Tribhuvan University

Faculty of Humanities and Social Sciences

"ELECTRONICS SHOP"

A PROJECT REPORT

Submitted to

Department of Computer Application

Pascal National College

In partial fulfillment of the requirements for Bachelor Degree in Computer Application

Shubmitted by

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Under the Supervision of

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Pascal National College

SUPERVISOR'S RECOMMENDATION

We hereby recommend that this project prepared under our supervision by Ramesh Rawat and Keshar Rawat entitled "**ELECTRONICS SHOP**" in partial fulfillment of requirements for a degree of Bachelor in Computer Application is recommended for the final evaluation.

_____

SIGNATURE

Suresh Thapa

SUPERVISOR

Faculty Member

Department of Computer Application

Pascal National College

Tribhuvan University

Faculty of Humanities and Social Sciences

Pascal National College

LETTER OF APPROVAL

This is to certify that this project prepared by Ramesh Rawat and Keshar Rawat entitled "**ELECTRONICS SHOP"** in partial fulfillment of the requirements for degree of Bachelor of Computer Application has been evaluated. In our opinion, it is satisfactory in the scope and quality as a project for the required degree.

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ABSTRACT

ELECTRONICS SHOP: A MERN-Based ELECTRONICS SHOP System

ELECTRONICS SHOP is a modern web-based platform built using the MERN stack (MongoDB, Express.js, React.js, and Node.js) to revolutionize the ELECTRONICS SHOPping experience for both customers and retailers. This system is designed to enhance operational efficiency, reduce costs, and improve customer satisfaction by automating processes and ensuring transparency throughout the shopping journey.

The platform allows customers to explore a wide range of electronic products, customize specifications, and place orders effortlessly. Real-time updates are provided at every stage of the shopping process, including estimated delivery timelines, notifications for delays, and alerts when orders are ready for pickup or have been shipped. The intuitive customer dashboard offers a seamless experience, while the administrative interface empowers store staff to efficiently manage orders and inventory.

This technology stack enables ELECTRONICS SHOP to reduce manual efforts, minimize errors, and ensure high accountability, resulting in a superior shopping experience for customers and streamlined operations for retailers. Accessible via the internet, ELECTRONICS SHOP is the ultimate solution for modern ELECTRONICS SHOPping and delivery needs.

Key words: MongoDB, Node.js

ACKNOWLEDGEMENT

We would like to express our special thanks of gratitude to our supervisor Mr. Suresh Thapa who gave us the golden opportunity to do this wonderful project on the topic of **'ELECTRONICS SHOP**, which also helped us in doing a lot of research and we came to know about so many new tools and technologies.

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With Regards

Ramesh Rawat **Registration No: 6-2-1226-17-2020**

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LIST OF ABBREVIATIONS

API: Application Programming Interface

CRUD: Create, Read, Update and Delete

CSS: Cascading Style Sheets

DFD: Data Flow Diagram

ER: Entity Relationship

HTML: Hyper Text Markup Language

JS: JavaScript

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CHAPTER 1:
INTRODUCTION

1.1 Introduction

The current generation is thriving in an era of advanced technology where access to electronics has become integral to both personal and professional life. Electronics, ranging from smartphones to laptops and home appliances, are essential tools that simplify and enhance daily tasks. A seamless shopping experience for electronics has become vital as customers increasingly rely on online platforms to meet their technology needs.

In today's digital world, e-commerce is rapidly growing, with the electronics market being one of its most prominent sectors. The convenience and accessibility of online platforms provide customers with an efficient way to purchase electronics. This proposal introduces ELECTRONICS SHOP, an online platform designed to offer a hassle-free and enjoyable shopping experience, allowing customers to browse and purchase electronic products from the comfort of their homes.

1.2 Problem Statement

Traditional brick-and-mortar stores often require customers to spend considerable time and effort visiting physical locations to shop for electronics. This can be challenging for individuals with time constraints, physical limitations, or those living far from urban centers. Moreover, these challenges limit the reach of businesses and their ability to cater to a broader customer base.

The proposed ELECTRONICS SHOP addresses these issues by providing a user-friendly online platform that allows customers to explore and purchase electronic products conveniently, anytime and anywhere. By leveraging this platform, businesses can expand their market presence while offering customers a reliable, accessible, and efficient shopping experience.

1.3 Objectives

The objectives of this project are as follows:

- To oreate an easy-to-use platform for customers to browse, compare, and purchase electronics with features like product specifications, images, prices, and user reviews.
- To use of Algorithms for various functionalities such as search and sorting

1.4 Scopes and Limitations

1.4.1 Scopes

- **Increased Reach:** ELECTRONICS SHOP allows businesses to connect with customers across Nepal, extending their services beyond physical store locations.
- **24/7 Availability:** The platform provides round-the-clock access for customers to browse and purchase electronics, eliminating the limitations of store hours.
- **Diverse Product Range:** Customers can explore a wide variety of electronic products, including gadgets, appliances, and accessories, all in one place.
- **Convenient Shopping Experience:** The platform offers customers a smooth shopping journey by allowing them to search categories, apply filters, and compare prices efficiently.
- **Flexible Payment Options:** Customers can complete transactions through online banking, mobile wallets, or cash on delivery, ensuring ease of use and accessibility.

1.4.2 Limitations

- **Digital Divide:** Limited internet access, technological availability, and digital literacy in certain parts of Nepal may prevent some customers from utilizing the platform.
- **Trust and Security Concerns:** Customers may hesitate to share personal and financial information online. Ensuring data privacy and implementing robust security measures is critical to building trust.
- **Limited Physical Interaction:** Customers cannot physically inspect or test products before purchasing, which may deter some buyers who prefer hands-on evaluation before investing in electronics.

1.5 Development Methodology Used

This system is designed with the series of processes starting with requirement analysis, design, implementation, testing and maintenance. After the design process, coding and development part is started then after integrating the system there is testing of the system. If the testing is positive then system is implemented otherwise some maintenance is done and system come in operation.

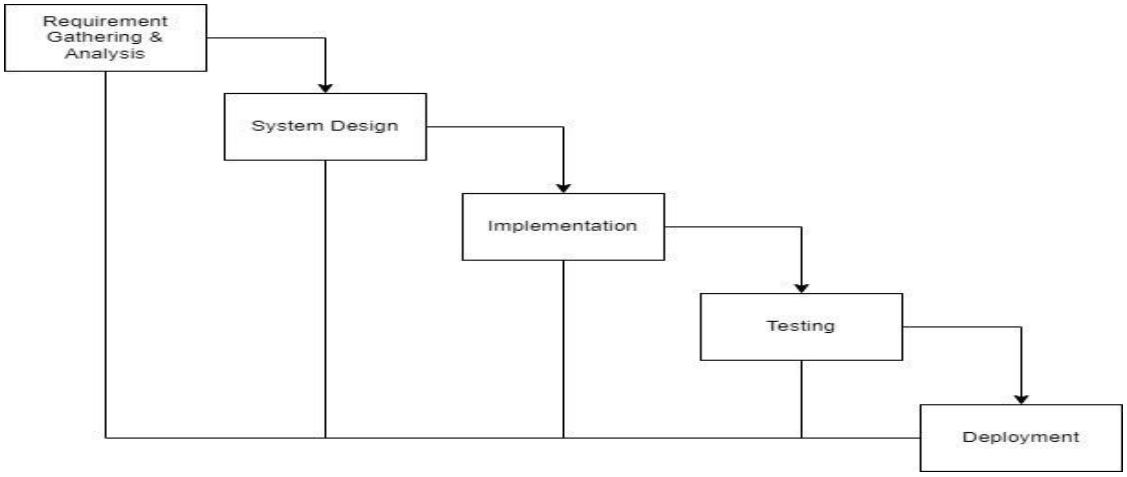

Figure 1.1 Waterfall Model of ELECTRONICS SHOP

1.6 Report Organization

Chapter 1: Introduction of the project along with the problem statement, objectives, scope and limitation.

Chapter 2: Background study related to the project along with general descriptions of project functions and components. Literature review in order to have broader understanding of the project concepts based on research done previously and analyze similar systems for comparison with projects.

Chapter 3: System Analysis and design of the system using various charts and figures. Functional requirements using use cases and other techniques. Database schema, interface design and deployment diagram.

Chapter 4: Tools and techniques used for project implementation along with algorithms used in the project and creations of test cases to test the system as unit and as a whole.

Chapter 5: Lesson learned from beginning to end of the project, future recommendations and project conclusions

CHAPTER 2:

BACKGROUND STUDY AND LITERATURE REVIEW

2.1 Background Study

The emergence of the ELECTRONICS SHOP represents a significant advancement in the products service industry, addressing the growing demand for streamlined and efficient order management. In today's fast-paced world, where timely and transparent service is essential, this system offers a tailored solution for s and products delivery services. The core functionality of Electronics Shop revolves around the efficient management of customer orders, enabling s to optimize their operations while enhancing accountability and customer satisfaction.

Key Features of Electronics Shop

- **User Registration and Management:** The system allows users to create accounts and store their details for easy and quick order placement.
- **Order Categorization**: Orders can be categorized for delivery or pickup, providing flexibility that aligns with customer preferences. This ensures that products reaches customers directly or is ready for pickup at the , enhancing convenience and operational efficiency.
- **Order Tracking and Status Updates**: The system includes a tracking feature with various order statuses, allowing customers to follow their orders from placement to delivery, ensuring transparency.
- **Online Payment Integration:** Electronics Shop supports secure online payment methods, offering customers a variety of payment options and enhancing convenience.
- **Security:** The system provides secure platform for the user's information by encrypting the confidential data.

Drawbacks of the Existing Manual System

- **Manual Processes**: All order management tasks are performed manually, leading to inefficiencies and errors.

- **Data Accuracy:** Manual entry and tracking of orders can result in discrepancies and inaccuracies.
- **Security Concerns:** Protecting sensitive customer data is challenging without a robust system.
- **Limited Scalability:** The manual system struggles to scale with growing operations and increased order volumes.

2.2 Literature Review

The rise of e-commerce has significantly impacted the way consumers purchase electronics, offering greater convenience, variety, and accessibility. Studies highlight that the electronics sector is one of the fastest-growing categories in online retail, driven by competitive pricing, diverse product options, and the ability to access detailed product information. Customers increasingly rely on online platforms to compare specifications, read reviews, and make informed decisions, underscoring the importance of an intuitive and user-friendly interface. [1]

Real-time order tracking and delivery notifications have also become critical features in modern e-commerce platforms. Research indicates that customers value platforms that ensure transparency and keep them informed about the status of their orders. These features not only build trust but also improve customer retention by enhancing the overall shopping experience. For electronics retailers, integrating such functionalities is vital to meet consumer expectations and remain competitive in the rapidly evolving digital marketplace owners through smartphones [2]

A separate project focused on automating the meal ordering process to enhance the dining experience, covering the design and implementation of a system that provides wireless data access to servers. Order information is accessible via a mobile Android application updating a central database with order details. [3]

CHAPTER 3:

SYSTEM ANALYSIS AND DESIGN

3.1 System Analysis

System Analysis is the process of examining a system with the intent of improving it through better procedures and methods. It is the process of planning a new system to either replace or complement an existing system. It is therefore, the process of gathering and interpreting facts, diagnosing problems and using the information to re- comment improvements in the system. System analysis is conducted with the following objectives in mind:

- Evaluate the system concept for feasibility.
- Perform economic and technical analysis.
- Allocate functions to hardware, software people, database and other system elements.
- Establish cost and schedule constraints.

3.1.1 Requirement Analysis

Requirement identification is a critical step in the development of the ELECTRONICS SHOP. This process involves identifying the functional and non-functional requirements of the system to ensure that it meets the needs of the library and its staff.

i.Functional Requirements

The functional requirements of ELECTRONICS SHOP are as follows:

- The system should allow admin to register and login securely to access the system functionalities.
- The system should enable user to login, place order, track order place to user in system.
- The system admin should add product and track order in system.
- The system provide security for user confidential information.

ii. Use Case Diagram

Use Case Diagram is a diagrammatic representation that helps the user to represent the interaction of user with the system. The use case diagram consists of use cases and actors and shows the interaction between them.

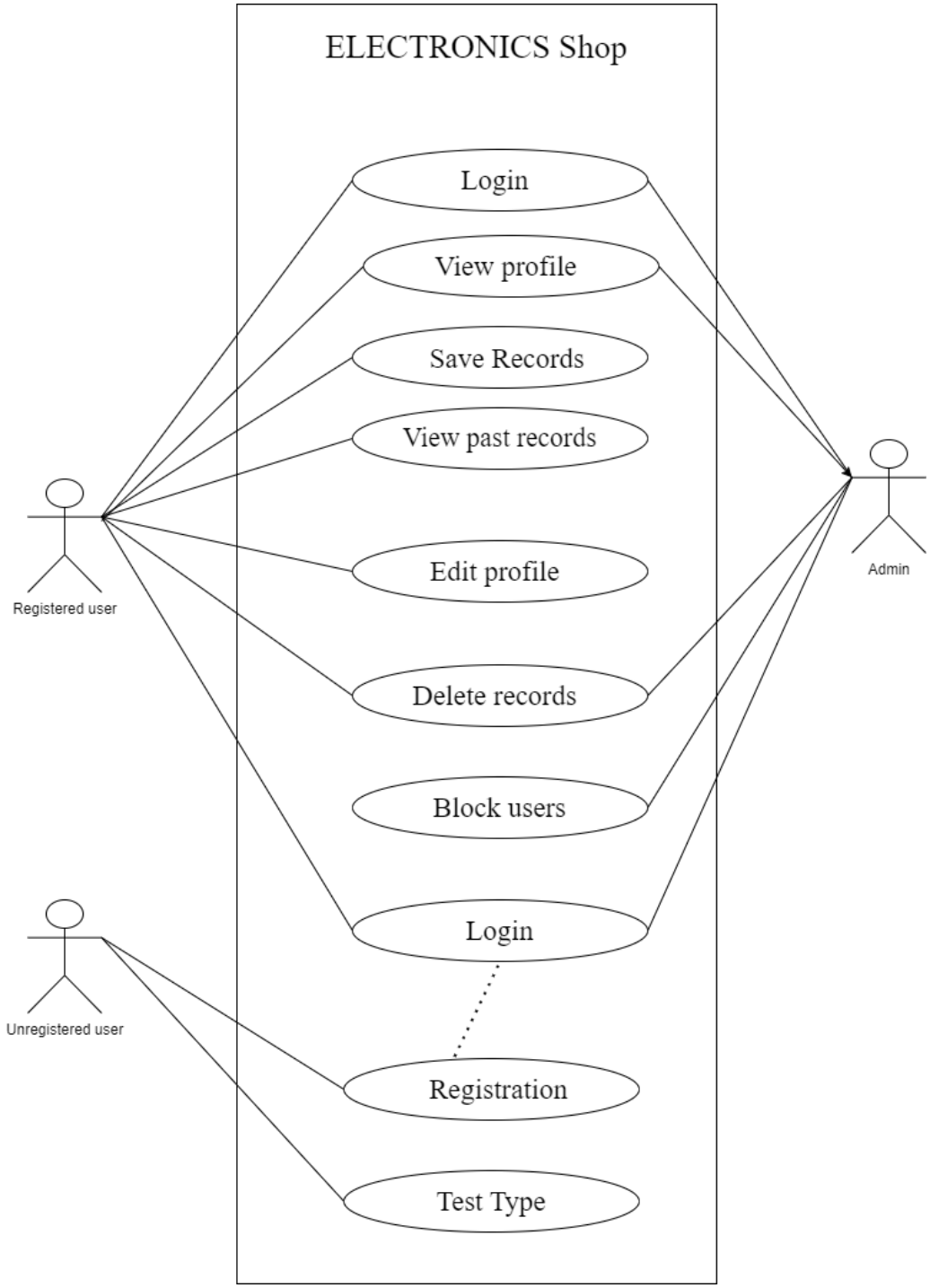

Figure 3. 1 Use Case Diagram for ELECTRONICS SHOP

iii. Non-functional Requirements

Non-Functional Requirements (NFR) define system attributes such as usability, performance, security, scalability, and technology stack. These ensure that the system meets the quality constraints specified in the project contract.

The non-functional requirements of the ELECTRONICS SHOP are as follows:

- **Usability:** The user interface will be intuitive, user-friendly, and responsive, catering to users with varying levels of technical expertise. It will provide a seamless experience from order placement to payment confirmation.
- **Performance:** The system will efficiently handle a large volume of orders, ensuring quick response times and minimal downtime during peak usage periods. It will support simultaneous user interactions without compromising performance.
- **Security:** Robust security measures will be implemented to protect sensitive user information and transactions. This includes secure user authentication, data encryption both in transit and at rest, and adherence to industry standards for data protection.
- **Scalability:** The system will be designed to scale seamlessly as the business grows. It will accommodate an increasing number of products, users, and transactions without compromising performance or user experience.
- **Technology Stack:** The system will be developed using the following technologies:
  - **Backend:** Express, Node.js will be used as the backend programming language.
  - **Database Management:** MongoDB will serve as the database management system for efficient data storage and retrieval.
  - **Frontend:** Reacts, CSS, JavaScript will be utilized for frontend development to ensure a modern and responsive user interface.

3.1.3 Feasibility Study

Feasibility analysis refers to the process of assessing the practicality and viability of a project, idea, or course of action. It involves evaluating various factors, such as technical, economic, legal, operational, and scheduling aspects, to determine whether the proposed initiative is achievable and worthwhile. Feasibility analysis is commonly performed before making significant investments or undertaking new ventures to minimize risks and ensure sound decision-making.

i. Technical Feasibility

It is technically feasible, since there will not be much difficulty in getting required resources for the development and maintaining the system as well. The project is being built by using simple technologies to reduce technological obstacles. The project is written on Visual Studio Code editor. To deploy the application, the only technical aspects needed are mentioned below:

- For fronted: Reacts, CSS, JavaScript
- For backend and database: Node.js, Express and MongoDB

ii. Operational Feasibility

Operational feasibility evaluates whether the proposed project can be effectively put into action within the organization's existing operational and technological setup. The system utilizes uncomplicated technology and offers a user-friendly interface, ensuring that users can interact with it comfortably.

iii. Economic feasibility

The system relies exclusively on open-source software, eliminating the need for additional expenditure on hardware and software. As a result, the project demonstrates strong economic viability.

iv. Schedule Feasibility

Operational feasibility evaluates whether the proposed project can be effectively put into action within the organization's existing operational and technological setup. The system utilizes uncomplicated technology and offers a user-friendly interface, ensuring that users can interact with it comfortably.

Phases	May				Apr				May				June			
	W1	W2	W3	W4	W1	W2	W3	W4	W1	W2	W3	W4	W1	W2	W3	W4
Planning																
Analysis																
Design																
Coding																
Testing																
Documentation																
Deployment																

Figure 3. 2 Gantt Chart for ELECTRONICS SHOP

3.1.4 ER-Diagram

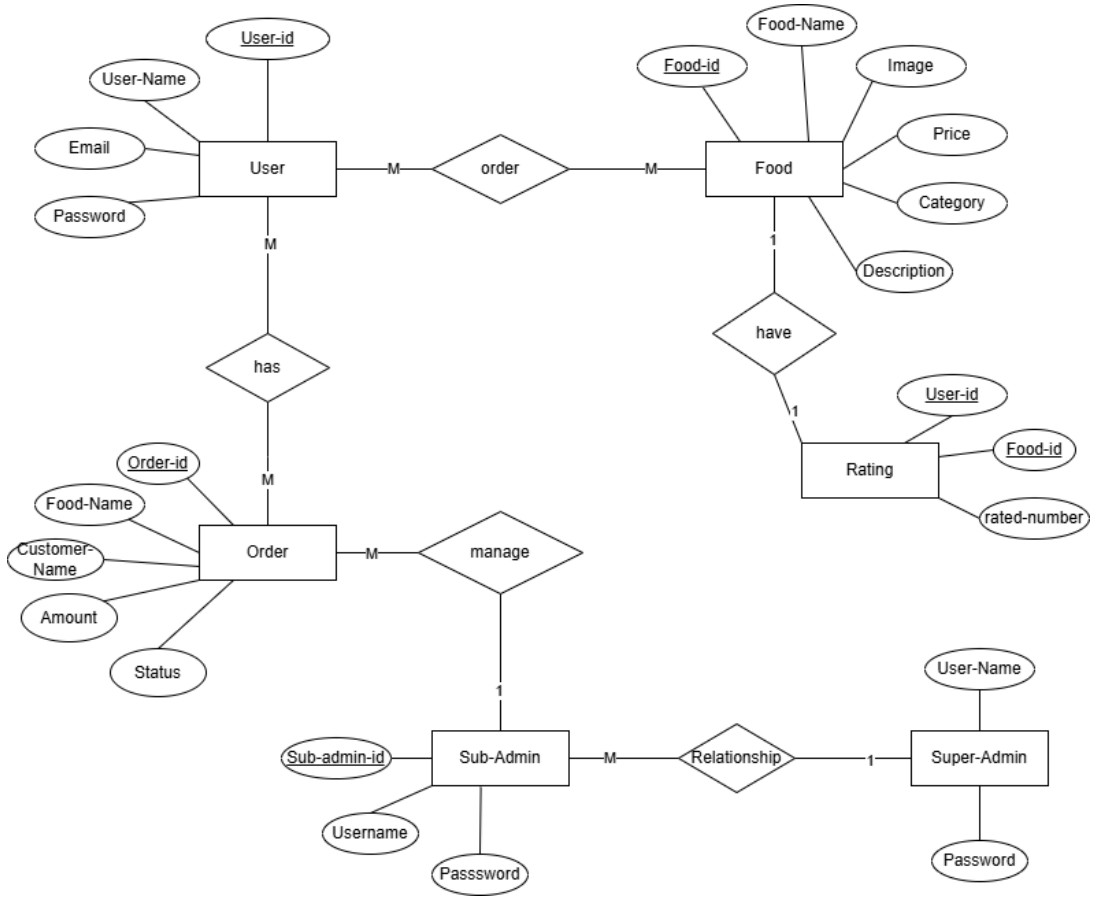

Figure 3. 3 ER Diagram for ELECTRONICS SHOP

3.1.5 Process Modeling (DFD)

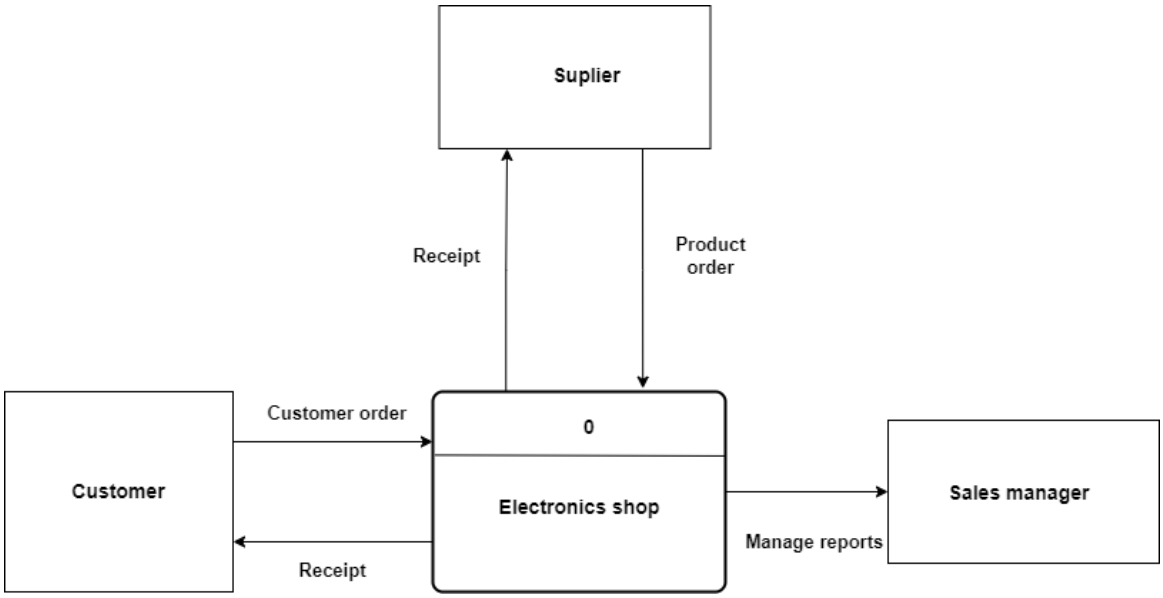

Figure 3. 4 Context level Diagram for ELECTRONICS Sho

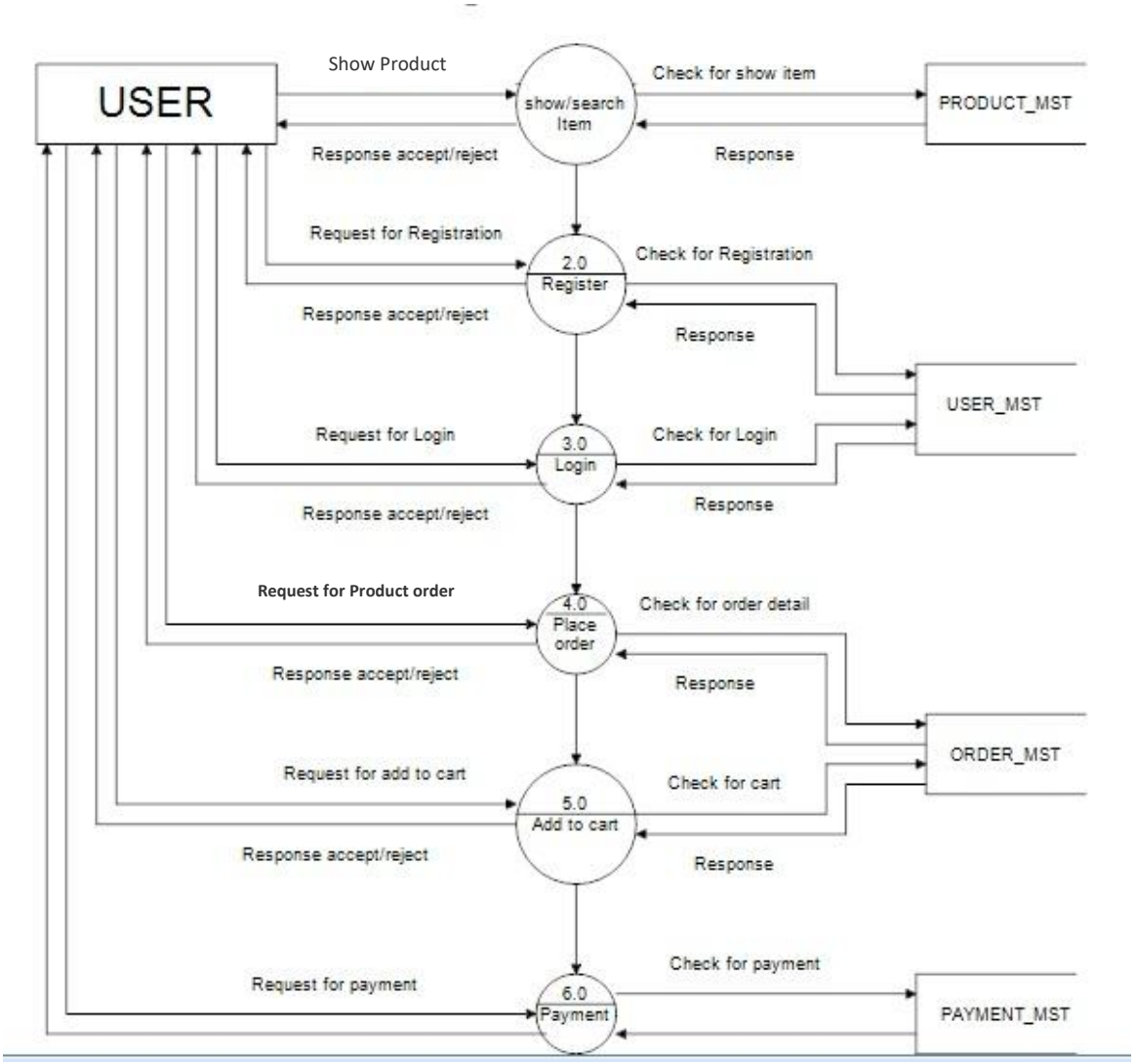

Figure 3. 5 User DFD for ELECTRONICS SHOP

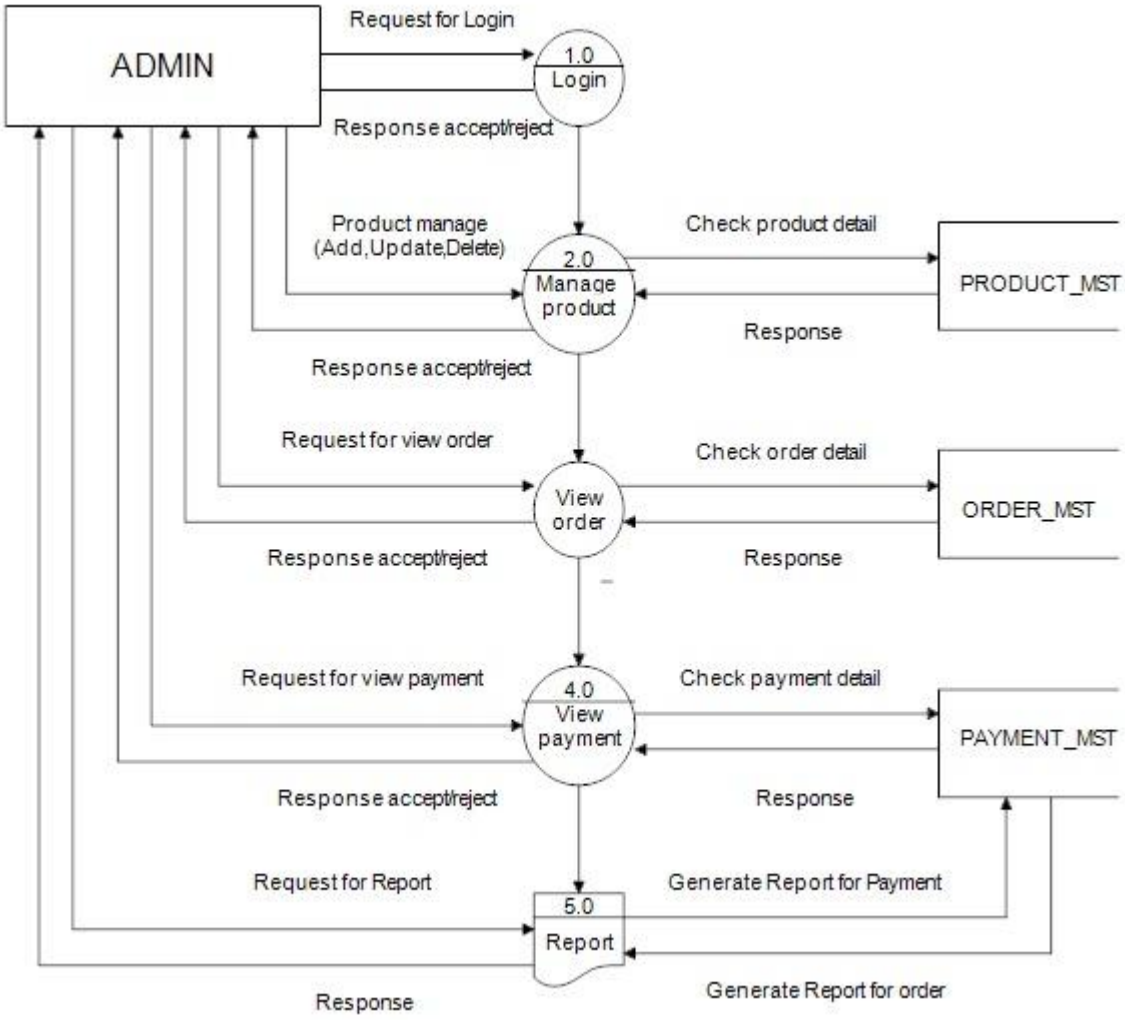

Figure 3. 6 Admin DFD for ELECTRONICS SHOP

3.2 System Design

System design is the process of defining the architecture, components, modules, interfaces, and data for a system to satisfy specified requirements. To realize the different functional requirement of the system in graphical form, different design and diagram of the system has been prepared which are as follows:

3.2.1 Architectural Design

For this system, a three-tier architecture is utilized with the user interface, web application server and database, depicting the essential structure in architectural design.

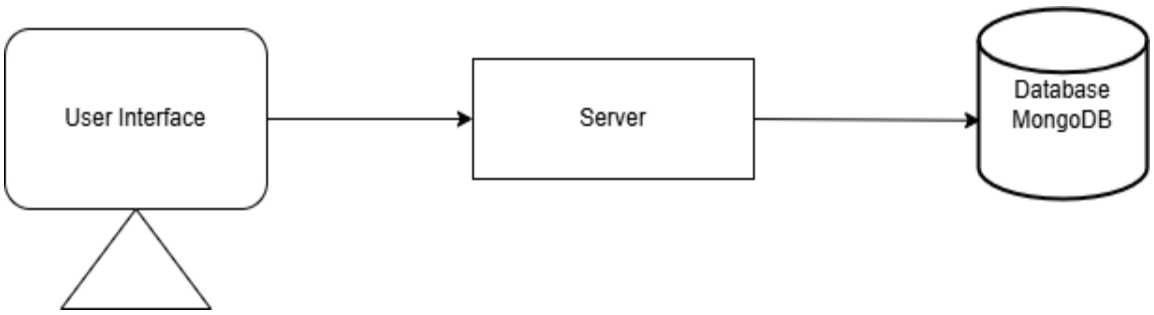

Figure 3. 7 Architecture Design of ELECTRONICS SHOP

3.2.2 System Flowchart

i. Admin Login

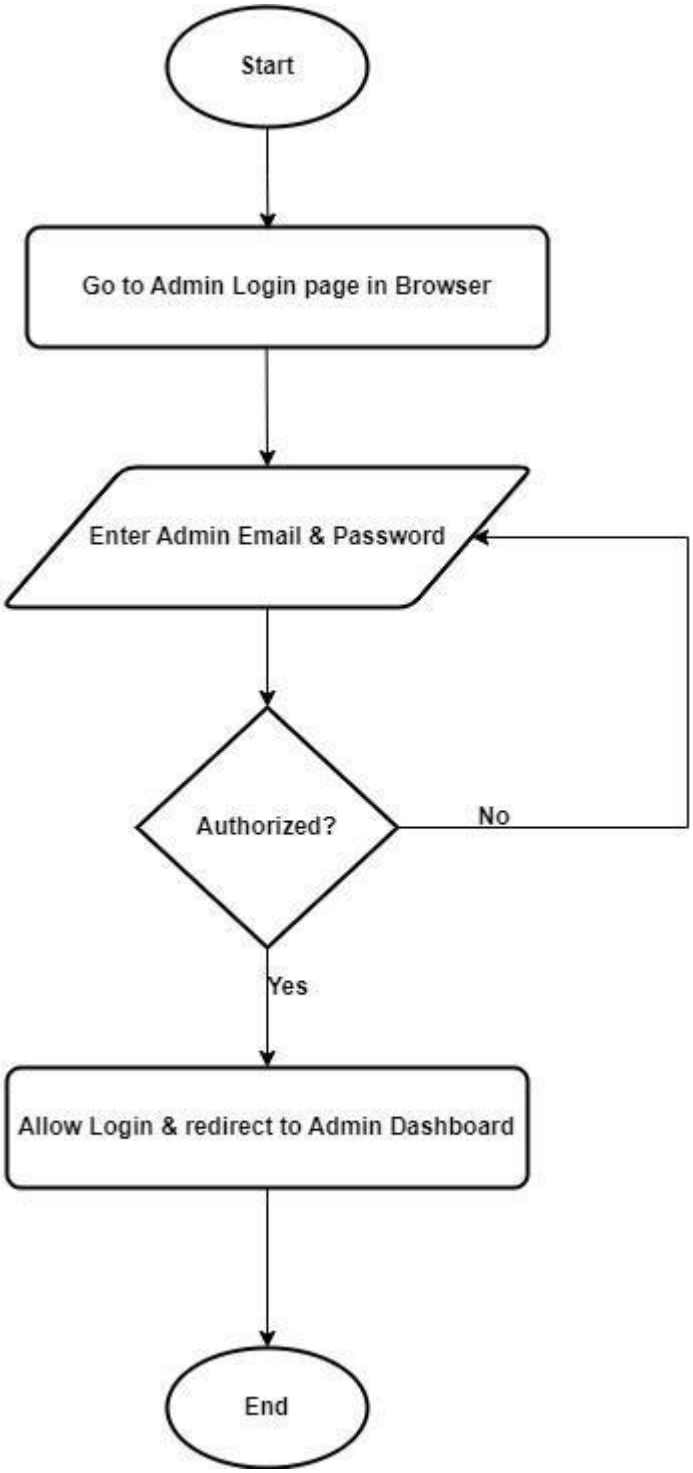

Figure 3. 8 Admin Login of ELECTRONICS SHOP

ii. User Login

Figure 3. 9 User Login of ELECTRONICS SHOP

iii. Register User

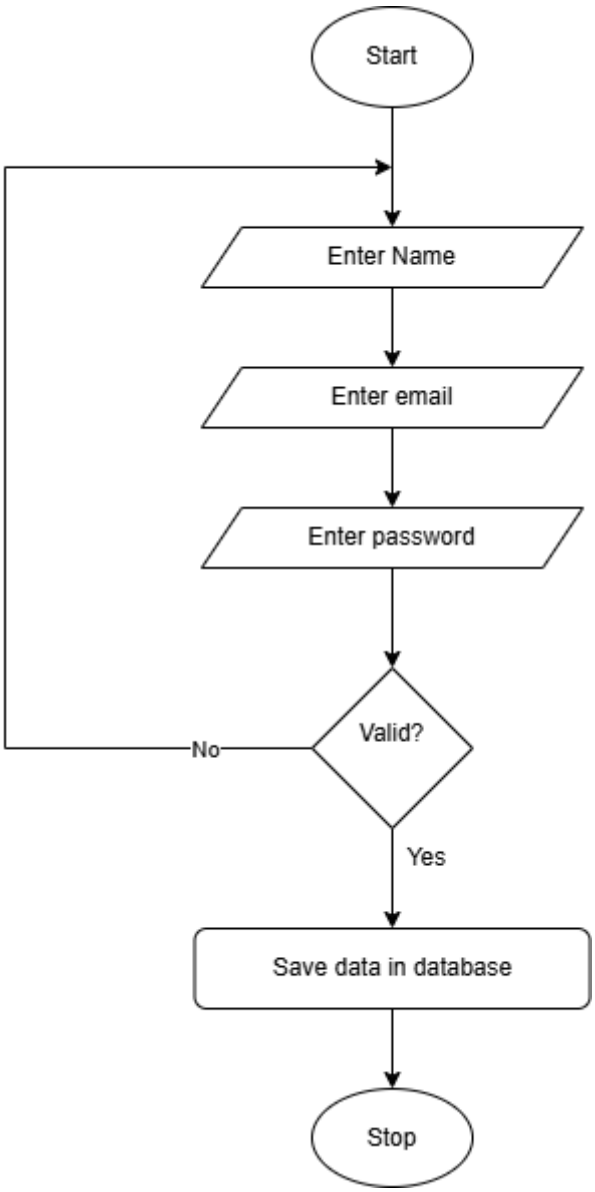

Figure 3. 10 New User Registration in ELECTRONICS SHOP

3.2.3 Database Schema design

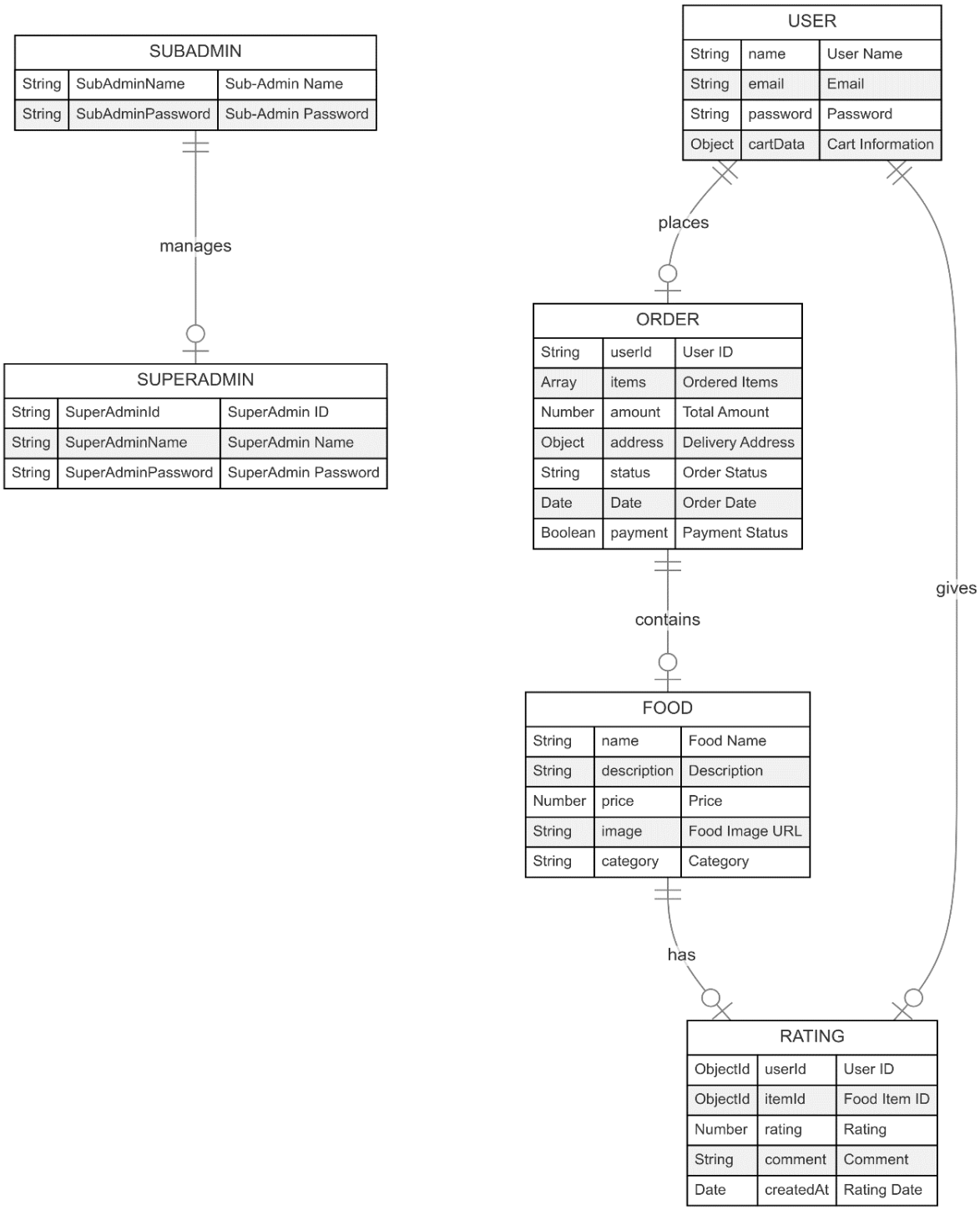

Figure 3. 11 Database Schema Design of ELECTRONICS SHOP

3.2.2 Interface Design

Interface design, also known as user interface (UI) design, is the process of creating the visual layout and interactive elements of a digital product, such as a website, mobile app, or software application. It focuses on making the user's interaction with the product as easy, efficient, and enjoyable as possible.

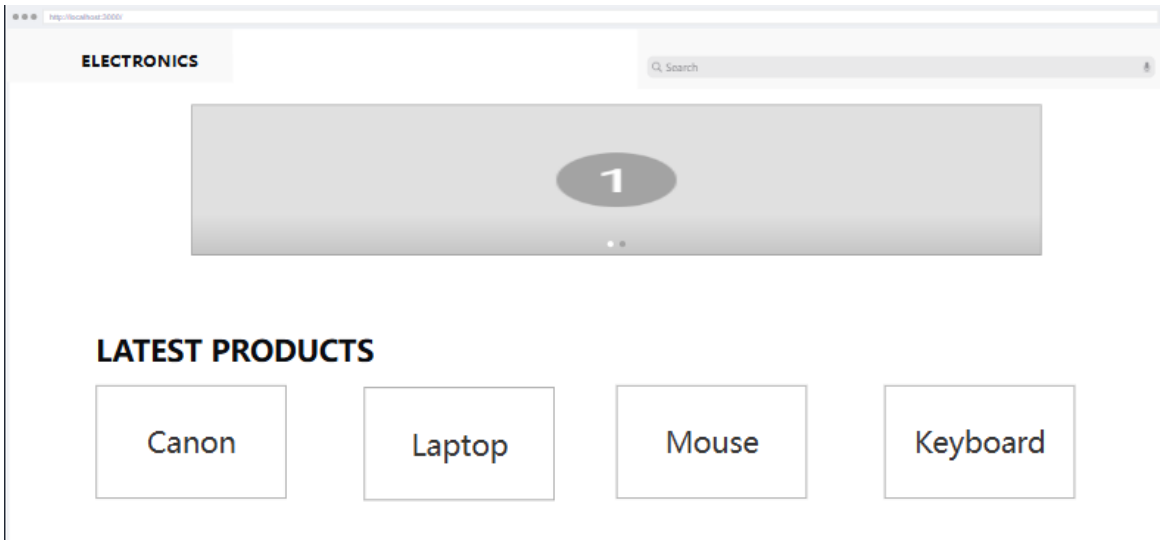

Figure 3. 12 Landing Page of ELECTRONICS SHOP

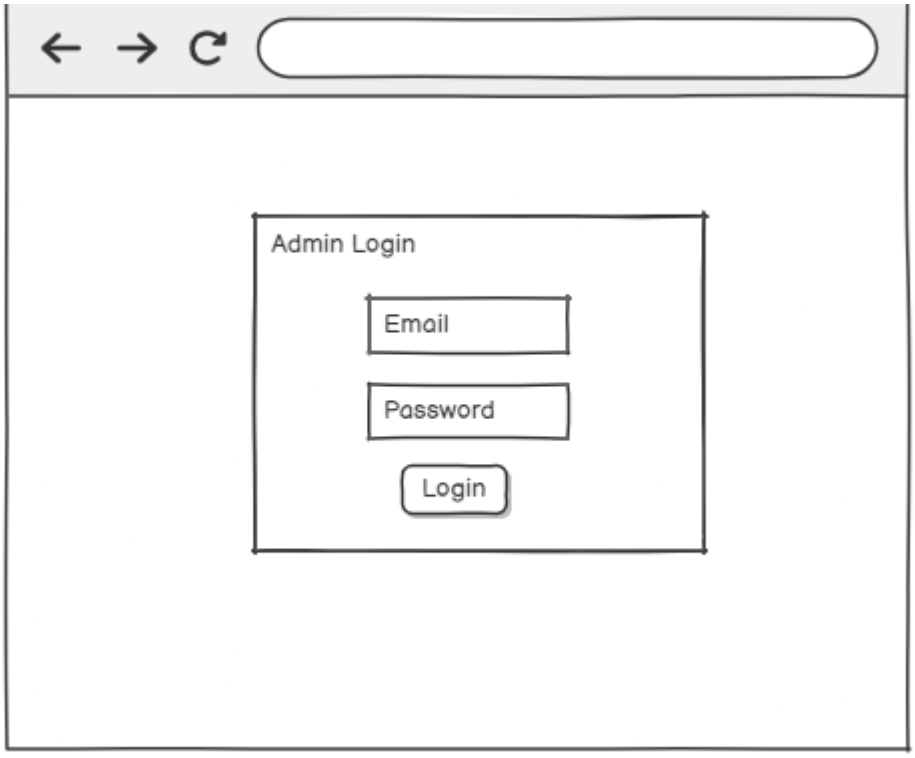

Figure 3. 13 Admin login of ELECTRONICS SHOP

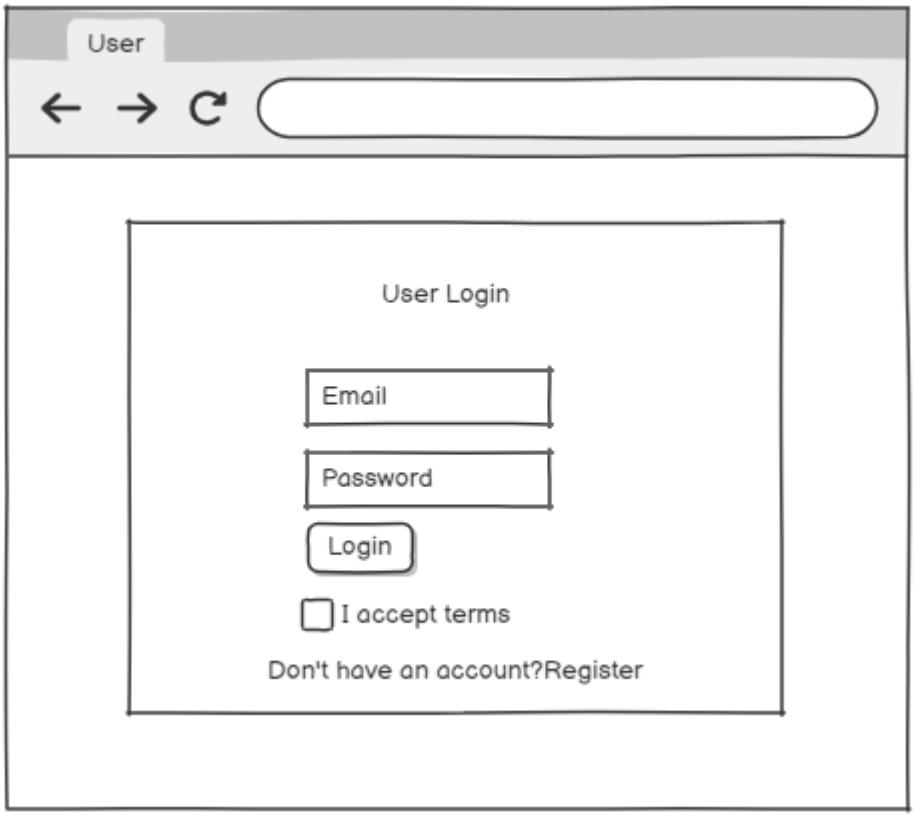

Figure 3. 14 User Login forP

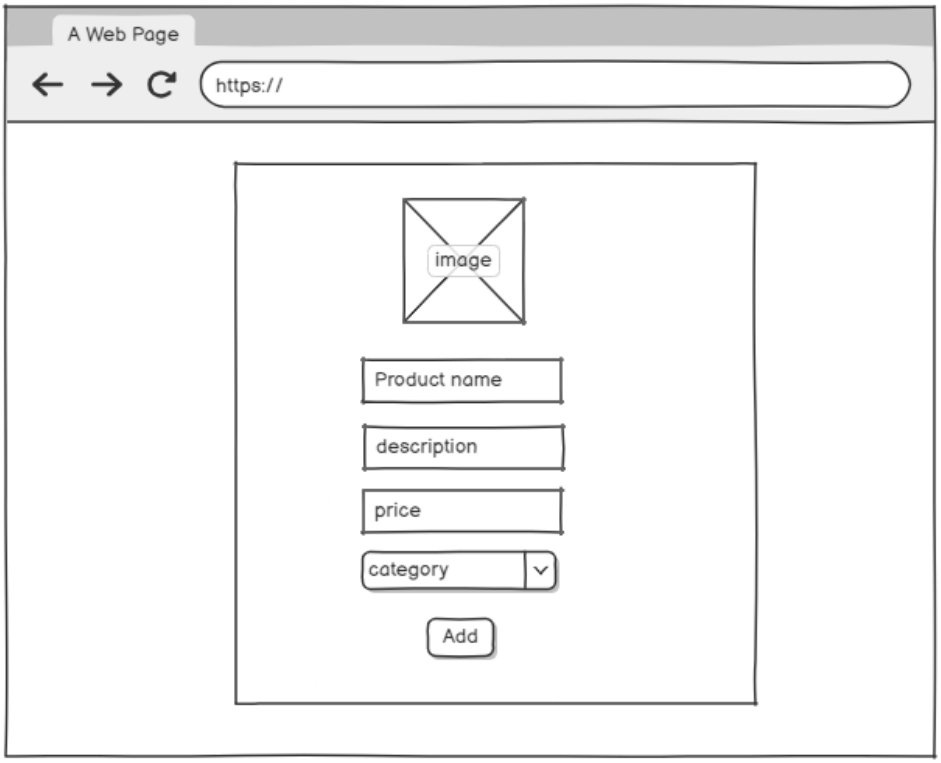

Figure 3. 15 Add Product for ELECTRONICS SHOP

3.3 Algorithm Used

The ELECTRONICS SHOP enhances the user experience by offering sorting and recommendation features that make browsing products easier and more personalized. Users can sort items by criteria such as price (low to high or high to low) or by how recently they were added, allowing them to quickly find what they're looking for. The system also filters the products list based on search terms, showing only relevant items. Additionally, the collaborative filtering recommendation feature suggests products items based on users' past orders, presenting familiar items or similar options they might enjoy. These personalized recommendations are displayed alongside the products list, making it easy for users to discover new favorites tailored to their tastes and preferences.

Input: ProductList, SortCriteria (e.g., 'price_low_high', 'price_high_low', 'newest')
Output: SortedProductList
Algorithm:
1. If SortCriteria == 'price_low_high':
    Sort ProductList by price in ascending order
2. Else if SortCriteria == 'price_high_low':
    Sort ProductList by price in descending order
3. Else if SortCriteria == 'newest':
    Sort ProductList by added_date in descending order
4. Return SortedProductList

Input: ProductList, SortCriteria (e.g., 'price_low_high', 'price_high_low', 'newest')
Output: SortedProductList
Algorithm:
1. If SortCriteria == 'price_low_high':
    Sort ProductList by price in ascending order
2. Else if SortCriteria == 'price_high_low':
    Sort ProductList by price in descending order
3. Else if SortCriteria == 'newest':
    Sort ProductList by added_date in descending order
4. Return SortedProductList

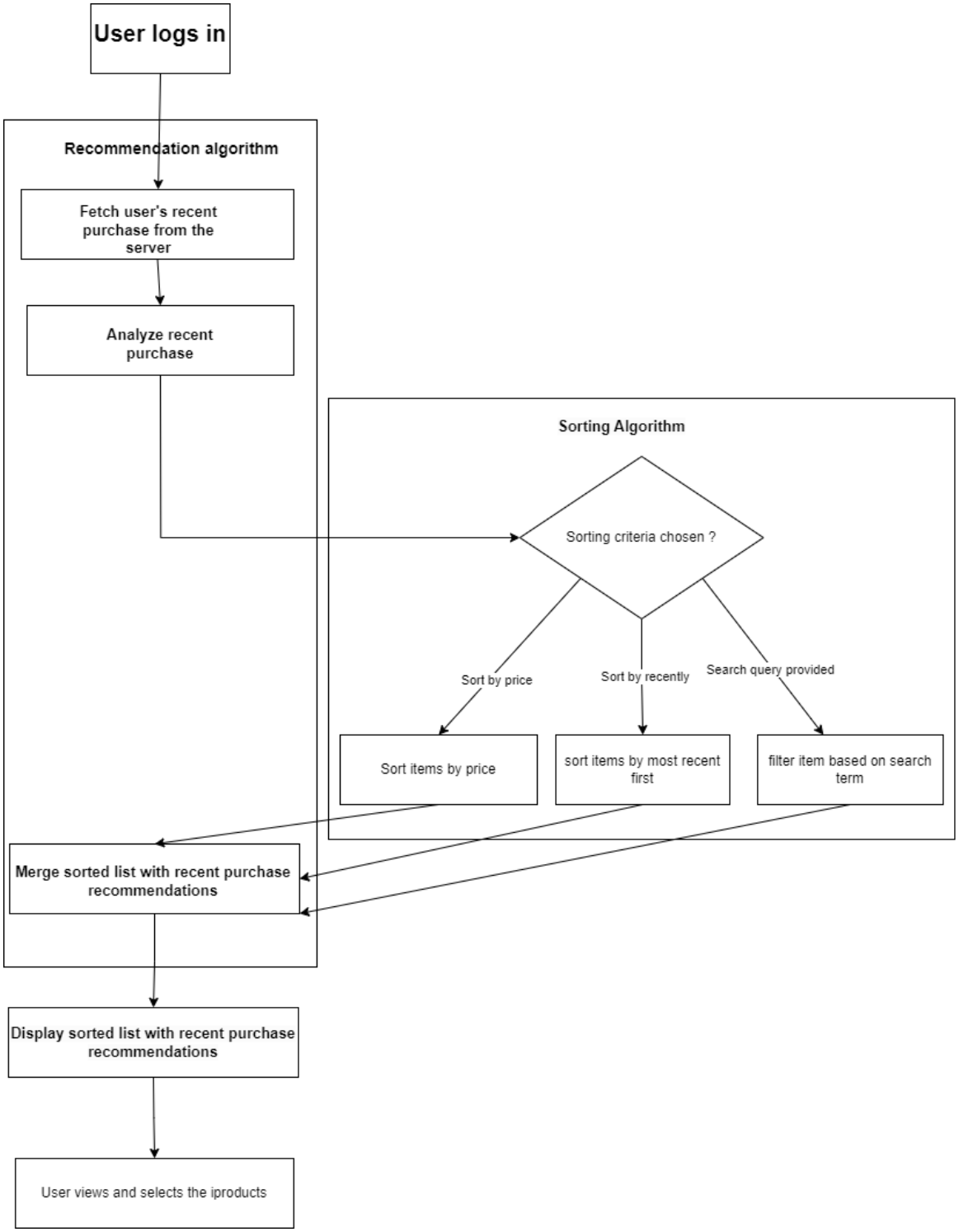

Figure 3. 16 Algorithm for ELECTRONICS SHOP

CHAPTER 4: IMPLEMENTATION AND TESTING

4.1 Implementation

4.1.1 Tools Used

Various tools that have been used in this project is listed below:

i) Microsoft Visual Studio Code:

Microsoft Visual Studio is a robust and feature-rich integrated development environment (IDE) that facilitates efficient software development across multiple platforms. It offers a comprehensive suite of tools and resources for coding, debugging, and testing applications. As visual studio is user-friendly and supports all programming language that is used in this project. It is used as an IDE for this project.

ii) MongoDB Atlas:

MongoDB Atlas is a fully managed cloud database service for MongoDB that allows developers to easily deploy, manage, and scale their MongoDB databases in the cloud. Built by the creators of MongoDB, Atlas simplifies database management, making it highly accessible to developers and organizations seeking a powerful, secure, and scalable solution for their data needs.

iii) Web Browser:

A web browser is a critical software application that enables users to access and interact with websites on the internet. It interprets HTML, CSS, and JavaScript code to render web pages and provides a user-friendly interface for browsing the internet. Brave Browser has been used in this project

4.1.2 Implementation Details of Modules

Implementing a module in the ELECTRONICS SHOP involves developing and integrating specific features and functionalities into the online platform. This section highlights key modules that can enhance the efficiency, user experience, and operational aspects of the products ordering service.

Users Module: The patron module focuses on providing a seamless experience for Electronics Shop's users using the platform to access various resources. It includes features such as:

- Login Form: Users use their credentials like username and password to authenticate and access the system.
- Signup Form: New users must create an account with personal credentials, which they later use to log in to the system.
- Order Products: Users can view the menu and can place the order as they wish
- Track Products Delivery: Users can track the status of the products they have ordered.
- Profile Management: Users can update their personal information and preferences.
- Logout Module: On the user homepage, there is a logout button that, when clicked, logs the user out of the system.

Admin Module: The Admin Module is designed to empower Admins with the tools and functionalities necessary to efficiently manage the resources, patrons, and operations. Here are the key components of the Admin Module:

- Login Form: Admins use their credentials to access the Admin dashboard.
- Catalog Management: Admins can add new products item, update products information, and remove products from the catalog.
- Profile Management: Admins can also update their personal information and preferences.
- Process Order: In the system, Admins oversee the process of ordered products from users. When a user order the products item, Admins ensure the products availability and then facilitate the process using the ELECTRONICS SHOP.
- Process Delivery: Admins play a vital role in delivery. When a user gets the delivery, the system updates the ordered list.
- Recording History: The ELECTRONICS SHOP maintains a record of each products ordered. This includes information about the user along with other details.

- Logout Module: On the Admin dashboard, there is a logout button that, when clicked, logs the Admin out of the system.

4.2 Testing

Testing in software development is a critical process that involves evaluating and validating a software application to ensure that it meets its intended requirements, functions correctly, and is free from defects or errors. The primary goal of testing is to identify and rectify any issues in the software before it is released to end-users, thus improving the software's quality and reliability.

4.2.1 Test Cases for Unit Testing

Unit testing: Unit testing is a fundamental practice in software development that involves testing individual components or units of code in isolation to ensure they function correctly.

S.N.	Test Case Description	Input	Expected Result	Actual Result	Status
1.	User forget to enter a particular field	name: Ramesh Email : Password: abcd1234	Display message please fill in this field.	As expected result.	Pass

2.	User enters invalid email formats	Full name: Ramesh Email : ramesh123 Password: abcd1234	Display message please enter an email address.	As expected result	Pass
3.	User enters all the details successfully	Full name: Ramesh Email:ramesh123@gmail.com Password: abcd1234	Registration successful. You may login now. User appears in user list	As expected result	Pass

Table 4. 1: User Registration Test for ELECTRONICS SHOP

This test case examines the user registration procedure within the system, with a primary goal of validating the input fields to guarantee the accurate and comprehensive recording of user information. The testing primarily targets three distinct scenarios: instances where a specific field is omitted, situations where an email is provided in an incorrect format, and cases where all details are accurately entered.

Table 4. 2: Admin Login Test for ELECTRONICS SHOP

S.N.	Test Case Description	Input	Expected Result	Actual Result	Status
1	Admin enters a wrong email	Email: ramesh@gmail.com Password: ramesh123	Display message user not registered	As expected	Pass

2	Admin enters correct email and incorrect password.	Email: Ramesh123@gmail.com Password: Ramesh@99	Display message incorrect password	As expected	Pass
3	Admin enters correct email and password.	Email: Ramesh123@gmail.com Password: ramesh123	Redirects admin to dashboard.	As expected	Pass

This test scenario assesses the functionality of the admin login procedure within the system, encompassing diverse situations like entering an incorrect email, an of the admin authentication mechanism, ensuring it functions as designed and delivers relevant feedback to the user incorrect password, and a successful login. The primary objective is to verify the proper operation

Table 4. 3: User Login Test for ELECTRONICS SHOP

S.N.	Test Case Description	Input	Expected Result	Actual Result	Status
1	User enters a wrong email	Email: rameshdan@gmail.com Password: Ramesh@123	Display user nott registered	As expected	Pass
2	User enters correct email and incorrect password	Email: rameshRawat@gmail.com Password: Ramesh1234	Display message incorrect password	As expected	Pass
3	User enters correct email and password.	Email: rameshRawat@gmail.com Password: Ramesh@123	Redirects user to user dashboard.	As expected	Pass

This test case addresses multiple scenarios involved in the user login process, encompassing instances of entering an incorrect email, providing an incorrect password, and achieving a successful login.

Table 4. 4: Add, and Delete Products Test for ELECTRONICS SHOP

S.N.	Test Case Description	Input	Expected Result	Actual Result	Status
1	Admin forgets to enter a particular required field to add new products.	Products Name: Canon 80D Image: Category: camera Price:114	Display message. Please fill this field.	As expected	Pass
2	Admin enters correct detail to add a new products item	Products Name: Canon 80D Image: canon80d.png Category: camera Price:114	Products item added	As expected	Pass
3	Admin update a products.	Products Name: Canon Image: canon.png Category: camera Price:224	Products item updated.	As expected	Pass

4	Admin clicks a remove button.	Products Name: canon Image: canon.png Category: camera Price:214	Products item removed	As expected	Pass

This test scenario assesses the operational aspects of the products management module within the system, specifically focusing on the processes of adding, updating, and deleting productss. The test encompasses situations related to the presence of inaccurate or missing data, the successful incorporation of a new products, the modification of products details, and the removal of a products from the list.

Table 4. 5: Search products category Test Case for ELECTRONICS SHOP

S.N.	Test Case Description	Input	Expected Result	Actual Result	Status
1	Admin explore menu	Click salad category	Displays salad category	Displays salad category	Pass

This test case centers on assessing the products search feature within the system. It aims to confirm that users can proficiently search for productss using products name, category and that the system provides suitable responses, presenting matching results. The test is instrumental in validating the precision and user-friendliness of the search functionality within the products management module.

CHAPTER 5: CONCLUSION AND FUTURE

5.1Lesson Learnt

- Mechanism of System: It helps to learn the working mechanism that interacts with the database to display content from database and allow editing or deleting existing content.
- Importance of time: Time management plays a crucial role for everything.
- Research: Without any research, everything seems difficult.
- Learned Web Development Skills: Acquired skills in web development, including front-end (Reacts, CSS, JavaScript), back-end (Node.js), and database (MongoDB).

5.2 Conclusion

In conclusion, after the successful completion of ELECTRONICS SHOP, it has been a matter of immense pleasure, honor and challenge to have this opportunity to take up this project and complete it successfully. We followed the specifications strictly but enhanced some of the features when there was need for it to be done. There have been challenges especially when it came to back-end and making sure that the application responses in a predictable manner.

As we come to the end of the project, we realized that there are many enhancements that can be made on the application. We decided to follow the specification because they were realistic to achieve in this given amount of time. Any other enhancements to the application can be done in future development of the application.

The entire project development process taught us the following skills:

- Using system analysis and design techniques like interface diagrams in designing the system and understanding the database handling.
- Analyze a problem from the user's point of view and how to make it user-friendly by hiding its complications behind the application.
- Understanding the criteria for making application that is more demanding.

5.2 Future Recommendations

There are many ways we can improve the ELECTRONICS SHOP in the future to make it even easier and more enjoyable for users. While the current version is a good start, adding more features can help make the platform more useful and user-friendly. Here are some ideas for what could be added next:

- **Barcode Integration**: Adding barcodes for users could make the ordering process smoother. Users could simply scan their order at the or during delivery, making everything quicker and more efficient.
- **Better User Interface**: We could make the design of the website even more interactive and fun to use. Adding personalized deals, promotions, and making the layout more user-friendly would improve the overall experience.
- **More Payment Options**: Right now, users can pay in a few ways, but adding more payment options would make the system even better. For example, adding payment methods like Esewa, Khalti, gift cards, or allowing users to pay with cash on delivery would give customers more choice. Saving payment details for next time could also make the checkout process faster and easier.

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[2] P. J. K. T. Varsha Chavan, "Implementing Customizable Online Food Ordering System Using Web Based Application," *International Journal of Innovative Science, Engineering Technology(IJISET),* vol. 2, 2015.

[3] T. S. D. I. N. S. R. T. Kirti Bhandge, "A Proposed System for Touchpad Based Food Ordering System Using Android Application," *International Journal of Advanced Research in Computer Science Technology (IJARCST 2015),* 2015.

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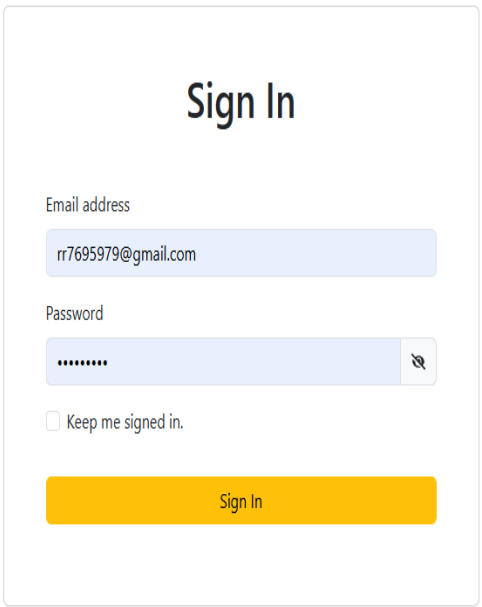
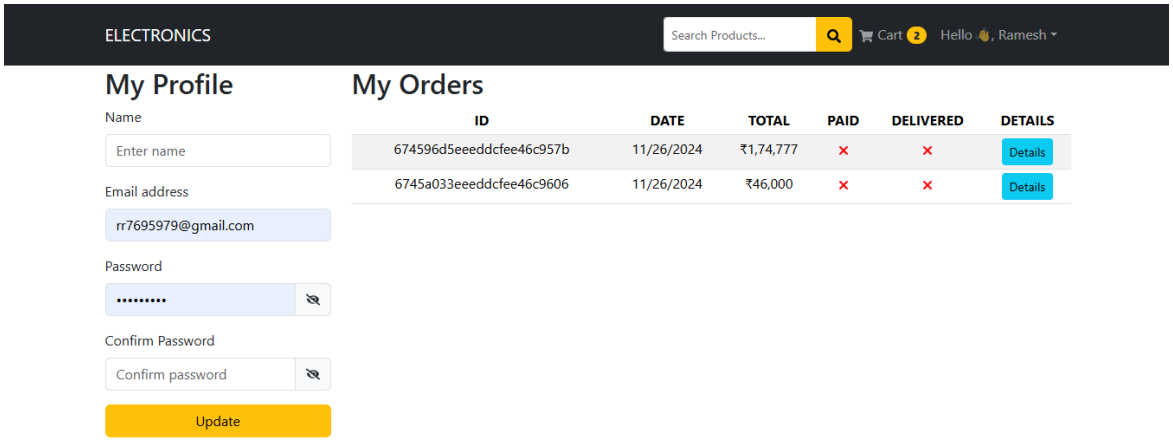
APPENDICES: SYSTEM SCREENSHOTS

i. Landing Page

ii. Admin Login

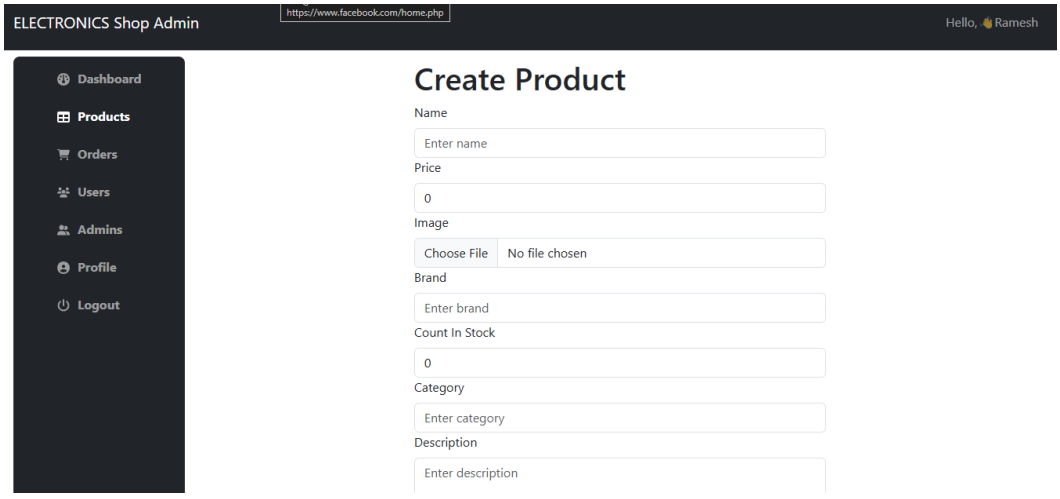


iii. Order List

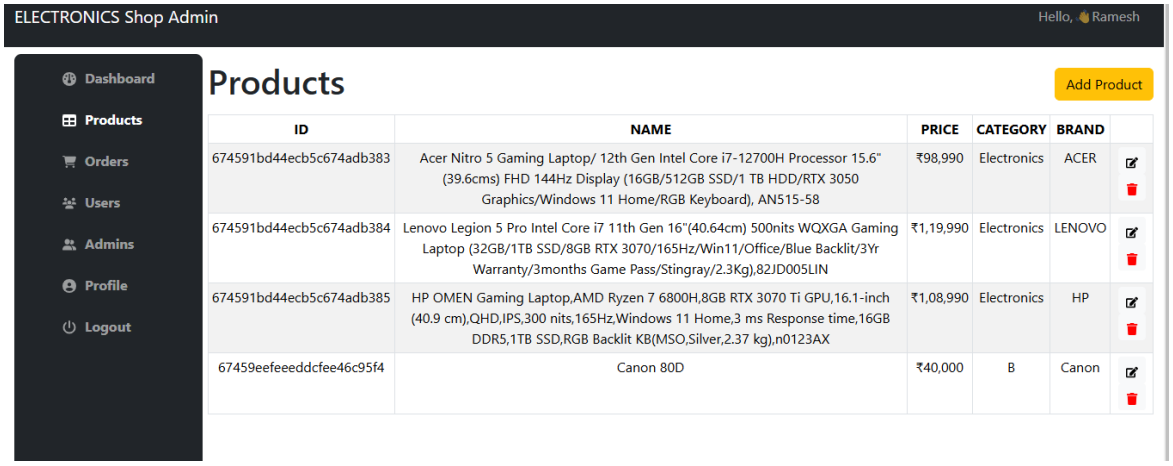


iv. User Login

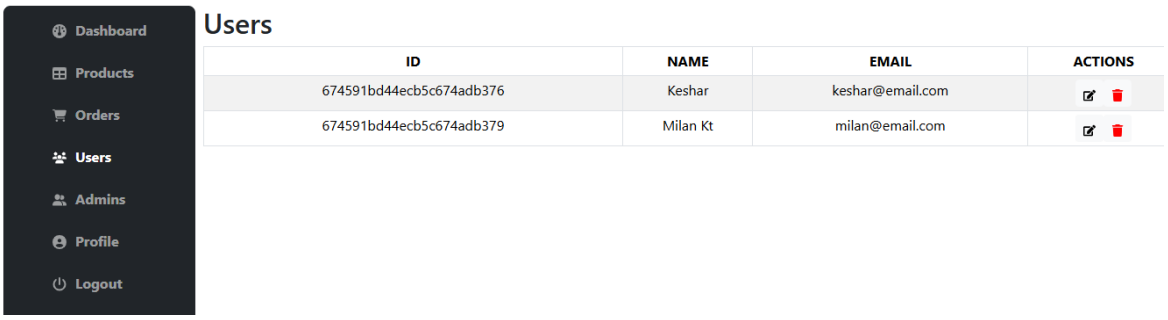
v. Add Products



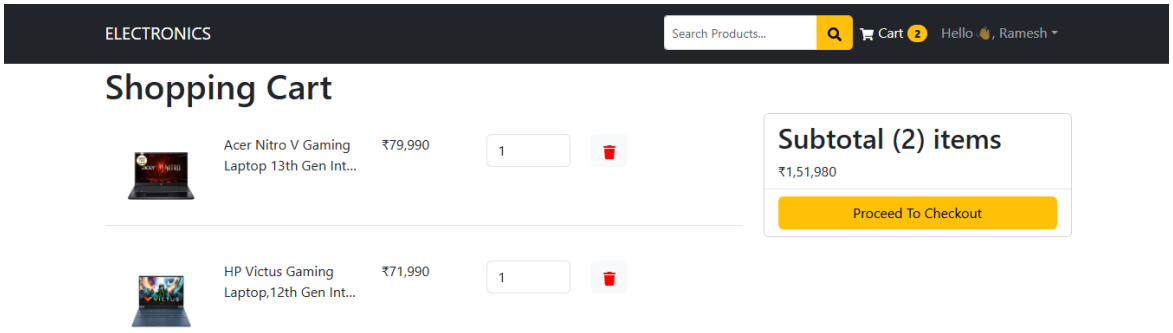
vi. Products List



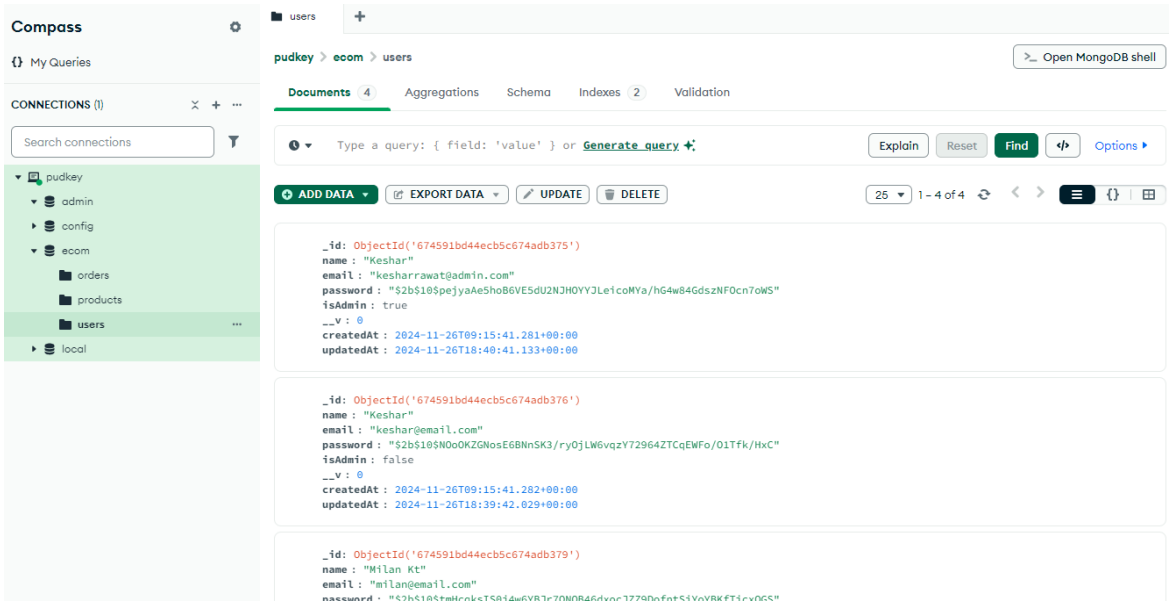
vii. User List



viii. Cart


ELECTRONICS
Search Products...
Cart 2
Hello, Ramesh
Shopping Cart
Acer Nitro V Gaming Laptop 13th Gen Int...
₹79,990
1
HP Victus Gaming Laptop,12th Gen Int...
₹71,990
1
Subtotal (2) items
₹1,51,980
Proceed To Checkout

ix. Database


Compass
My Queries
CONNECTIONS (1)
Search connections
pudkey
admin
config
ecom
orders
products
users
local
users
pudkey > ecom > users
Open MongoDB shell
Documents 4
Aggregations
Schema
Indexes 2
Validation
Type a query: { field: 'value' } or Generate query
Explain
Reset
Find
Options
ADD DATA
EXPORT DATA
UPDATE
DELETE
25
1 - 4 of 4
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email : "kesharrawat@admin.com"
password : "$2b$10$pejyaAe5hoB6VE5dU2NJHOYYJLeicoMYa/hG4w84GdszNFOcn7oWS"
isAdmin : true
__v : 0
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updatedAt : 2024-11-26T18:40:41.133+00:00
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email : "keshar@email.com"
password : "$2b$10$NOoOKZGNosE6BNnSK3/ryOjLW6vqzY72964ZTCqEWFo/O1Tfk/HxC"
isAdmin : false
__v : 0
createdAt : 2024-11-26T09:15:41.282+00:00
updatedAt : 2024-11-26T18:39:42.029+00:00
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name : "Milan Kt"
email : "milan@email.com"