robust security measures to ensure a smooth shopping experience. Additionally, marketing efforts and data analytics inform decision making for continuous optimization.

1.4.2 Limitations

E-commerce shoe stores have limitations including the inability to try shoes physically before purchase, potential discrepancies in product images and descriptions, logistical challenges with shipping and returns, security concerns with online transactions, and the competitive nature of the market, requiring continuous innovation and investment.

1.5 Development Methodology

We are going to use Waterfall methodology to develop this website. This project have fixed requirements, enough time, known technology, specific documentation to build this system waterfall methodology can be used.

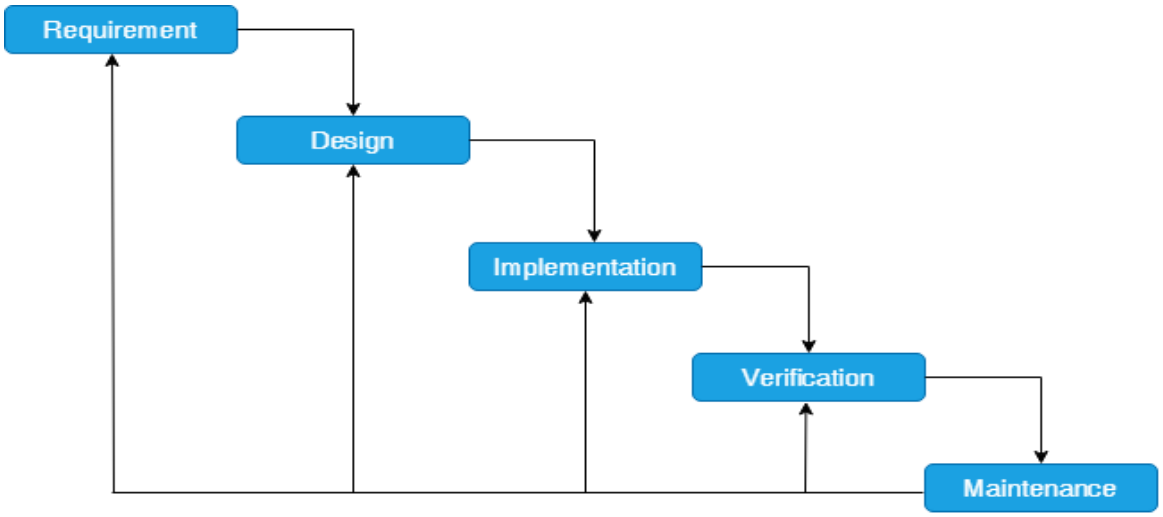

Figure 1 Waterfall model

The Waterfall methodology also known as the Waterfall model is a sequential development process that flows like a waterfall through all phases of a project (analysis, design, development and testing) with each phase completely wrapping up before the next phase begins. It is easy to arrange task and clearly define stages in this methodology.

1.6 Report Organization

Chapter1: Deals with the basic requirement for developing the project and gives the general information of the system that is developed.

Chapter2: Reviews related works under literature reviews, functional and non-functional requirement analysis, data modeling and process modeling by the use of ER-Diagram and DFDs.

Chapter3: Specifies the system design. It describes the basic process modeling using different kinds of diagram.

Chapter4: Deals with the implementation and testing of the developed system.

Chapter5: Discuss the maintenance and support that may be necessary to be carried out in the future and conclude the project.

CHAPTER: 2

BACKGROUND STUDY AND LITERATURE REVIEW

2.1 Background Study

In researching for my ecommerce shoe store project, I encountered several common issues with existing online shoe retail websites that I aimed to address in my own platform. One prevalent problem I observed was complicated and cluttered website layouts, making it difficult for customers to find and purchase products easily. To tackle this, my website prioritizes a clean and intuitive user interface, ensuring seamless navigation and a hassle-free shopping experience. Another issue I identified was limited payment options and concerns about security during transactions. To alleviate these worries, my platform integrates multiple trusted payment gateways while adhering to stringent security measures, ensuring customer information remains safe. Additionally, many existing websites lacked personalized recommendations and tailored shopping experiences, often leaving customers feeling disconnected from the brand. In response, my website implements intelligent algorithms to provide personalized product suggestions based on customer preferences and browsing history, fostering a sense of engagement and satisfaction. By addressing these common problems, my ecommerce shoe store system aims to offer a superior online shopping experience that meets the needs and expectations of modern consumers.

2.2 Literature Review

The literature review for Shoe Store Nepal involves looking at a lot of research and reports about selling shoes in Nepal. We check out things like what people buy, how they buy it, and what other shoe stores are doing. By studying all this, we can figure out how to make our store better and offer shoes that [1] people really like. We also look at how much people are willing to pay for shoes and how to make sure they have a good time shopping with us.

By putting together what we learn from all this research, Shoe Store Nepal can come up with good ideas to make our store work well in Nepal. We use what we find out about what people like, [2]what other stores are doing and how much people want to pay for shoes. Then, we make plans to advertise our store better, set prices that people are happy with, and make sure

people have a great experience shopping with us. This helps us make our store successful and keep our customers happy.

In short, shoe store shop systems are really important for stores [3]. They help things run smoothly, make customers happy, and help stores make better decisions.

CHAPTER: 3

SYSTEM ANALYSIS AND DESIGN

3.1 System Analysis

3.1.1 Requirement Analysis

i. Functional Requirement

A functional requirement of E-commerce (Shoe Store system) typically refers to the specific features and capabilities that the system must have in order to meet the needs of its users. Here are some common functional requirements for E-commerce Shoe Store system:

- User registration and Authentication
- Product catalog management
- Selection and viewing products
- Shopping cart and checkout process
- Product add to cart

USE CASE DIAGRAM

Use case illustrates a unit of functionality provided by the system. Typically used to communicate the high-level functions of the system and the system's scope (i.e., diagram shows what the system doesn't do). It helps development teams visualize the functional requirements of a system, including the relationship of "actors". Stakeholders can easily see if needed functionality is present or not present in the system. Generally, shows groups of use-cases:

- either all use cases for the complete system, or
- a breakout of a particular group of use cases with related functionality (e.g., all security administration related use cases)

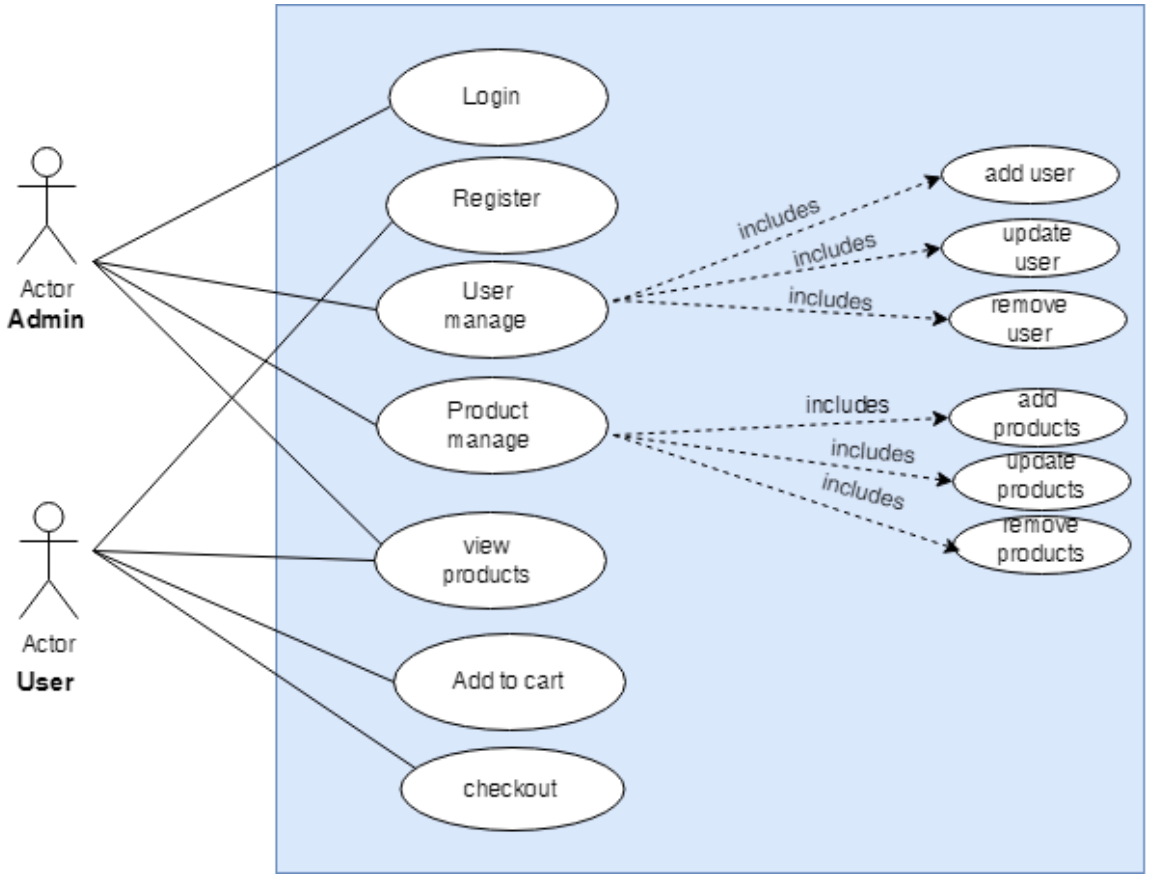

Figure 2 Example of Use case

ii. Non Functional Requirement

Performance: The website should load quickly and respond promptly to user interactions, even during peak traffic periods. Page load times should be optimized to minimize bounce rates and improve user satisfaction.

Scalability: The system should be designed to scale gracefully as the user base and product catalog grow over time. This includes scalable hosting infrastructure and efficient database management practices.

Security: The platform should implement robust security measures to protect user data, including encryption of sensitive information, secure transmission protocols (HTTPS), and protection against common web vulnerabilities such as cross-site scripting (XSS) and SQL injection.

Reliability: The system should be highly reliable, with minimal downtime and robust backup and recovery procedures in place to ensure data integrity and continuity of service.

Accessibility: The website should adhere to accessibility standards (such as WCAG) to ensure that users with disabilities can access and use the site effectively. This includes features such as alternative text for images, keyboard navigation support, and compatibility with screen readers.

User Experience: The website should offer a seamless and enjoyable user experience, with intuitive navigation, clear and concise information, and visually appealing design elements. This includes considerations for mobile usability, intuitive forms, and error handling mechanisms.

3.1.2 Feasibility Analysis

i. Technical Feasibility Study

In ensuring the technical feasibility of the shoe store system, our primary concern is implementing robust security measures to safeguard against unauthorized access. This includes password protection to restrict entry to authorized users only, as well as encryption methods to secure sensitive data within the system. By prioritizing these security measures, we aim to create a shore store system that is both technologically feasible and adequately protected from potential threats.

ii. Operational Feasibility Study

The proposed system is designed to be user-friendly, making it accessible to anyone with basic computer knowledge. Its intuitive interface ensures ease of use, allowing users to navigate and utilize the system effortlessly. With simplified processes and clear instructions, this computerized system is straightforward and easy to understand, enabling users to interact with it comfortably and efficiently.

iii. Economic Feasibility Study

The proposed system is economically feasible due to its affordable hardware and software installation and maintenance costs. The investment required for setting up and maintaining the system is within reasonable limits, making it financially viable for the organization. By minimizing upfront expenses and ensuring ongoing affordability, the

system offers a cost-effective solution that aligns with the organization's budgetary constraints.

iv. Schedule Feasibility Study

The schedule feasibility study for the laptop store involves checking if we can finish the project on time. We make a detailed plan with all the tasks and deadlines for building, testing, and launching the system. We make sure we have enough people and tools to get the job done. And if there are any delays, we have backup plans to keep things on track.

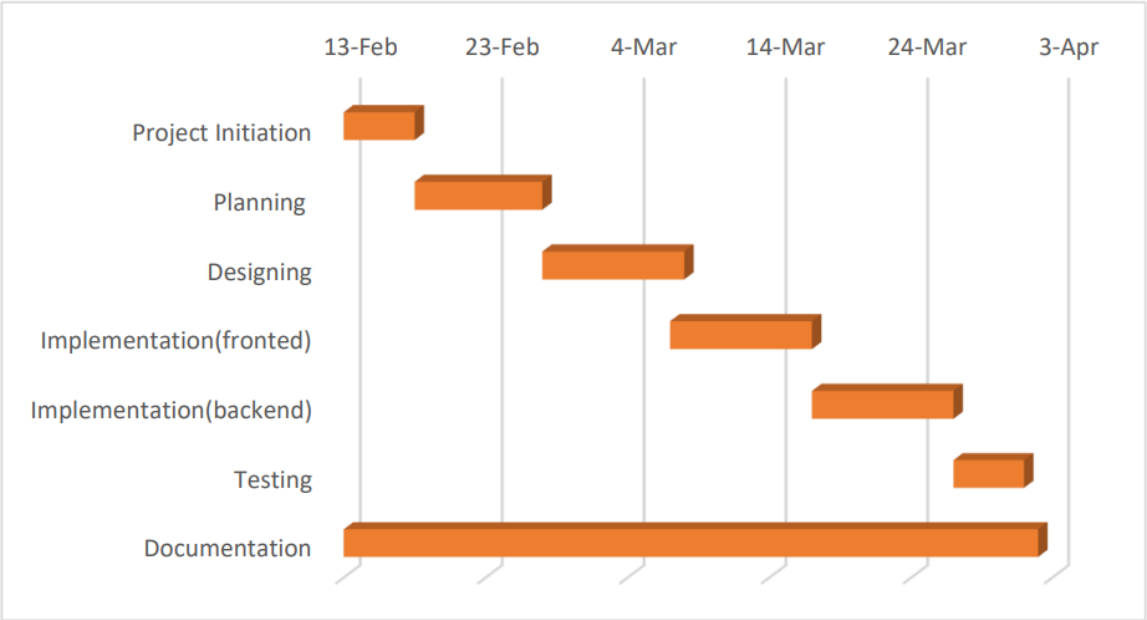

Figure 3 Gantt chart

3.1.3 Data Modeling ER-Diagram

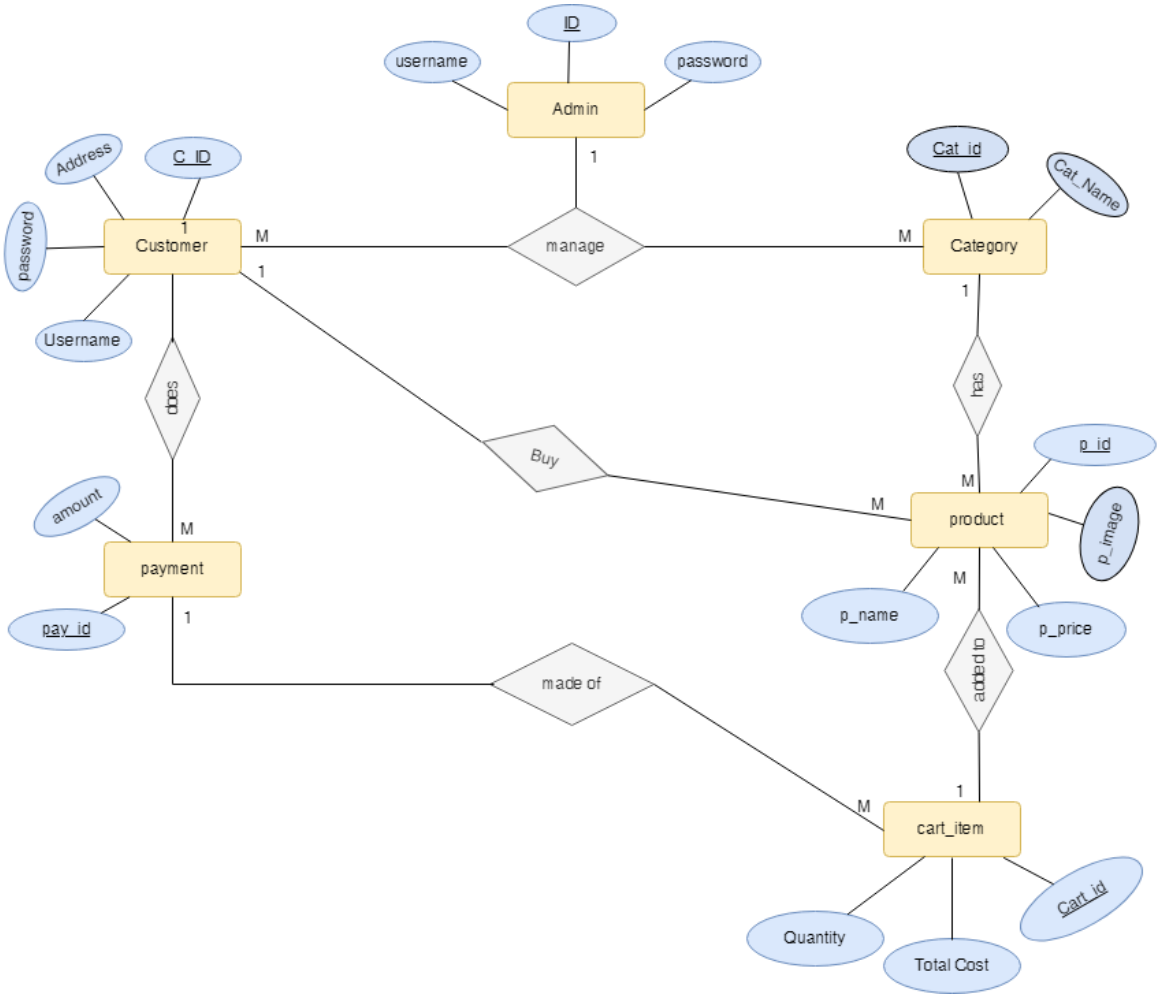

Figure 4 ER Diagram

3.1.4 Process Modeling (DFD)

Context Diagram:

Example of Context diagram

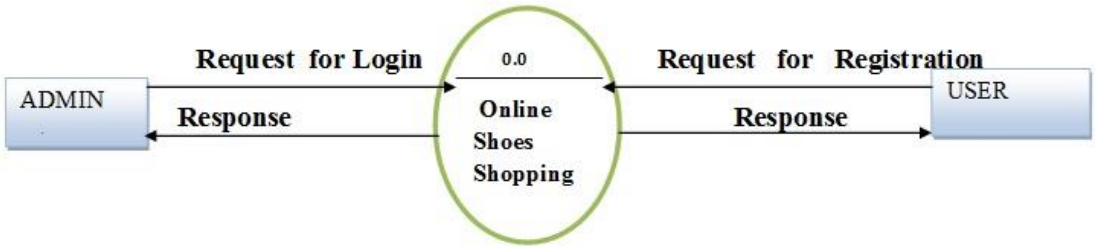

Figure 5 Level 0 DFD

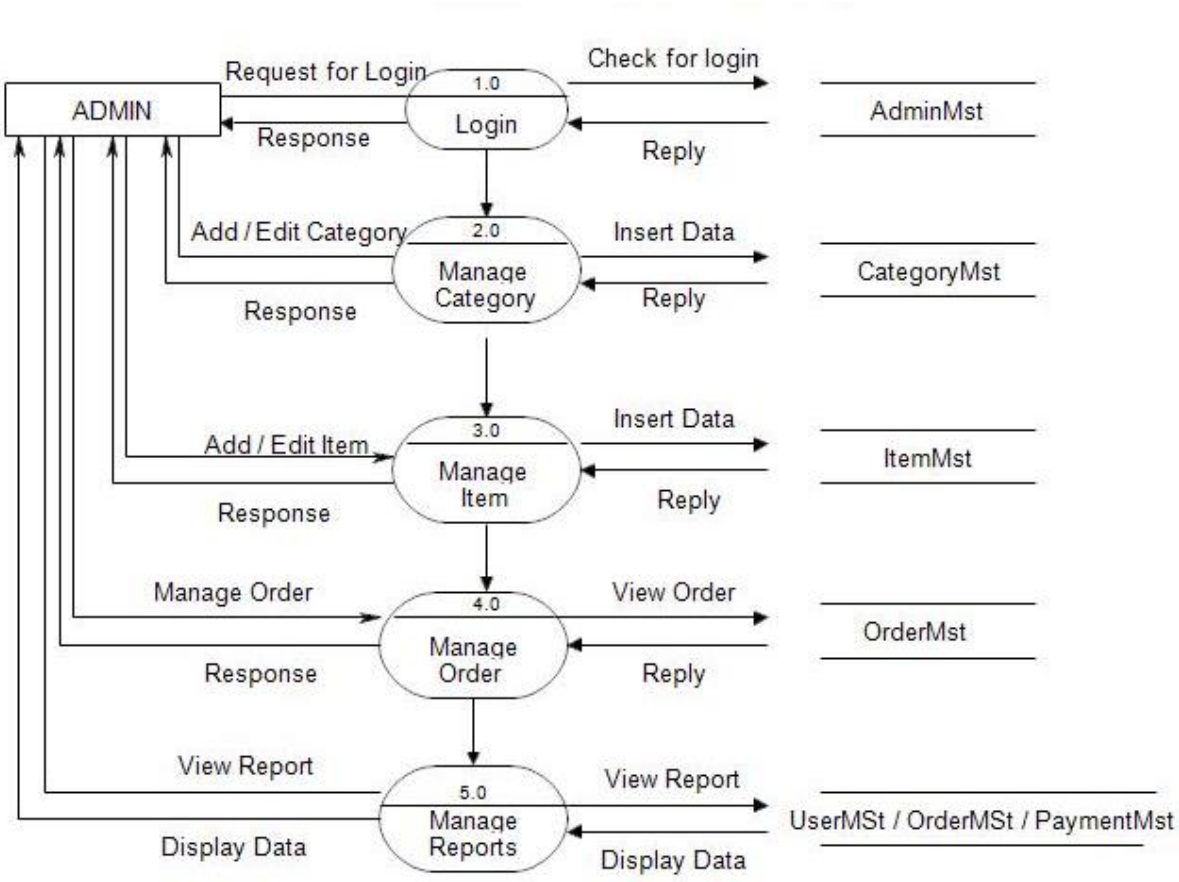

Figure 6 Level 1 Admin side DFD

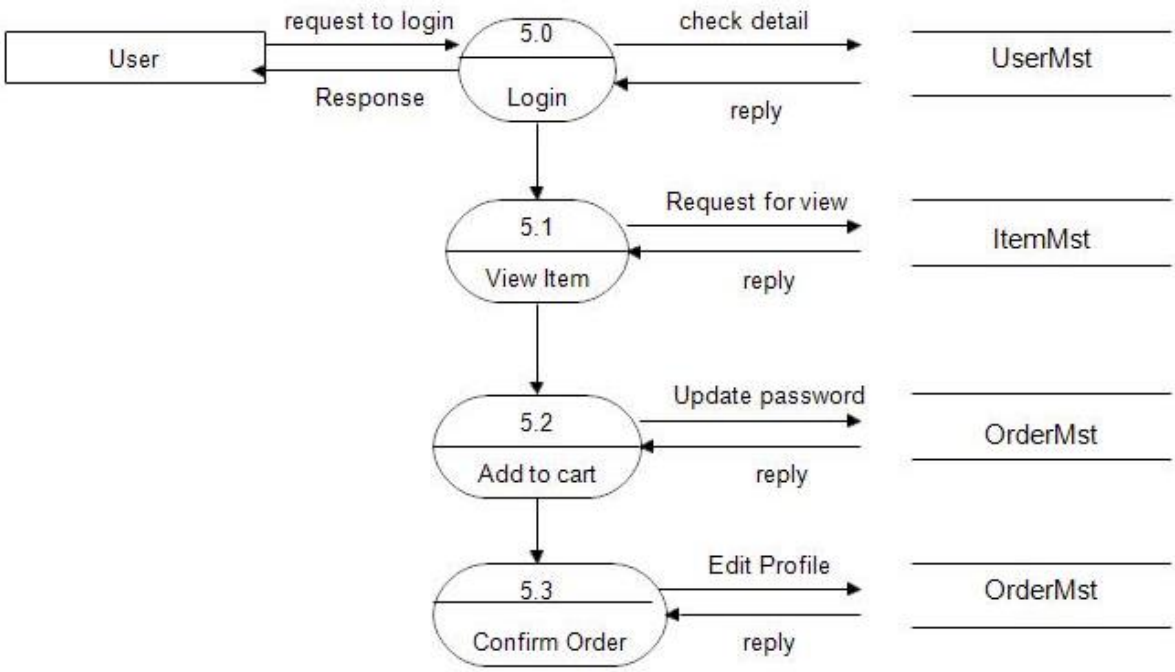

Figure 7 Level 1 User side DFD

3.2.3. Database Schema Design

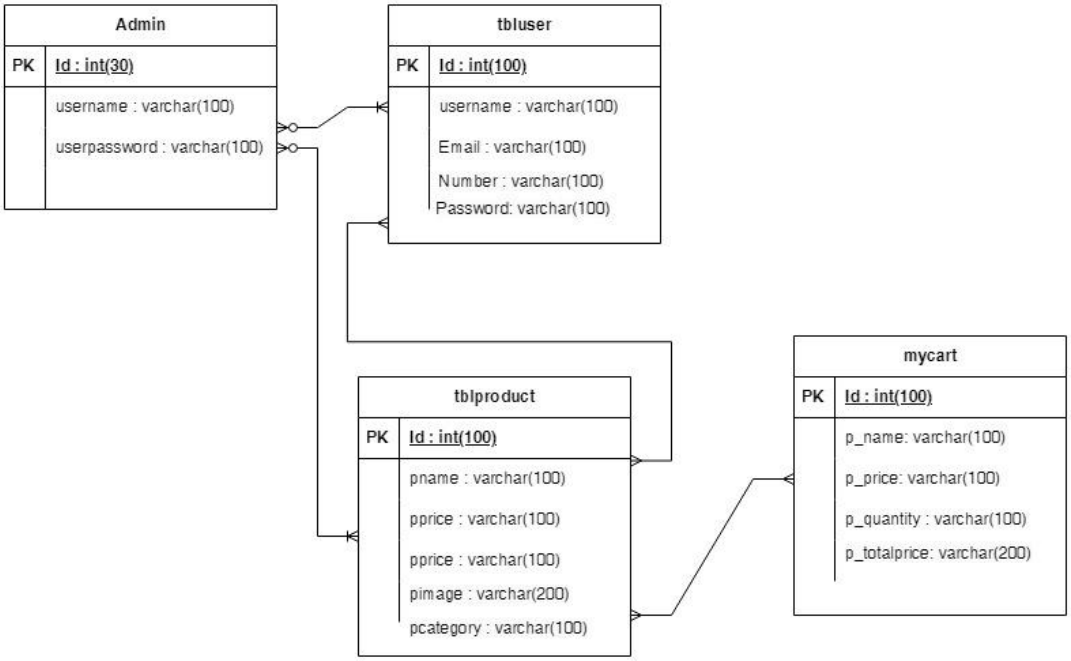

Figure 8 Database schema

3.2.4. Interface Design (UI Interface / Interface Structure Diagrams)

This section contains the UI design of home page, register page login page and other pages of your application.

Figure 9 Home Page

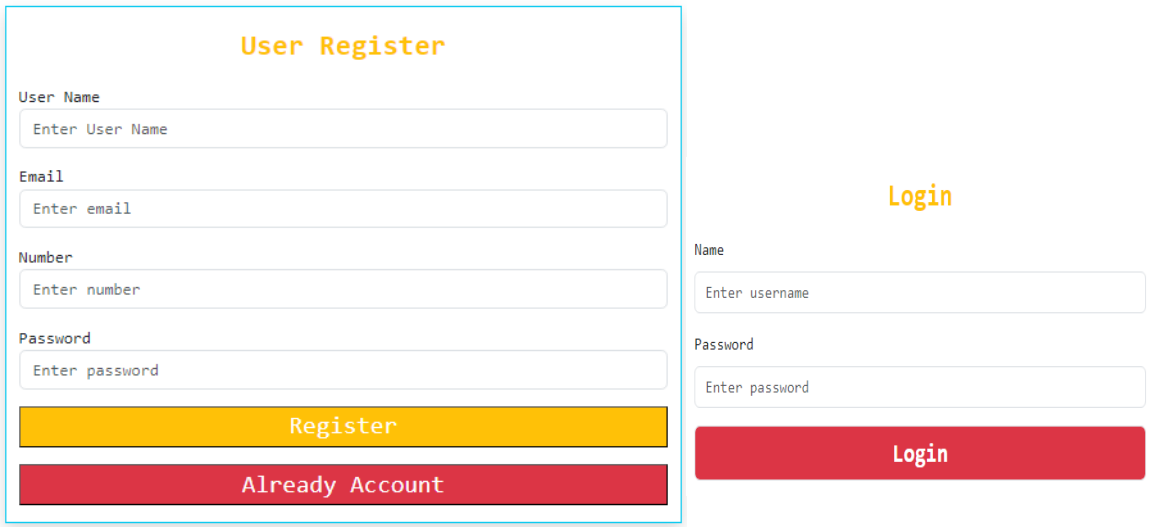

Figure 10 User register and login

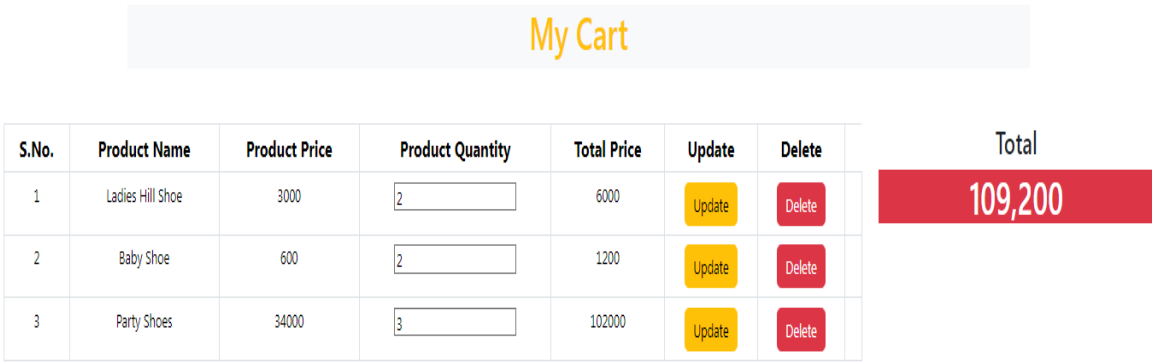

Figure 11 Products list in cart

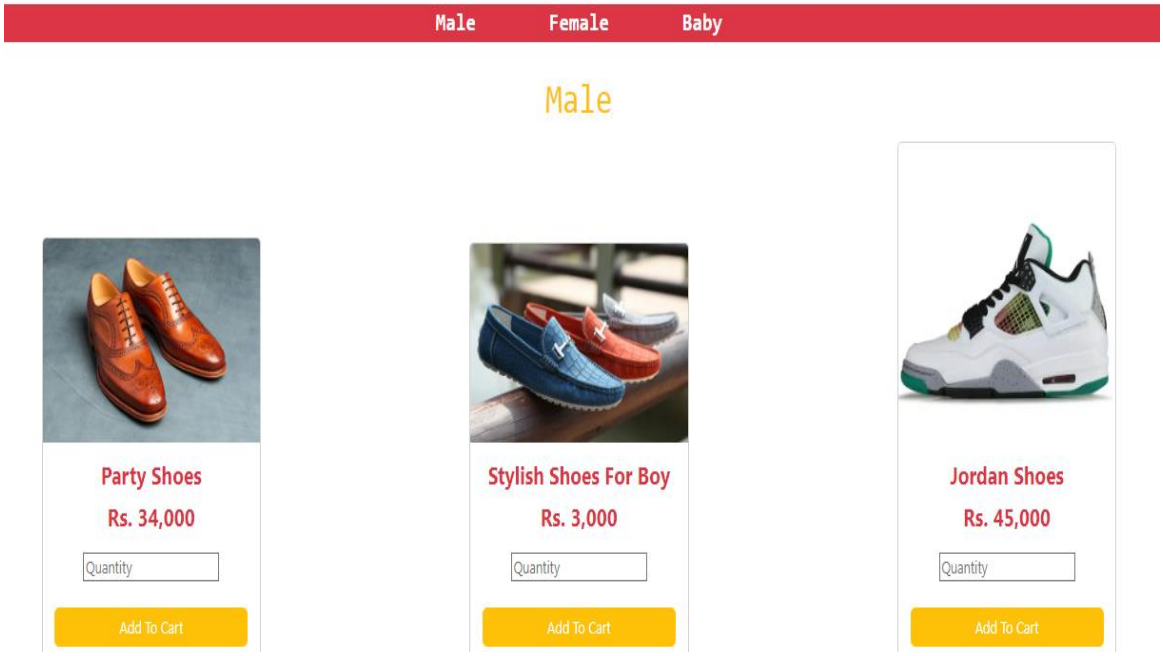

Figure 12 Products Category

CHAPTER: 4

IMPLEMENTATION AND TESTING

4.1. Implementation

4.1.1. Tools Used (CASE tools, Programming language, Database platforms)

HTML: HTML (Hypertext Markup Language) is the most basic building block of the Web. It defines the meaning and structure of web content. HTML determines the structure of web pages. We used HTML to create the basic layout of the web pages in the project.

CSS: Cascading Style Sheets (CSS) is a style sheet language used for describing the presentation of a document written in a markup language such as HTML. We used CSS to make the document more interactive by adding hovers, bright color sand to align test.

JAVASCRIPT: JavaScript often abbreviated JS, is a programming language that is one of the core technologies of the World Wide Web, alongside HTML and CSS. Over 97% of websites use JavaScript on the client side for web page behavior, often incorporating third-party libraries. As per JavaScript, we used it to make the webpage more dynamic by adding events, animations and page brakes.

PHP: PHP is a general-purpose scripting language geared toward web development. PHP code is usually processed on a web server by a PHP interpreter implemented as a module, a daemon or as a Common Gateway Interface (CGI) executable. In the project we used this tool to connect the frontend with backend.

MySQL: MySQL is an Oracle-backed open source relational database management system (RDBMS) based on Structured Query Language (SQL).Tis tool was used to create database for website.

Bootstrap: Bootstrap is a potent front-end framework used to create modern websites and web apps. It's open-source and free to use, yet features numerous HTML and CSS templates for UI interface elements such as buttons and forms. We imported some of the templet in our project as per need.

Draw.io: Draw.io is a valuable tool for creating figures. Its simplicity and ease of use allowed us to efficiently illustrate concepts and data enhancing the overall clarity and presentation of our work.

Figma: We employed figma for the initial design phase of our project, streamlining the creative process before entering the coding stage. Figma’s user-friendly interface made it easy and simple to create and iterate on our project’s visual elements.

4.1.2. Implementation details of modules

There are two main modules: the Admin Module and user Module. The admin module allows the admin to log in and access the dashboard, where they can perform actions like adding, editing and deleting users as well as creating new products. On the other hand the user module enables to view products add to cart and checkout.

Here are the implementation details for both modules:

1. **Admin Module:**

    a. Admin login: Implement a secure login system for the admin using username and password authentication. Store admin records in a secure manner, such as hashing and salting passwords before storing them in the database.
    b. Admin Dashboard: Create a dashboard with a user-friendly interface for the admin to manage users and travel packages. Use HTML, CSS and JavaScript to design and implement the dashboard.
    c. User management: In the admin section you can easily see a list of all users. You the option to edit or delete their details. You can also add new users using simple forms and if you need to update any existing user information you can do that too. To keep everything secure and accurate, the system checks and verifies the data on the server side making sure no unauthorized access occurs.
    d. Products Management: The admin dashboard makes it easy to view all the available products in a list format. You can effortlessly edit or delete any of the products as needed.

2. **User Module:**

    a. User Interface: You can view all available products complete with essential details such as cost.
    b. Products Details: When a user enter into the website you will se the products details there.
    c. Add to cart: It allows users to select the products as their need and they can add to the cart for the checkout.

4.2 Testing

Software Testing is the process of evaluation of a software items to detect differences between given input and expected output. It also assesses the features and quality of a software product.

4.2.1 Test Cases for Unit Testing

Table 1 Admin Login

Test case	Test case Description	Test Data	Expected Result	Actual Result	Pass/Fail
1	Check conditions when admin enters valid information for login	Username: admin Password: admin	Should login and redirect to dashboard	Login successfully and redirected for verified admin	Pass
2	Check results on entering invalid username and password	Username: admin Password: admin	Should not login in	Invalid	Pass

Table 2 User Register and Login

Test case	Test case Description	Test Data	Expected Result	Actual Result	Pass/Fail
1	Check conditions when user try to login before they have to register	Username email Phone no. password	Should register successfully	Register successfully and added successfully	Pass
2	After successfully register user have to login	Username Password	Should login successfully	Successfully login	pass

4.2.2 Test Cases for System Testing

Table 3 Admin Add Products

Test case	Test case Description	Test Data	Expected Result	Actual Result	Pass/Fail
1	Check conditions when admin add new products	Products name: Products price: Products Image: Choose category:	Should added successfully into the list	Products added successfully	Pass
2	Check conditions when admin update products details	Products name: Products price: Products Image: Choose category:	Should update successfully and add to the list	Products updated successfully	pass

Table 4 Add to Cart

Test case	**Test case Description**	**Test Data**	**Expected Result**	**Actual Result**	**Pass/Fail**
1	Check conditions when user want to add product to the shopping cart	Products name Quantity of products Price of products	Should add successfully and should show in the shopping cart	added successfully	Pass

CHAPTER: 5

CONCLUSION AND FUTURE RECOMMENDATIONS

5.1. Lesson Learnt / Outcome

The project aims to deliver a seamless e-commerce experience where users can effortlessly browse and purchase products. Users will be able to view all available items on the website and add them to their shopping cart. To initiate this process, users will first need to register, providing essential details such as username, email, phone number, and password. Once registered, users can easily log in using their username and password, gaining access to the full functionality of the website, including browsing, adding items to their cart, and making purchases.

5.2 Conclusion

In conclusion, our shoe store ecommerce website offers a comprehensive and user-friendly platform for customers to explore, select, and purchase footwear. With an intuitive interface, customers can effortlessly navigate through our diverse range of products, easily adding desired items to their shopping cart. The registration process ensures a secure environment for users to create accounts, enabling smooth logins for future visits. Our website is designed to provide a seamless shopping experience, enhancing customer satisfaction and loyalty.

5.3 Future Recommendations

In the future, we could enhance our shoe store ecommerce project by personalizing recommendations based on user preferences, optimizing the website for mobile devices, integrating social media for increased brand visibility, providing efficient customer support channels, expanding our product range to meet market demands, streamlining the checkout process for smoother transactions, and utilizing data analytics to make informed decisions. These steps would help us stay competitive and improve customer satisfaction.

References

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[2] R. Khanal, "competitive strategies of footwear retailers in nepal," 2019.

[3] A. Pokharek, "price sensitivity and purchasing behavior of shoe shopper in nepal," 2021.

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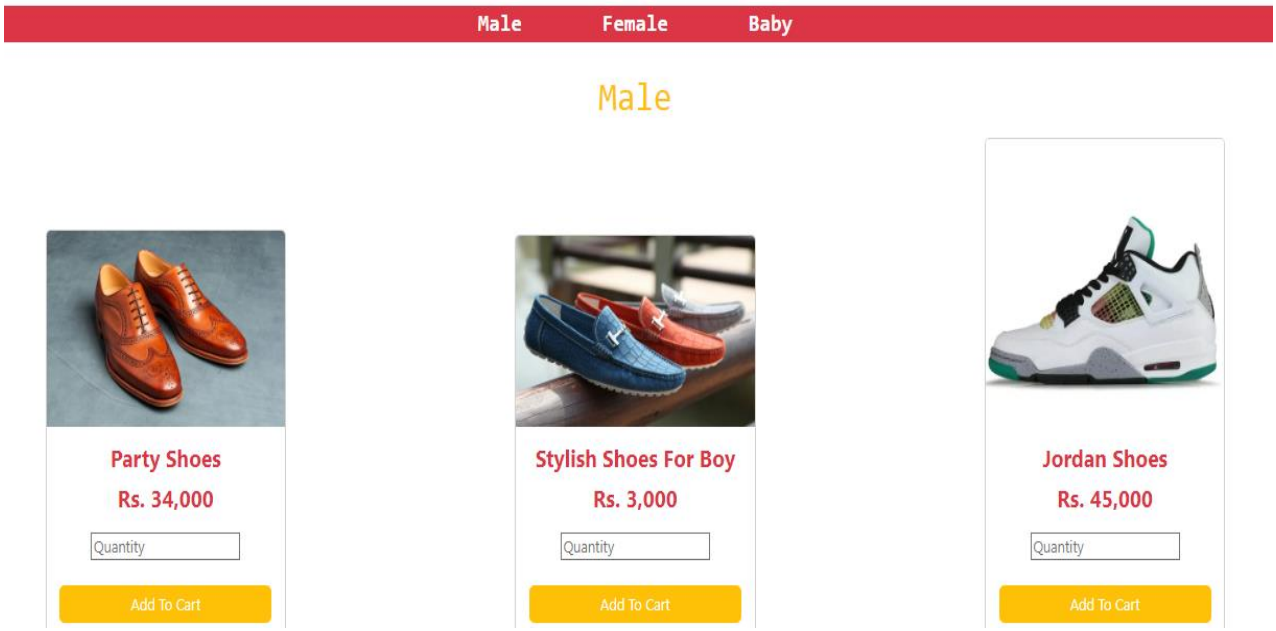
[5] youtube, "https://www.youtube.com/watch?v=kIOTtRf9Drk&list=PL-h5aNeRKouEaGrQj6EXaqZsagEphQboI".

[6] "https://themeforest.net/category/ecommerce?term=shoes".

[7] "https://dribbble.com/tags/shoe-ecommerce".

APPENDICES


Shoes Store
Home
Card (0)
Hello,
Login
Admin
Male
Female
Baby
Special offer
Sale
up to 80% Off
Shop Now !


Male
Female
Baby
Male
Party Shoes
Rs. 34,000
Quantity
Add To Cart
Stylish Shoes For Boy
Rs. 3,000
Quantity
Add To Cart
Jordan Shoes
Rs. 45,000
Quantity
Add To Cart

Female

Ladies Hill Shoe

Rs. 3,000

Quantity

Add To Cart

Ladies Hill Shoe

Rs. 3,000

3

Add To Cart

Shoe for Female

Rs. 3,000

Quantity

Add To Cart

Shoe for Female

Rs. 34,000

Quantity

Add To Cart

Female Shoe

Rs. 3,000

Quantity

Add To Cart

Shoe for Female

Rs. 5,000

Quantity

Add To Cart

Baby

Baby shoes

Rs. 450

Quantity

Add To Cart

Small Baby Shoe

Rs. 450

Quantity

Add To Cart

Baby Shoe

Rs. 600

Quantity

Add To Cart

Baby Winter Shoe

Rs. 600

Quantity

Add To Cart

Baby shoes

Rs. 450

Quantity

Add To Cart

Baby shoes

Rs. 450

Quantity

Add To Cart

My Cart

S.No.	Product Name	Product Price	Product Quantity	Total Price	Update	Delete
1	Ladies Hill Shoe	3000	2	6000	Update	Delete
2	Baby Shoe	600	2	1200	Update	Delete
3	Party Shoes	34000	3	102000	Update	Delete

Total

109,200

SHOES STORE

Hello,admin | Logout | Userpanel

Dashboard

Add post Users

SHOES STORE

Hello,admin | Logout | Userpanel

Dashboard

Add post Users

S.N	User Name	Email	Number	Delete
1	rakesh	theengrakesh55@gmail.com	9803650653	Delete

Total

1