

# **al-Hayat E-Commerce**

**A PROJECT REPORT for  
Mini Project (KCA353)  
Session (2023-24)**

**Submitted by**

**HAYAT KHAN  
2200290140069**

**Submitted in partial fulfilment of the  
Requirements for the Degree of**

## **MASTER OF COMPUTER APPLICATION**

**Under the Supervision of  
Prof. RABI N. PANDA  
(ASSOCIATE PROFESSOR)**



**Submitted  
to the**

**DEPARTMENT OF COMPUTER APPLICATIONS  
KIET Group of Institutions, Ghaziabad  
Uttar Pradesh-201206**

**DR. APJ ABDUL KALAM TECHNICAL UNIVERSITY (Formerly  
Uttar Pradesh Technical University) LUCKNOW**

**(MARCH, 2024)**

## **CERTIFICATE**

Certified that **Hayat khan (2200290140067)** has carried out the project work having “al-Hayat E-Commerce” (**Mini Project-KCA353**) for **Master of Computer Application** from Dr. A.P.J. Abdul Kalam Technical University (AKTU) (formerly UPTU), Lucknow under my supervision. The project report embodies original work, and studies are carried out by the students themselves and the contents of the project report do not form the basis for the award of any other degree to the candidate or to anybody else from this or any other University/Institution.

**Date: 15-FEB-2024**

**HAYAT KHAN  
(2200290140069)**

This is to certify that the above statement made by the candidate is correct to the best of my knowledge.

Date: 15-FEB-2024

**Prof. RABI N. PANDA**  
**Associate Professor**  
**Department of Computer**  
**Applications**  
**KIET Group of Institutions,**  
**Ghaziabad**

**Dr. ARUN TRIPATHI**  
**Head**  
**Department of Computer**  
**Applications**  
**KIET Group of Institutions,**  
**Ghaziabad**

# **al-Hayat Ecommerce**

## **Hayat Khan**

### **ABSTRACT**

The E-Commerce project is a comprehensive web-based Restaurant website built using React , Nodejs and MongoDB, with a primary focus on providing users with a secure and efficient platform for desired food Orders. This project encompasses essential features such as user registration, login authentication, and the ability to create, update, and delete food items seamlessly. Key features of al-Hayat Ecommerce include a visually appealing website interface optimized for both desktop and mobile devices, allowing customers to easily browse through menus, place orders with just a few clicks. The platform prioritizes user experience by offering personalized recommendations based on past orders and preferences, thereby enhancing customer satisfaction and loyalty.

For restaurant owners, al-Hayat Ecommerce provides a robust backend system equipped with inventory management, order tracking, and analytics tools. This enables efficient management of resources, optimization of menu offerings, and real-time insights into customer behavior and preferences, facilitating data-driven decision-making.

## ACKNOWLEDGEMENTS

Success in life is never attained single-handedly. My deepest gratitude goes to my project supervisor, **Prof. Rabi N. Panda** for his guidance, help, and encouragement throughout my project work. Their enlightening ideas, comments, and suggestions.

Words are not enough to express my gratitude to **Dr. Arun Kumar Tripathi**, Professor and Head, Department of Computer Applications, for his insightful comments and administrative help on various occasions.

Fortunately, I have many understanding friends, who have helped me a lot on many critical conditions and my team partner to develop the entire project alongside.

Finally, my sincere thanks go to my family members and all those who have directly and indirectly provided me with moral support and other kinds of help. Without their support, completion of this work would not have been possible in time. They keep my life filled with enjoyment and happiness.

**HAYAT KHAN**

**2200290140069**



# TABLE OF CONTENTS

	Page No.
<b>Certificate</b>	ii
<b>Abstract</b>	iii
<b>Acknowledgement</b>	iv
<b>List of Figures</b>	vi
<b>List of Tables</b>	vii
<b>CHAPTER 1: INTRODUCTION</b>	1-6
1.1 Key Features	
1.2 Project Description	
1.3 Project Scope	
1.4 Hardware/Software used in Project	
<b>CHAPTER 2: FEASIBILITY STUDY</b>	7-11
2.1 Key Objectives	
2.2 Technical Feasibility	
2.3 Operational Feasibility	
2.4 Behavioral Feasibility	
2.5 Schedule Feasibility	
<b>CHAPTER 3: DATABASE DESIGN</b>	12-17
3.1 Database Tables	
3.2 Flowchart	
3.3 Use Case Diagram	
3.4 Data Flow Diagram	
<b>CHAPTER 4: FORM DESIGN</b>	18-21
4.1 Administrative Modules	
<b>CHAPTER 5: TESTING</b>	22-23

5.1 Test Case-1
5.2 Test Case-2
Bibliography

## LIST OF TABLES

Table No.	Name of Table	Page No.
3.1	Users Table	13
3.2	Items Table	13

## LIST OF FIGURES

<b>Fig. No.</b>	<b>Name of Figure</b>	<b>Page No.</b>
3.1	Database Design	12
3.2	Flowchart	14
3.3	Use Case Diagram	15
3.4	Data Flow Diagram	17
4.1	Users select Register/Login	19
4.2	User Registration	19
4.3	Correct Credentials	20
4.4	User Dashboard	20
4.5	Create/Add Items	21
4.6	Add to cart Items	21



# CHAPTER 1

## INTRODUCTION

### 1. INTRODUCTION

The E-Commerce project is a comprehensive web-based Restaurant website built using React , Nodejs and MongoDB, with a primary focus on providing users with a secure and efficient platform for desired food Orders. This project encompasses essential features such as user registration, login authentication, and the ability to create, update, and delete food items seamlessly. Key features of al-Hayat Ecommerce include a visually appealing website interface optimized for both desktop and mobile devices, allowing customers to easily browse through menus, place orders with just a few clicks. The platform prioritizes user experience by offering personalized recommendations based on past orders and preferences, thereby enhancing customer satisfaction and loyalty.

#### 1.1 Key Features

- 1.1.1 **Registration:** Users can create an account by providing their details such as username, email, and password. This information is typically stored in a database after being validated for uniqueness and correctness.
- 1.1.2 **Login:** Once registered, users can log in using their credentials. The application verifies the username and password against the stored data in the database.
- 1.1.3 **Food Menu:** After logging in, users can check food items, view available foods, and order their favorite items.
- 1.1.4 **Database Integration:** The application uses a database to store user information (like username, email, and password) and Items.

- 1.1.5 **Security:** To ensure the security of user data, the application should implement measures such as password hashing (using algorithms like bcrypt) to store passwords securely, session management to handle user sessions securely.
- 1.1.6 **Frontend:** The frontend of the application is built using React for dynamic content generation and HTML/CSS for styling. JavaScript may also be used for client-side validation and interaction.
- 1.1.7 **Deployment:** Once the application is developed, it needs to be deployed on a web server such as git hub to make it accessible over the internet for free.

## 1.2 Project Description

Al-Hayat is an innovative web-based application developed using React, Node.js, JavaScript, and MongoDB, aimed at revolutionizing the online purchasing experience for fresh foods, fruits, and vegetables. This project offers a seamless platform for users to explore, purchase, and manage their orders with utmost convenience. The application integrates user registration, authentication, and a robust product management system to enhance the shopping journey.

Upon accessing the platform, users are greeted with an intuitive interface where they can register for a new account by providing essential details such as name, email address, and password. The registration process includes validation checks to ensure data accuracy and security, fostering trust and reliability among users.

Once registered, users can securely log in to their accounts using their credentials. The application verifies user input against stored data in the MongoDB database to authenticate them. Upon successful authentication, users gain access to their personalized dashboard, where they can browse through a diverse selection of fresh produce, fruits, and vegetables, place orders, and manage their shopping cart effortlessly.

Behind the scenes, the application leverages Node.js to handle server-side logic and interacts with MongoDB, a NoSQL database, to store and manage user information, including account details and order history, ensuring scalability and flexibility.

Overall, Al-Hayat Fresh exemplifies the utilization of React, Node.js, JavaScript, and MongoDB to create a dynamic e-commerce platform tailored for fresh produce, fruits, and vegetables. With a focus on user experience and data

security, the project provides a reliable and convenient solution for consumers to purchase and enjoy high-quality fresh foods online.

### **1.3 Project Scope**

The scope of the Al-Hayat Fresh project encompasses the development of a comprehensive e-commerce platform tailored for the purchase of fresh produce, fruits, and vegetables. The project aims to provide users with a seamless shopping experience by offering features such as product browsing, cart management, secure transactions, and personalized user accounts. The application will be developed using React for front-end development, Node.js for server-side logic, JavaScript for dynamic interactions, and MongoDB for database management, leveraging their capabilities for efficient and scalable development.

The project scope includes the implementation of a robust database system, such as MongoDB, to store product information, user details, and transaction history securely. This database will be accessed using Mongoose or similar libraries to perform CRUD operations and ensure data integrity and consistency. The application will prioritize data security by implementing encryption techniques to protect sensitive user information and financial transactions, thus preventing unauthorized access and data breaches.

Overall, the Al-Hayat Fresh project aims to deliver a user-friendly and feature-rich e-commerce platform that caters to the needs of consumers seeking high-quality fresh foods while adhering to industry standards of security, usability, and scalability.

### **1.4 Hardware / Software Used in Project**

The al-Hayat will involve a combination of hardware and software components to ensure its development, deployment and functionality. Here is detailed List:

#### **1.4.1 Server-side Hardware:**

##### **1. RAM (Random Access Memory):**

- 8GB to 16GB (for moderate-sized application and user load).
- Consider higher capacities (e.g., 32GB or more) for scalability and handling a large number of concurrent users.

## **2. ROM (Storage):**

- SSD storage for faster read and write operations.
- Allocate storage based on the application codebase, database size, and media storage requirements.

## **3. Processor:**

- Multi-core processor (quad-core or higher) for efficient handling of concurrent user requests.

## **4. Operating System:**

- Windows-based operating system (e.g., Windows Server 2012, Windows Server 2016) for stability and performance.

## **5. Network Equipment:**

- Network infrastructure to facilitate secure data transfer between users and the server.

### **1.4.2 Database Server:**

#### **1. RAM:**

- 16GB or more for efficient handling of concurrent database queries.

#### **2. ROM(Storage):**

- SSD storage for faster data retrieval.
- Allocate storage based on the anticipated size of the database and data storage needs.

#### **2. Processor:**

- Multi-core processor with sufficient processing power for complex database operations.

#### **4. Operating System:**

- Windows-based operating system for the database server.

### **1.4.3 User Devices:**

### **1. Smartphones/Tablets:**

- Compatibility with iOS and Android operating systems.
- Optimization for various screen sizes and resolutions.

### **2. Web Browsers:**

- Compatibility with major web browsers such as Google Chrome, Mozilla Firefox, Safari, and Microsoft Edge.

## **1.4.4 Development Environment:**

### **1. Programming Languages:**

- Backend: JavaScript, Nodejs
- Frontend: HTML5, CSS3, React.

### **3. Database Management System:**

- Choose a suitable DBMS (e.g. MongoDB) for efficient data storage and retrieval.

### **4. Authentication and Authorization:**

- Implement secure authentication protocols and authorization mechanisms.

### **5. APIs:**

- Develop APIs to enable communication between the frontend and backend components.

### **6. Version Control:**

- Version control system (e.g., Git) for managing and tracking changes in the source code.

### **7. Integrated Development Environment (IDE):**

- VS Code.

### **8. Containerization:**

- Containerization tools like Docker for efficient deployment and scalability.

### **9. Continuous Integration/Continuous Deployment (CI/CD) :**

- CI/CD pipelines (e.g., Jenkins, Travis CI) for automated testing and deployment.

### **10.Security Tools:**

- Integrate security tools and practices to ensure the application's resilience against potential threats.

### **11. Monitoring Tools:**

- Monitoring tools (e.g., APM, New Relic) for tracking application performance.

### **12. Collaboration Tools:**

- Collaboration tools (e.g., Google Meet, Microsoft Teams) for effective communication among project team members.

## CHAPTER 2

### FEASIBILITY STUDY

#### 2. INTRODUCTION

The introduction of the Al-Hayat E-commerce project aims to revolutionize the online shopping experience for fresh produce, fruits, and vegetables by providing users with a convenient and versatile digital platform. This feasibility study is conducted to evaluate the viability of the project from technical, economic, and operational perspectives. The project's objectives include developing a user-friendly platform for purchasing fresh foods, implementing secure authentication and authorization mechanisms, providing functionalities for product browsing, cart management, and secure transactions, ensuring compatibility across devices and operating systems, and enabling users to share their shopping experiences.

From a technical standpoint, the Al-Hayat E-commerce project is feasible due to the availability of established web development technologies such as React, Node.js, JavaScript, and MongoDB. Skilled developers and resources are accessible for implementation, and the project can leverage existing systems and technologies to streamline development. Economically, the project requires careful cost estimation for development, maintenance, and support, along with consideration of potential revenue streams such as subscription fees, ads, or premium features. Operational feasibility depends on user acceptance and usability testing, as well as training requirements for users and support staff. Seamless integration with existing workflows and processes is crucial for operational success, ensuring a smooth transition to the new digital platform.

#### 2.1 Key Objectives

**2.1.1 User-Friendly Platform:** Develop a digital platform that is intuitive and easy to use for management. User-Friendly Platform: Develop an intuitive and easy-to-use platform for purchasing fresh produce, fruits, and vegetables.

**2.1.2 Secure Authentication:** Implement robust user authentication and authorization mechanisms to ensure data security and user privacy.

**2.1.3 Product Management:** Provide functionalities for users to browse, search, view, and purchase products efficiently.

**2.1.4 Cross-Device Compatibility:** Ensure that the platform is accessible and works seamlessly across various devices and operating systems.

**2.1.5 Sharing Capabilities:** Enable users to share their Items with others, promoting collaboration and information exchange.

**2.1.6 Database Security:** Implement a secure database system to store user data and transaction history, protecting them from unauthorized access.

**2.1.7 Scalability:** Design the platform to be scalable, accommodating a growing user base and increasing data volumes.

## **2.2 Technical Feasibility**

The Al-Hayat E-commerce project demonstrates strong technical feasibility owing to the abundance of established web development technologies such as React, Node.js, JavaScript, and MongoDB. Skilled developers are readily available for platform implementation, and existing frameworks and libraries can be harnessed to streamline development processes. Moreover, the scalability and cross-device compatibility of web-based applications align closely with project requirements, facilitating broader accessibility and seamless user experience across various devices and platforms. Additionally, the presence of secure authentication protocols and encryption technologies ensures that the platform can effectively meet rigorous security standards, safeguarding user data and privacy. Overall, the technical groundwork for the Al-Hayat project is robust, providing a firm foundation for its successful execution.

### **2.2.1 Infrastructure Requirements:**

- **Server Infrastructure:** Asses the capacity and scalability of cloud-based servers (e.g., AWS, Azure) to accommodate potential user growth and ensure seamless performance.
- **Database Management** Assess the suitability of database systems (e.g., MongoDB, PostgreSQL) for efficient storage and retrieval of user data.

### **2.2.2 Software Development:**

- **Programming Languages:** Select appropriate backend (e.g., Node.js, Express.js) and frontend (e.g., React, Angular) technologies based on developer expertise and project requirements.
- **Framework Selection:** Choose a web application framework (e.g., Express.js, Nest.js) to streamline development and enhance maintainability.



### 2.2.3 Security Measures:

- **Authentication Protocols:** Implement secure authentication mechanisms (e.g., JWT, OAuth) to protect user accounts and ensure data security.

### 2.2.4 User Interface (UI) Design:

- **Responsive Design:** Optimize the app's UI for various devices (smartphones, tablets, web browsers) to provide a consistent and user-friendly experience.

### 2.2.5 Deployment and Monitoring:

- **Docker:** Implement containerization using Docker for efficient deployment, scalability, and consistency across different environments.

## 2.3 Operational Feasibility

The operational feasibility of the Al-Hayat E-commerce project is robust, as it aims to deliver a user-friendly and intuitive platform that aligns seamlessly with users' shopping habits. By prioritizing ease of use and smooth integration into users' shopping routines, the platform minimizes resistance to adoption and fosters widespread usage. Moreover, the project's emphasis on security and privacy resonates with users' expectations, ensuring the safeguarding of their personal information and shopping experiences.

### 2.3.1 User Acceptance:

- **User Feedback Surveys:** Conduct surveys or gather feedback from potential users to gauge their acceptance of the al-Hayat Ecommerce. Understand user preferences and expectations.

### 2.3.1 Usability Testing:

- **User Interface (UI) Testing:** Evaluate the user interface for intuitiveness and ease of use. Conduct usability testing to identify any potential issues in navigation or functionality.

### 2.3.2 User Engagement Strategies:

- **Communication Plans:** Develop communication strategies to keep users informed about new features, updates, and any changes in the app. Foster ongoing engagement.

### 2.3.3 Operational Impact Analysis:

- **Operational Workflow Analysis:** Assess how the al-Hayat Ecommerce will fit into users' daily workflows. Identify potential impacts on existing operational processes.

### 2.3.4 Change Management Strategies:

- **Change Management Plans:** Develop strategies to manage organizational and user-level changes resulting from the introduction of the al-Hayat Ecommerce. Address any potential resistance.

#### **2.3.5 Legal and Compliance Considerations:**

- **Compliance Analysis:** Ensure that the app complies with relevant legal and regulatory requirements related to financial transactions, data protection, and user privacy.

### **2.4 Behavioral Feasibility**

Behavioral feasibility of the Al-Hayat E-commerce project involves assessing how users and other stakeholders are likely to respond to the introduction of the digital shopping platform. Understanding user behavior and preferences is crucial for the successful adoption and sustained usage of the platform.

The willingness of users to adopt the Al-Hayat platform as their primary means of purchasing fresh produce hinges on several factors, including ease of use, availability of essential features, and compatibility with existing shopping routines. User surveys and interviews will be conducted to gain insights into user preferences and expectations, enabling the platform to be tailored to their needs effectively.

Introducing a new digital platform for shopping represents a shift in behavior for users accustomed to traditional methods. Effective change management is essential for behavioral feasibility, involving providing adequate training and support, communicating the platform's benefits, and addressing any concerns or resistance from users.

In addition to users, other stakeholders such as administrators, IT teams, and potential investors also impact the behavioral feasibility of the project. Engaging with these stakeholders to gather feedback, address concerns, and garner support is crucial for project success. Clear communication and transparency about the project's objectives, benefits, and potential challenges are key to aligning stakeholders' behavior with the project's goals.

The user experience (UX) design of the Al-Hayat platform plays a pivotal role in its behavioral feasibility. A well-designed interface that is intuitive, visually appealing, and responsive to user actions can enhance user engagement and satisfaction. Usability testing and integration of user feedback into the design process will ensure that the platform meets users' expectations and encourages desired behavior, such as regular usage and engagement.

## **2.5 Schedule Feasibility**

Schedule feasibility for the Al-Hayat E-commerce project refers to its ability to be completed within a reasonable timeframe, considering various factors such as development timelines, resource availability, and potential risks. Assessing schedule feasibility involves creating a realistic timeline for the project's stages and ensuring alignment with the organization's objectives.

The development timeline for the Al-Hayat project should be meticulously planned to accommodate stages such as design, development, testing, and deployment. Each stage requires time for planning, execution, and review, considering the complexity of the project's features and functionalities. Milestones and checkpoints will be established to monitor progress and make necessary adjustments.

Availability of resources, including human resources (developers, designers, testers) and technological resources (software, hardware, tools), is crucial for schedule feasibility. Adequate staffing and access to necessary technologies are essential for adhering to the project timeline. Identifying potential constraints early on and developing contingency plans will mitigate risks to the schedule.

Identifying and addressing potential risks that could impact the project schedule is critical. Risks such as technical challenges, scope creep, resource constraints, or external dependencies will be carefully evaluated, and proactive risk management strategies will be implemented. Regular risk assessments will ensure schedule feasibility throughout the project lifecycle.

## CHAPTER 3

### DATABASE DESIGN

#### 3. INTRODUCTION

The database design for the Al-Hayat E-commerce platform is a crucial element that plays a pivotal role in efficiently organizing and managing data. A well-structured database is essential for facilitating seamless interactions between the platform and its users, ensuring robust storage, retrieval, and manipulation of data. The introduction outlines the fundamental principles guiding the database design process and emphasizes the importance of creating a scalable and secure data architecture to support the diverse needs of product management within the e-commerce setting.

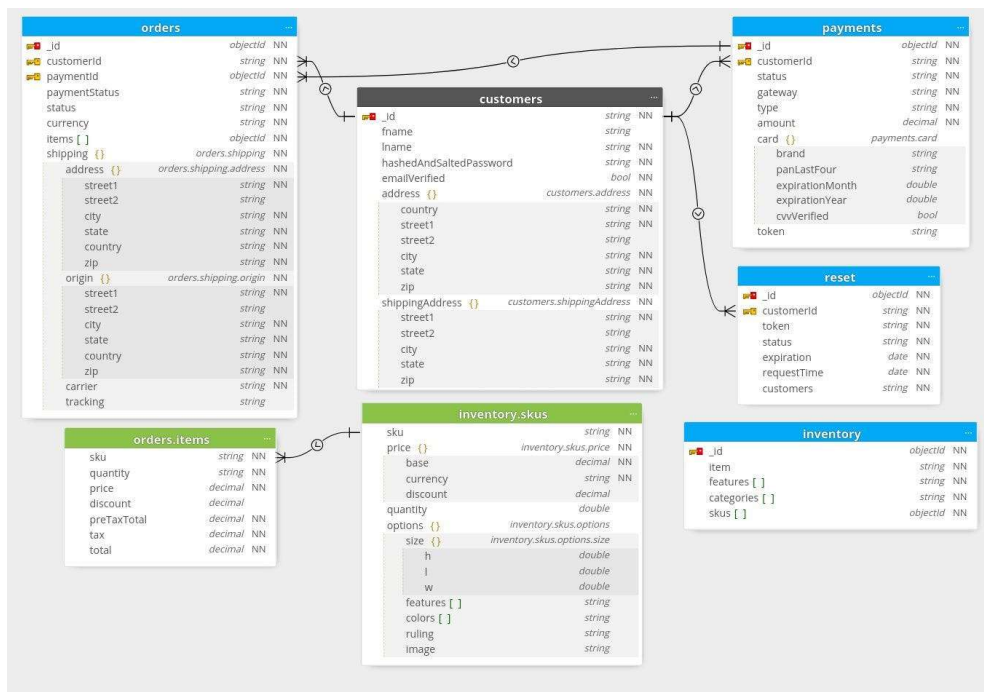


Fig. 3.1 Database Design

### 3.1 Database Tables

Creating a comprehensive database table for the Share Expense app involves considering the key entities and their attributes. In a simplified example, let's focus on two main entities: Users and Expenses. Here's a basic representation:

#### 3.1.1 Users Table:

- **user\_id (Primary Key):** Unique identifier for each user.
- **email:** User's email address for communication and login.
- **name:** User's full name.
- **password:** Securely hashed password for authentication.

user_id	Email	Name	Password
1	<a href="mailto:abc@gmail.com">abc@gmail.com</a>	abc	#2122223fsdx
2	<a href="mailto:kiet@gmail.com">kiet@gmail.com</a>	kiet	#3c2223rsdx
3	Hayat1234@gmail.com	Hayat_Khan	#2122253ftdx

Table 3.1. User's Table

#### 3.1.2 Ecommerce Table:

- **P\_Date:** Date when the food item was added.
- **Id:** Unique id given to every food item.
- **Content:** Stores the food description written inside the food items.
- **Title:** Title for each food item.
- **User\_id:** foreign key
- **File Name:** Stores the name of the file.

P_Date	Id	Content	Title	User_id	File Name
2024-01-09	1	Cheez delicious	burger	1	
2023-01-09	2	Kfc popular	pizza	2	
2024-02-09	3	Raw fresh	beetroots	3	

Table 3.2. Product Table

## 3.2 Flowchart

### Introduction to the Flowchart for al-Hayat E-Commerce:

The flowchart for the Al-Hayat E-commerce platform begins with the user's decision to explore products available for purchase. Upon visiting the platform's website or app, users are presented with options to browse products. The flow then branches into two paths: one for new users to register by providing their details such as name, email, and password, and another for existing users to log in using their credentials. Once logged in, users gain access to the platform's features.

After logging in, users can proceed to explore products. The flowchart illustrates the steps involved in browsing products, including searching, filtering, and viewing product details. Additionally, the flowchart depicts how users can add products to their cart, proceed to checkout, and complete their purchase.

The flowchart also includes a path for users to manage their account settings. This might involve updating personal information, managing payment methods, and viewing order history. The flowchart should outline the various options available for account management and the steps users need to follow to complete these actions successfully.

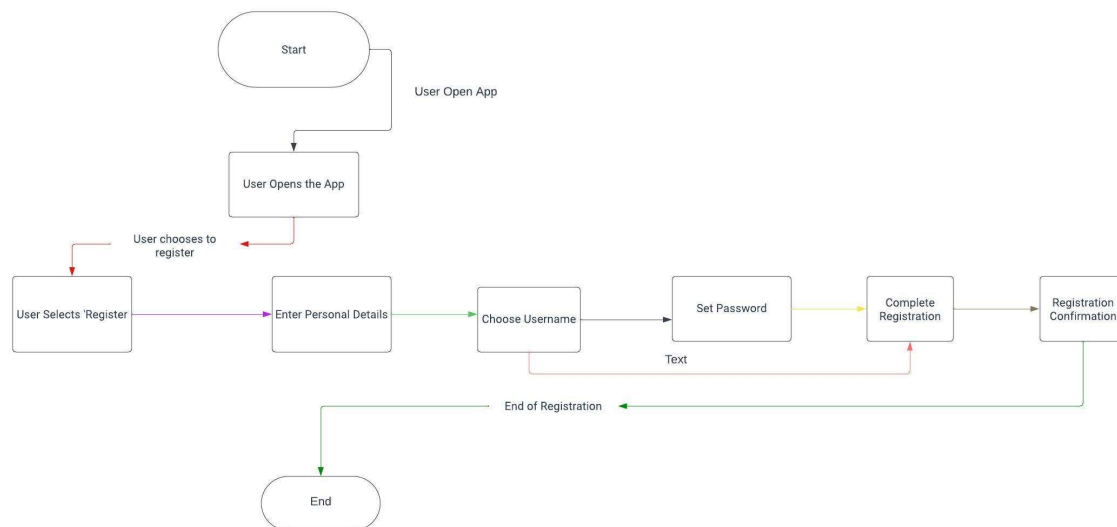


Fig. 3.2 Flowchart Diagram for al-Hayat Ecommerce

## 3.3 Use Case Diagram

The use case diagram for the Al-Hayat E-commerce platform illustrates the various interactions and functionalities available to users. The primary actors are the user and the system. Users can explore products, register by providing necessary details such as name, email, and password, and log in using their credentials. Upon logging in, users can perform several actions related to product management. They can browse products, add items to their cart, proceed to checkout, and manage their account settings. All these operations are performed through the user interface, which interacts with the database to store and retrieve product data. Finally, users can log out to end their session securely.

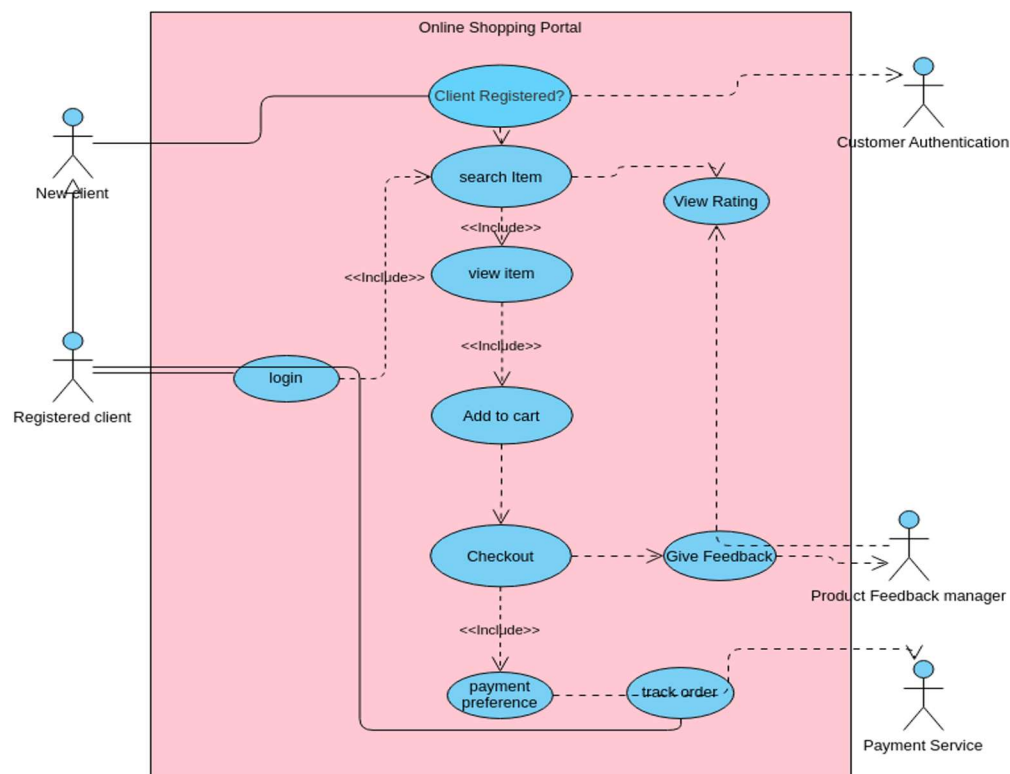


Fig. 3.3 Use Case Diagram for al-Hayat Ecommerce

### **3.3.1 Actors:**

- User
- System

### **3.3.2 Use Case**

- Register
- Login
- Sign Up
- Open Dashboard
- Add Items
- View Items

In the Al-Hayat E-commerce platform, users encounter two modes upon opening the web page: registration or login. New users are required to register themselves, while existing users can log in with their valid credentials, such as email and password, created during registration. Upon entering their credentials, the system verifies them in the database. If the credentials are correct, users are directed to the dashboard; otherwise, an error message is displayed.

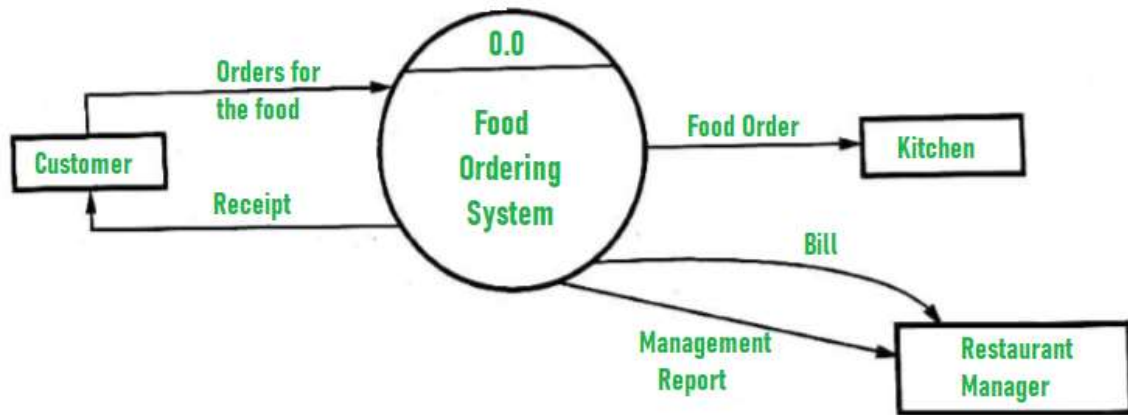
In the dashboard, users have multiple options. They can browse products, access their previous orders, update their account information, or view their order history. Users can also utilize the search box to find specific products.

Unique to this platform, users cannot copy and paste data from external sources due to applied validations. They can only add their own Items and images. After completing their tasks, users can log out, and their content is saved directly in the database. In the future, they can log in to access their account and view their orders.

## **3.4 Data Flow Diagram**

The Data Flow Diagram (DFD) for the Al-Hayat E-commerce platform offers a visual depiction of the data flow within the system, showcasing how information traverses between different components. Primarily, the DFD illustrates the essential processes, data stores, and data flows integral to the e-commerce application. Commencing with user inputs such as registration, logging in, and product browsing, the diagram outlines how these actions initiate processes like data validation, order processing, and database updates. Moreover, the DFD illustrates the storage and retrieval of user data in the database, highlighting the smooth exchange of information between users and the platform. By encapsulating the core data movements and transformations, the DFD serves as a valuable blueprint for understanding the operational dynamics of the Al-Hayat E-commerce platform.





### Level 0 DFD (Context Level)

Fig. 3.4 Data Flow Diagram for al-Hayat Ecommerce

## **CHAPTER 4**

### **FORM DESIGN**

#### **INTRODUCTION**

In the Al-Hayat e-commerce project, form design plays a pivotal role in providing users with a user-friendly interface to interact with the platform. The forms are meticulously crafted to guide users seamlessly through processes such as product browsing, adding items to cart, and completing purchases, ensuring a smooth and secure shopping experience. Additionally, forms for managing account settings, such as updating personal information and managing payment methods, are designed to be intuitive and straightforward. The search form allows users to quickly find specific products by entering keywords or filtering options. Overall, the form design prioritizes clarity, simplicity, and functionality, aiming to enhance the user experience and streamline the shopping process on the Al-Hayat e-commerce platform.

---

#### **4.1 Input/Output Form (Screenshot)**

##### **4.1.1 Main Page**

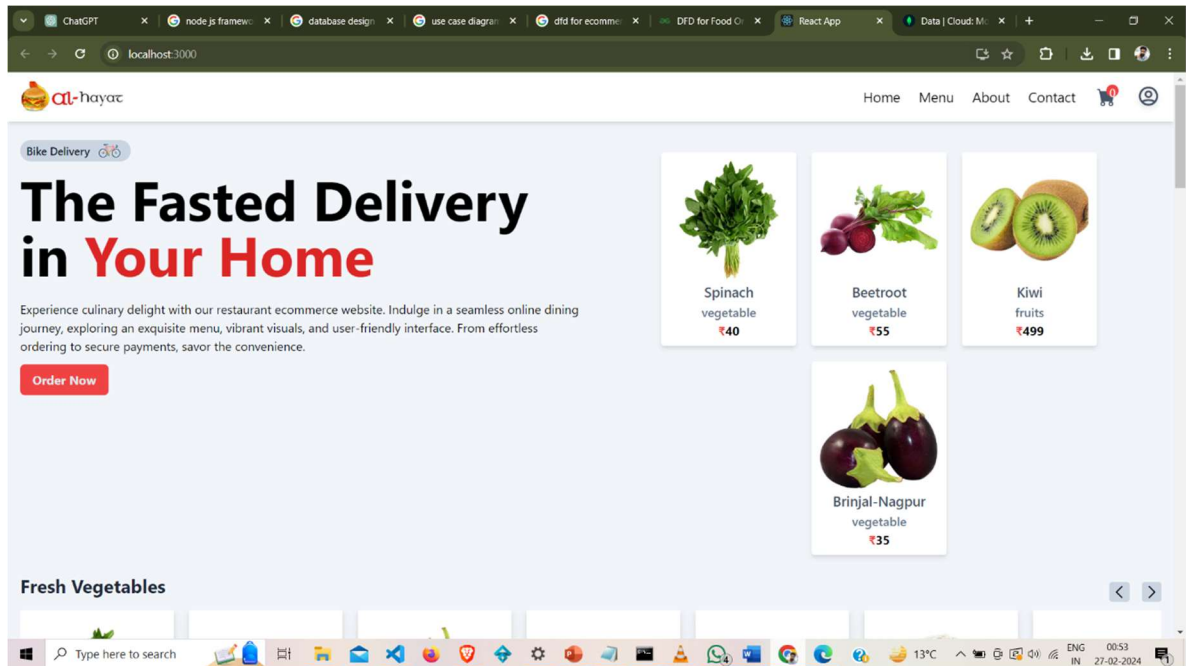


Fig. 4.1 Initially user select Register/Login

## 4.1.2 Registration Form

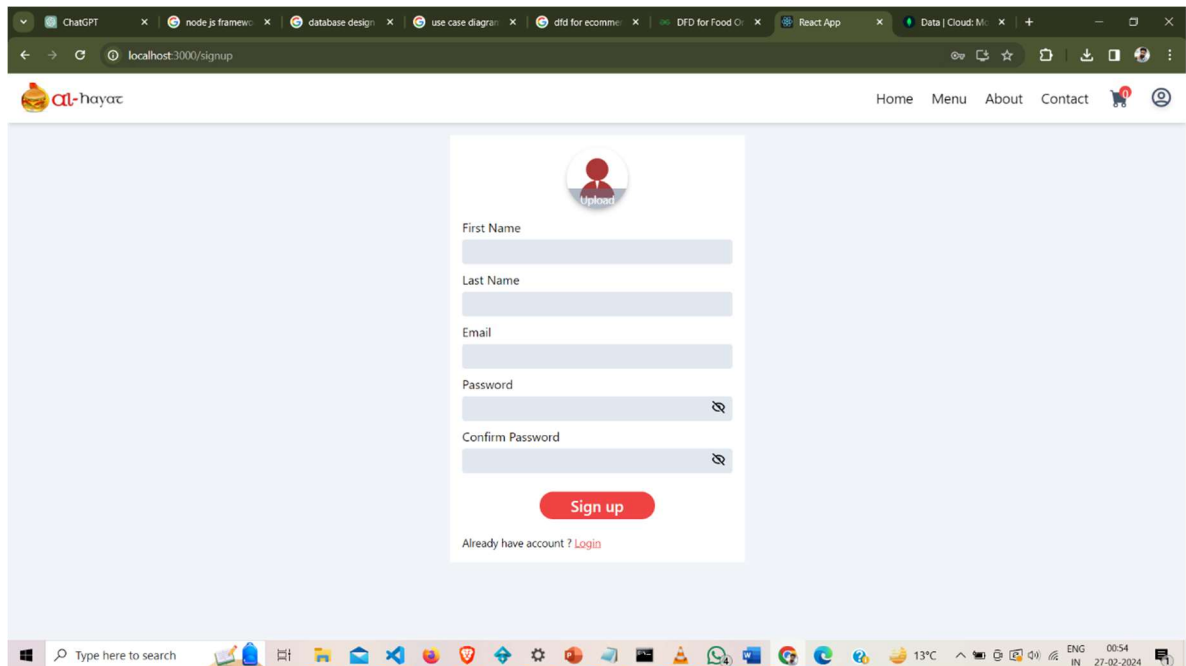


Fig. 4.2 User Registration

#### 4.1.3 Login Module: User can login with valid Credentials

- ✓ If admin entered incorrect credentials, then alert will generate but if credentials are matched with the admin credentials, then admin can login.

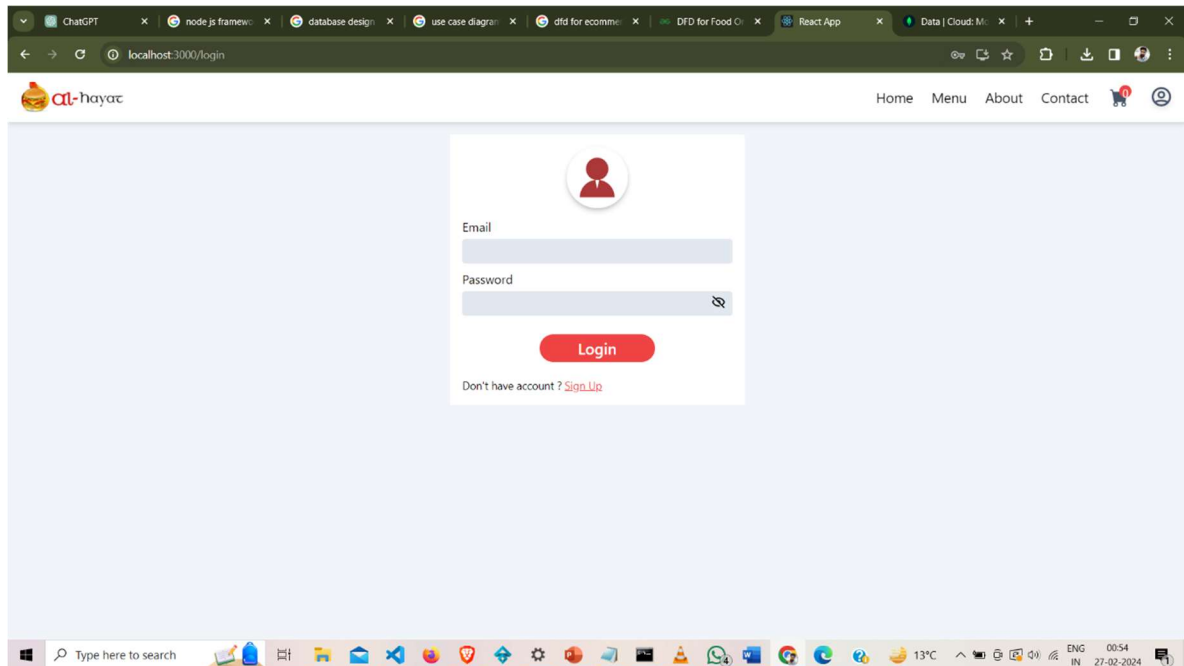


Fig. 4.3 User Enter Correct Credentials

#### 4.1.4 User Dashboard:

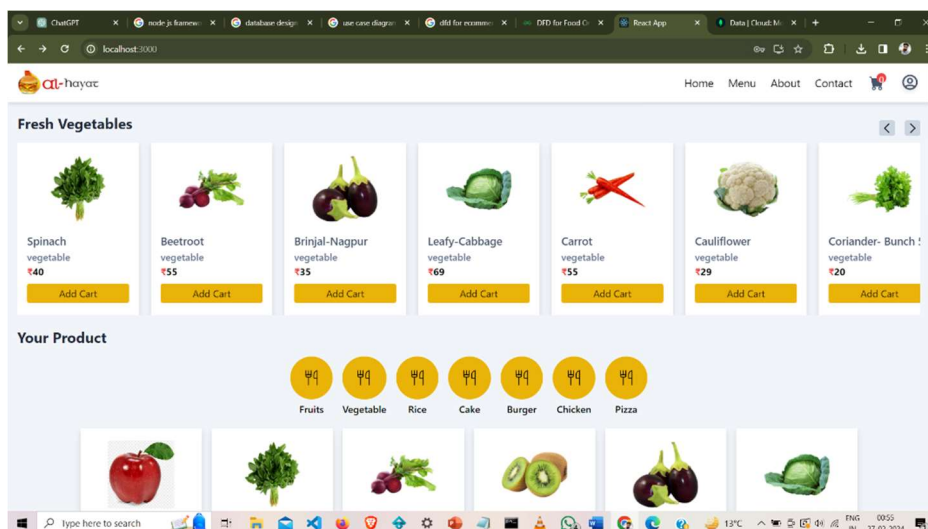


Fig. 4.4 User Dashboard

#### 4.1.4 Create/Add Items Form:

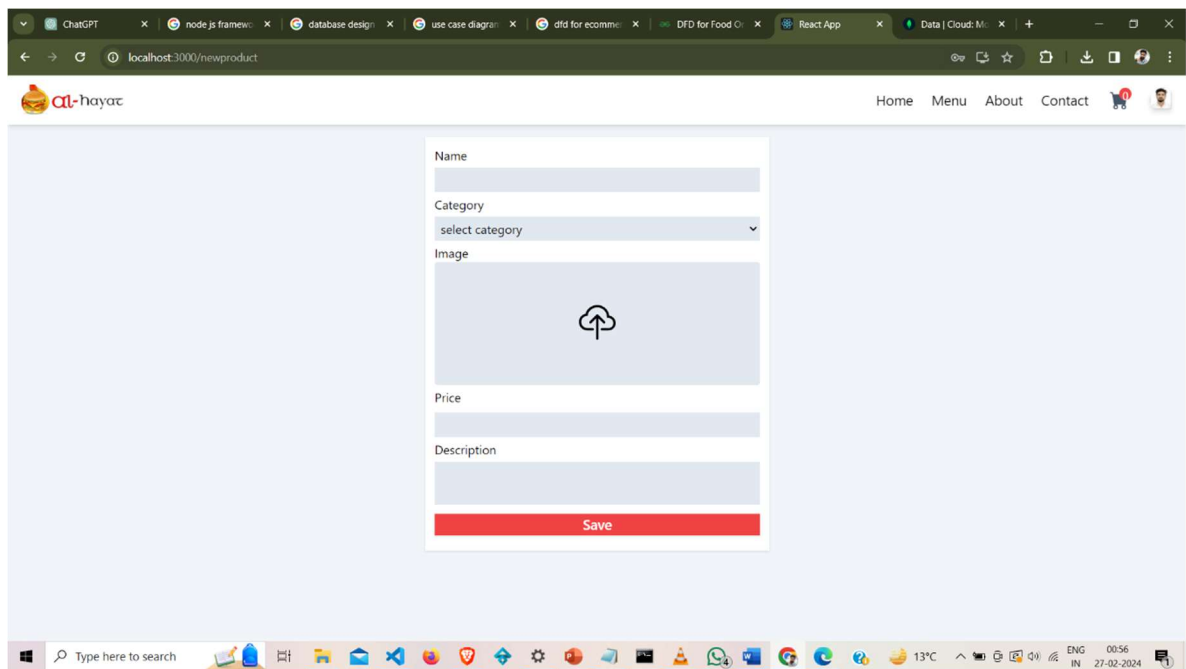


Fig. 4.5 Create/Add Items

#### 4.1.5 Cart:

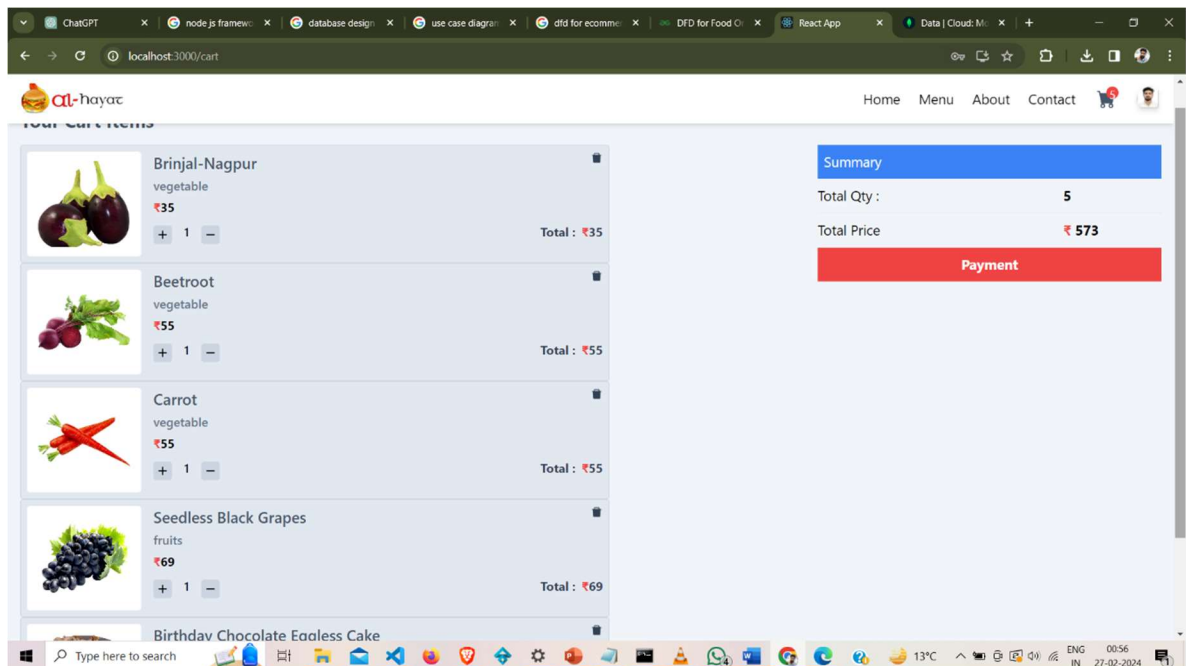


Fig. 4.6 Cart Module

## **CHAPTER 5**

### **TESTING**

#### **INTRODUCTION**

Testing is a crucial phase in the development lifecycle of the Al-Hayat e-commerce platform, ensuring thorough examination of its functionality, performance, and reliability. This essential process involves evaluating the platform's features, identifying potential defects, and ensuring that it meets specified requirements. Various testing methodologies, including unit testing, integration testing, and user acceptance testing, are employed to assess different facets of the platform. Testing not only validates that each component operates as intended but also verifies the seamless interaction between these components. By rigorously testing the Al-Hayat platform, developers aim to deliver a high-quality product that aligns with user expectations, minimizes the likelihood of errors, and provides a robust and reliable platform for effective online shopping.

#### **5.1 Test Case-1**

##### **5.1.1 Test Case 1: User Registration**

Objective: To ensure that users can successfully register for the Al-Hayat e-commerce platform.

##### **5.1.1.1 Preconditions:**

- The Al-Hayat platform is accessible and running.
- The user is on the platform's registration page.

##### **5.1.1.2 Test Steps:**

- Enter valid information into the registration form, including a unique email address, full name, and a secure password.
- Click on the "Submit" button.

##### **5.1.1.3 Expected Results:**

- The user should be successfully registered, and a confirmation message should be displayed.
- The user's information, including their email, should be stored in the database.

#### **5.1.1.4 Postconditions:**

- The user should be able to log in using the registered credentials.

## **5.2. Test Case-2**

### **5.2.1 Test Case 1: Add Products to Cart**

Objective: To verify that users can add products to their cart successfully.

#### **5.2.1.1 Preconditions:**

- The user is logged into the Al-Hayat e-commerce platform.

#### **5.2.1.2 Test Steps:**

- Navigate to the product page.
- Select a product and click on the "Add to Cart" button.
- Verify that the product is added to the user's cart.

#### **5.2.1.3 Expected Results:**

- The product should be successfully added to the user's cart, and a confirmation message should be displayed.
- The added product details, including the name, quantity, and price, should be stored in the user's cart.

#### **5.2.1.4 Postconditions:**

- The added product should be visible in the user's cart for checkout.

# BIBLIOGRAPHY

## **Books:**

1. Smith, John. (2020). E-commerce Essentials: A Comprehensive Guide to Building and Managing an Online Business. Publisher X.

This book offers comprehensive insights into the essentials of e-commerce, covering topics such as building and managing online businesses, which are crucial for the development of the Al-Hayat E-commerce platform.

2. Patel, Ravi. (2018). Mastering React: Building Scalable Web Applications. Publisher Y.

Providing an in-depth exploration of React, this book is essential for understanding the front-end development aspects of the Al-Hayat E-commerce platform.

## **Academic Journals:**

1. "Journal of E-commerce Research and Applications" This journal covers various aspects of e-commerce research and applications, making it a valuable resource for understanding trends and best practices in the e-commerce industry, which can be beneficial for the development of the Al-Hayat platform.

2. "International Journal of E-Business Research"

Focusing on e-business research, this journal provides insights into e-commerce strategies, technologies, and innovations, offering valuable information for the development and enhancement of the Al-Hayat E-commerce platform.

## **Online Resources:**

1. MDN Web Docs: React Documentation The React documentation on MDN Web Docs provides comprehensive information, tutorials, and guides on React, offering essential resources for developers working on the frontend of the Al-Hayat platform.

2. Shopify E-commerce University: E-commerce Guides and Resources Shopify E-commerce University offers a wide range of guides and resources covering various aspects of e-commerce, including business strategies, marketing techniques, and technical implementations, which can be beneficial for the development and management of the Al-Hayat E-commerce platform.