

ONLINE BAKERY SHOP

**A PROJECT REPORT SUBMITTED IN PARTIAL FULFILLMENT OF
THE REQUIREMENT FOR THE
DEGREE OF**

**MASTER OF COMPUTER APPLICATION
END SEMESTER**

By

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UNDER THE GUIDANCE OF

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**DEPARTMENT OF COMPUTER APPLICATION
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2024, June

Declaration by the Candidate

I, **Amir Suhel**, Roll No: 220320043003 is a student of the department of Computer Application, Girijananda Chowdhury Institute of Management and Technology hereby declares that I have compiled this progress report reflecting all my works during the semester long full-time projects part of my MCA curriculum.

I declare that, I have included the descriptions of my project work, and nothing has been copied but uses as references from other's work. The facts, figures, analysis, results, claims etc. depicted in my reports are all related to my full-time project work.

I, also declare that the same report or any substantial portion of this report has not been submitted anywhere else as part of any requirements for any degree/diploma etc.

Amir Suhel

ACKNOWLEDGEMENT

I thank Mr. Arindom Ain, Assistant Professor, Mr. Rajashri Paul, Assistant Professor & System Analyst, Mr. Jeetumoni Barman, Assistant Professor, Dr. Arnab Kumar Das, Assistant Professor, Mr. Pranjal Das, Assistant Professor, Department of Computer Application, GCU, for their constant support and encouragement given throughout the development of the project. I take this opportunity to specially extend our gratitude to our Project Guide, Dr. Mukta Ranjan Singha, Associate Professor & HOD, Department of Computer Application, GCU. Last but not the least, our sincere thanks to our parents, family and friends for their continuous support, inspiration, and encouragement without which this project would not have been successful.

Amir Suhel
MCA 4th Semester Roll Number: 220320043003
GIMT, Guwahati

Certificate

This is to certify that **Amir Suhel** (220320043003) who has carried out the project work on '**Online Bakery Shop**' at **GIMT, Guwahati, Assam-781017** under my supervision and has compiled this project report reflecting the candidate's work in the semester long project. The candidates did this project full time during the whole semester under my supervision, and the analysis, results, claims etc. are all related to his studies and works during the semester.

I recommend submission of this project report as a part for partial fulfillment of the requirements for the degree of Master of Computer Application of Assam Science and Technology University.

Dr. Mukta Ranjan Singha

Associate Professor & HOD

Department of Computer Application

**GIRIJANANDA CHOWDHURY INSTITUTE OF
MANAGEMENT AND TECHNOLOGY DEPARTMENT
OF COMPUTER APPLICATION**

Certificate

This is to certify that **Amir Suhel** , Roll No: **Roll 220320043003No** has successfully completed the System Development Project Work on '**Online Bakery Shop**' at **Xopuntech, Garigaon**. This project work is a bonafide work for the partial fulfilment of the requirement of the 4th semester **Master of Computer Application** Programme in the Department of Computer Application, **Girijananda Chowdhury Institute of Management and Technology**, Guwahati., affiliated to **Assam Science And Technology University, Guwahati** and approved by **AICTE, MHRD, Govt. of India**

The work done by him is an academic work and cannot be presented for any other purpose.

I wish him/her all success in life.

External Examiner

Dr. Mukta Ranjan Singha

Head

Department of Computer
Application,

GIMT, Guwahati

CERTIFICATE

TO WHOM IT MAY CONCERN

Dated: 24-06-2024

This is to certify that the project report entitled "Ecommerce Platform as a Service (Online Bakery Shop)", submitted to the Department of Computer Science, Girijanada Choudhury University, Azara in partial fulfillment for the award of the degree of Master of Computer Applications is a record project work carried out by Amir Suhel bearing Roll no: 220320043003 under my supervision during the internship period from 22nd January 2024 to 24th June 2024 at XopunTech (India) Pvt. Ltd. for partial fulfillment of the internship requirements.

He was part of Xopuntech Bootcamp cum Internship Program and as a part of the project, he learned React JS, Node Js(Express), MySQL and Bootstrap and has demonstrated significant growth in JavaScript, and problem-solving abilities, consistently produced clean, readable codes.

Congratulations from the Xopuntech family.

Warm regards,
Xopuntech India Private Limited


Director

MD MUKIBUL ISLAM
MANAGING DIRECTOR
XOPUNTECH (INDIA) PRIVATE LIMITED


Mr. Nitya Ranjan Deori
Project Leader

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Chapter-1

1. Introduction

E-commerce offers a fantastic opportunity for businesses to reach new customers and expand their reach. This project focuses on creating a user-friendly online platform specifically designed for a bakery.

1.1 Problem Statement

This web application, built with Node.js, and React aims to provide a seamless online shopping experience for customers looking to purchase delicious baked goods from your bakery. Customers will be able to:

- Browse a variety of bakery products with enticing descriptions and mouth-watering images.
- Compare prices and product details to find the perfect treat.
- Conveniently purchase items online for delivery or pick-up.

Integration with local delivery services will ensure timely and accurate deliveries, getting fresh pastries straight to your customers' doorsteps.

For bakery management, a comprehensive admin dashboard will be included. This dashboard will allow you to:

- Manage your product listings, including adding new items, updating descriptions, and adjusting prices.
- Track inventory levels to ensure you never run out of your most popular items.
- View and fulfill customer orders efficiently.
- Access valuable customer data and analytics to gain insights into buying trends and make informed business decisions.

Overall, this online bakery platform provides a complete solution:

- **For Customers:** A convenient and user-friendly way to browse, purchase, and enjoy your delicious baked goods.
- **For Your Bakery:** A powerful tool to expand your reach, streamline operations, and gain valuable customer insights.

1.2 Reasons for This Project

There are several compelling reasons to develop an e-commerce platform specifically for your bakery:

- **Reach a Wider Audience:** Go beyond your physical location and attract customers from a broader geographic area. This online platform can showcase your bakery's offerings to anyone with an internet connection.
- **Increased Convenience:** Today's customers are busy and appreciate convenient shopping options. This platform allows them to browse and purchase your baked goods from anywhere, anytime.
- **Boost Sales:** By offering online ordering, you create a new sales channel, potentially leading to increased sales and revenue.
- **Gather Valuable Data:** Gain valuable insights into customer behavior through purchase data and analytics. This information can help you refine your product offerings, tailor promotions, and make strategic business decisions.
- **Improved Customer Experience:** The platform provides a user-friendly and personalized shopping experience, potentially leading to increased customer satisfaction and loyalty.

1.3 Target Audience

This online bakery platform targets two primary audiences:

- **Online Shoppers:** Customers who enjoy the convenience of online shopping and appreciate the ability to browse and purchase delicious treats from the comfort of their homes.
- **Your Bakery:** This platform empowers you to expand your reach, streamline operations, and gain valuable customer insights to grow your online presence.

In essence, this e-commerce platform caters to anyone who wants to buy and sell delicious baked goods in a convenient and user-friendly online environment.

Chapter-2

2. Aim and objectives:

2.1 Objectives

The aims and objectives of the Online Bakery Shop project can be summarized as follows:

- To deliver a seamless and user-friendly online shopping experience to customers, allowing them to browse, compare, and purchase a variety of bakery products with ease.
- To provide a secure payment gateway for customers to complete their transactions and integrate with various delivery services to ensure timely and accurate delivery of bakery items.
- To offer a comprehensive admin dashboard for bakery owners, enabling them to manage products, inventory, orders, and customer information effortlessly.
- To provide detailed analytics and reports to bakery owners, helping them make informed business decisions based on customer behavior and preferences.
- To offer a highly customizable and scalable platform, allowing bakery owners to personalize the look and feel of their online shop and add new products as their business expands.
- To ensure a reliable and stable platform capable of handling high volumes of traffic and transactions while maintaining maximum uptime.

Chapter-3

3. Preliminary System Analysis and Planning

3.1 Functional Requirements

3.1.1 Key Modules of the Proposed System

The platform consists of two main modules: the User Module and the Admin Module, each encompassing several components with specific features and functionalities.

User Module

The User Module focuses on providing functionalities and features to regular users or visitors of the application. It includes the following components:

Authentication Module:

User Registration and Authentication: Users can create an account, log in, and log out, enabling access to personalized features and content.

Security Features: Ensures secure login processes and protects user data.

Product Module:

Product Catalog Management: Users can browse through the product listings, including details such as descriptions, prices, and images.

Description: The browse function allows users to view the list of available products.

Shopping Cart Module:

Cart Management: Users can add, remove, and modify items in their shopping cart.

Checkout Process: Facilitates a seamless checkout experience, including order confirmation.

○

User Profile Module:

- **Profile Management:** Users can view and update their personal information, such as contact details and addresses.
- **Order History:** Users can view their past orders and track the status of current orders.

Search and Filter Module:

- **Search Functionality:** Users can search for products using keywords.

Filtering Options: Users can filter products based on criteria such as category, price range, and ratings.

Description: Users can view and update their personal information, such as contact details and addresses.

2. Admin Module

The Admin Module is maintained by the administrator of the system and allows authorized users to manage and control various aspects of the application. It includes the following components:

Product Management Module:

- **Description:** Admins can create, update, and delete product listings, including details such as descriptions, prices, and images.

Order Management Module:

Order Processing: Admins can view, update, and manage orders.

Overall, the User and Admin modules work together to provide a comprehensive end-to-end solution for bakery businesses looking to establish or expand their online presence, while offering customers a seamless and enjoyable shopping experience.

3.2 Requirement Analysis

3.2.1 FEASIBILITY STUDY

The feasibility study for the 'Online Bakery Shop' assesses the practicality, viability, and potential success of implementing the proposed system. The study is conducted in three key dimensions: technical feasibility, financial feasibility, and operational feasibility. The system has been tested for feasibility in the following points:

1. Technical feasibility

The project titled "Online Bakery Shop" is technically feasible because the project is developed using modern and robust technologies including HTML, CSS, JavaScript, React.js, Bootstrap for the client-side, and Node.js, Express.js, and MySQL for the server-side. The project development environment is well-supported with a powerful PC configuration, a stable internet connection, and the necessary software development tools and libraries.

2. Financial feasibility

The financial feasibility of this project is promising. The cost of developing and hosting the app is manageable, with initial investments directed towards server hosting, domain registration, and minimal development costs as open-source technologies are utilized. Revenue generation is anticipated through product sales, delivery charges, and potential advertising. The app is expected to be profitable given the increasing demand for online food delivery services and the convenience it offers to customers.

3. Operational feasibility

The Online Bakery Shop is a web-based application that can be accessed from various devices and operating systems such as Windows, Mac, Android, iOS, and Linux. The only requirement for accessing the application is a web browser, which makes it highly accessible. The user interface (UI) is designed to be user-friendly, ensuring that users can easily navigate and obtain information without additional support. The system also ensures efficient record-keeping, data accuracy, and integrity, providing a reliable and user-friendly platform for both customers and administrators.

3.2.3 Non-functional Requirements

The non-functional requirements for the Online Bakery Shop project include:

Performance: The platform should handle a large number of simultaneous users and transactions without significant slowdowns or downtime.

Reliability: The Online Bakery Shop should have high availability and be dependable, with minimal outages or disruptions in service.

Compatibility: The platform must be compatible with various devices and browsers, ensuring a seamless experience across desktops, tablets, and smartphones.

Maintainability: The system should be designed for easy maintenance and updates, allowing for quick resolution of issues and implementation of improvements.

Compliance: The Online Bakery Shop must adhere to relevant legal and regulatory requirements, including data protection and e-commerce regulations.

3.2.3 SOFTWARE AND HARDWARE REQUIREMENTS

To ensure successful implementation, the key features, functionalities, and constraints of the system are outlined below:

Hardware Requirements

Processor: Intel i3 6th generation or higher

RAM: 4GB or higher

Cache: 2 MB or higher

Hard Disk: 10 GB or higher

Keyboard: Microsoft Compatible 101 or more

Software Requirements

Operating System: Windows / Linux / MacOS

Web Technology: Open Source

Web Browser: Any modern web browser (Chrome, Firefox, Safari, etc.)

IDE or Editor: VS code, IntelliJ IDEA

Front-End: React.js, Bootstrap

Back-End: Node.js, Express.js

Database: MySQL

By addressing these feasibility aspects, the Online Bakery Shop project is poised for successful implementation, providing a valuable and efficient service for users.

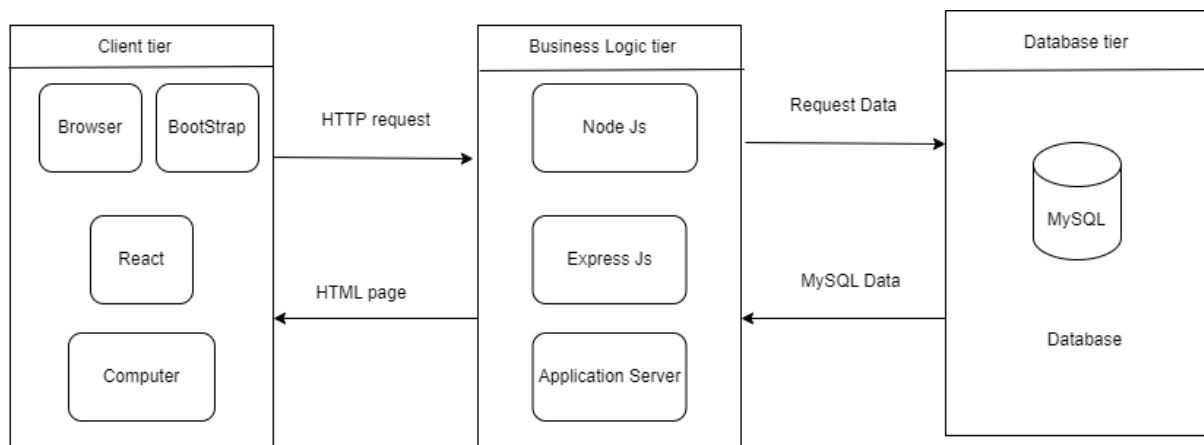
Chapter-4

3.1 System Design

- **INTRODUCTION TO SYSTEM DESIGN:**

Design is the first step in the development phase, crucial for defining a device, process, or system in enough detail to allow its physical realization. Once software requirements are analyzed and specified, the design phase involves three main activities: design, coding, and testing, all essential for building and verifying the software. Design decisions made during this phase are critical as they impact the software's success, reliability, and ease of maintenance. Accurate translation of customer requirements into a finished product relies heavily on effective design, ensuring the software meets user needs and is maintainable over time.

Architecture Diagram:



This architecture diagram illustrates a multi-tiered architecture for a web application using React, Node.js, Express.js, MySQL, and Bootstrap. This architecture is divided into three main tiers: Client Tier, Business Logic Tier, and Database Tier.

Client Tier

Client Tier: The user interacts with the application through a web browser, which renders the user interface built with React and styled using Bootstrap.

- **Browser:** The browser is the platform where the end-user interacts with the web application. It renders the front-end code, enabling user interaction with the interface.
- **Bootstrap:** Bootstrap is a front-end framework used to create responsive and visually appealing web pages. It provides a collection of CSS and JavaScript components for designing the user interface.

- **React:** React is a JavaScript library used for building user interfaces, particularly single-page applications. It allows developers to create reusable UI components and manage the state of the application efficiently.
- **Computer:** This represents the user's device (desktop, laptop, etc.) where the browser runs. It executes the front-end code and provides the interface for user interaction.

Business Logic Tier:

When the user performs an action, such as submitting a form, the browser sends a request to the server hosted on the application server. The server, running Node.js and Express.js, processes the request and applies the necessary business logic.

- **Node.js:** Node.js is a runtime environment that allows the execution of JavaScript code on the server side. It enables the development of scalable and high-performance server-side applications.
- **Express.js:** Express.js is a web application framework for Node.js. It provides a set of features for building web applications and APIs, including routing, middleware support, and handling HTTP requests and responses.
- **Application Server:** The application server hosts the server-side application built using Node.js and Express.js. It processes client requests, applies business logic, and communicates with the database tier to retrieve or store data.

Database Tier

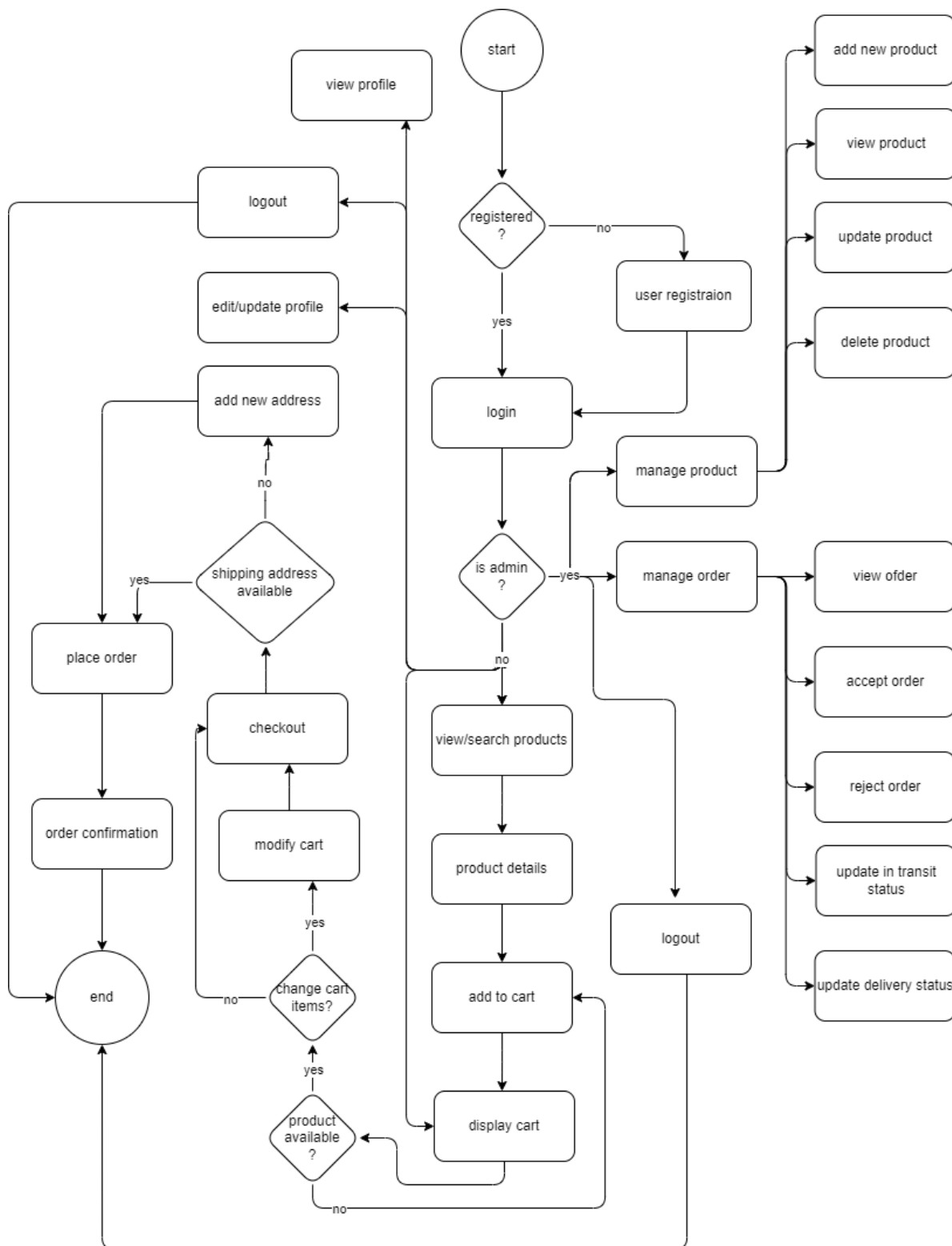
If the request requires data storage or retrieval, the server communicates with the MySQL database. The server performs the required database operations and sends the response back to the client.

- **MySQL:** MySQL is a relational database management system (RDBMS) used to store and manage the application's data. It provides functionalities for querying, inserting, updating, and deleting data in a structured format.
- **Database:** This represents the actual database instance running MySQL. It stores all the application's data, such as user information, application settings, and other necessary records.

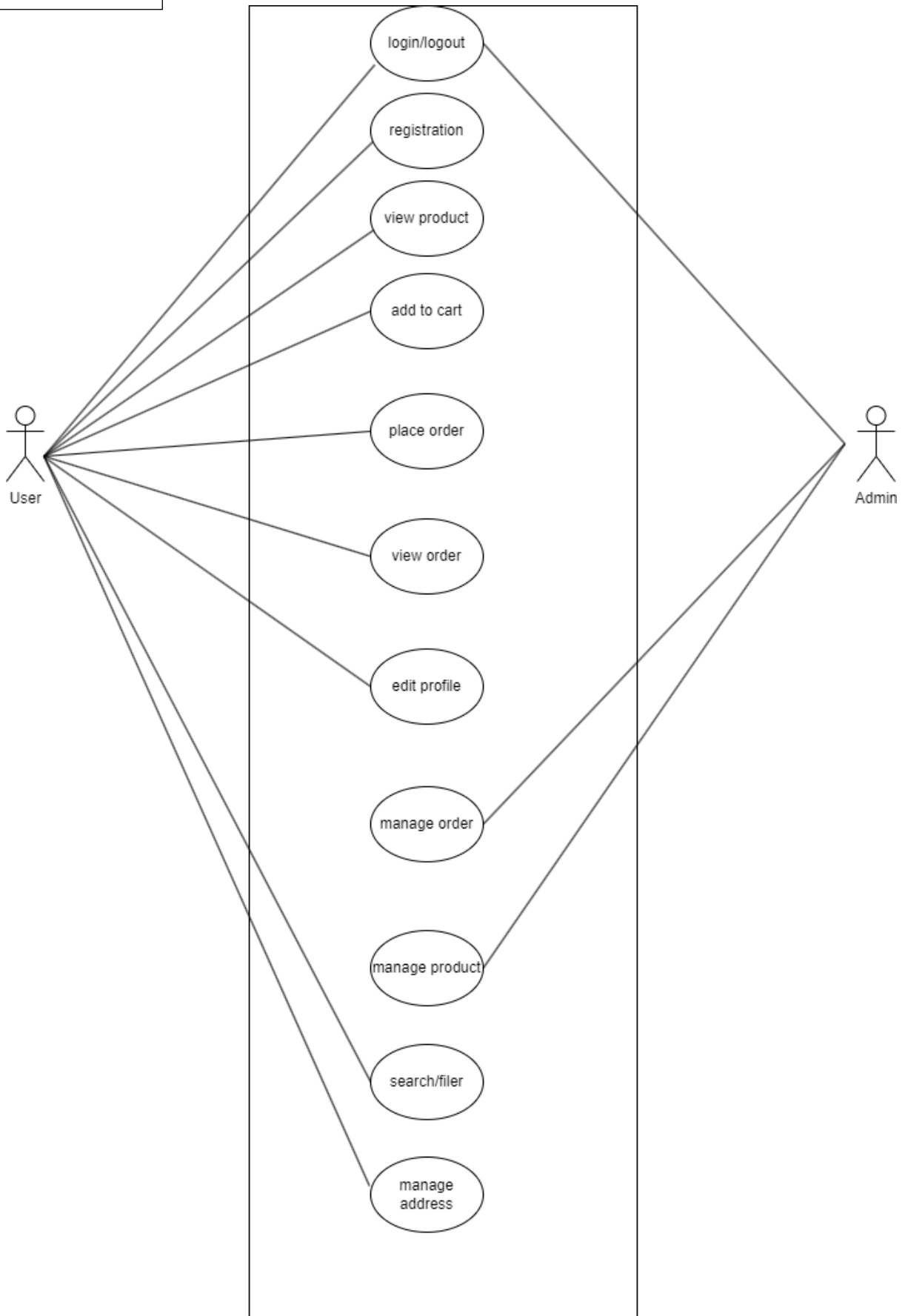
Summary of Data Flow

This architecture ensures a clear separation of concerns, making the application modular, scalable, and easier to maintain.

3.2 Work Flow diagram:



Use case



Register New User

Description: The register function is used to register new user.

- User asked to click the “Register” option.
- **SYSTEM:** Displays box which contain username, email, password, confirm password.
- **USER:** Enters the details and submit
- **Output:** “Successfully registered”.
- **Output:** Else “Invalid Request”.
 - **SYSTEM:** Display “password didn’t match or email is not valid” option.
 - **SYSTEM:** User asked to enter the user details again
 - **USER:** Enters the email and new password.
 - **SYSTEM:** “Register Successful”.

Login Registered User:

Description: This module is use to authenticate registered user and allowing them to proceed to the portal.

- **User:** asked to enter the username and the password.
- **SYSTEM:** Displays the box to enter the username and the password.
USER: Enters the required details and login.
- **Output:** If the credentials were correct its will display “Successful Login”.
- **Output:** Else “Invalid user name or password”.
 - **SYSTEM:** Display “user not found or wrong password” option.
 - **SYSTEM:** User asked to enter the user details again
 - **USER:** Enters the email and password.
 - **SYSTEM:** “Login Successful”.

Logout:

Using this case, customers can logout from their account.

- **Customer:** Selects logout option
- **System:** Displays a logged out dialogue.

Product Module:

Product Catalog Management: Users can browse through the product listings, including details such as descriptions, prices, and images.

Description: The browse function allows users to view the list of available products.

Input: User clicks the “View all Products” option.

- **SYSTEM:** Displays a list of products including descriptions, prices, and images.

- **USER:** Views the product listings.

View Product Details

Description: The view details function allows users to see detailed information about a specific product.

Input: User clicks on a specific product from the product list.

- **SYSTEM:** Displays a box containing the product's name, description, price, and images.
- **USER:** Views the detailed information.

Shopping Cart Module:

Cart Management: Users can add, remove, and modify items in their shopping cart.

Checkout Process: Facilitates a seamless checkout experience, including order confirmation.

- **Add Product to Cart :** (in home page and also in product details page)
Using this case, customers can add bakery products to their cart using counter.
 - **Customer:** Selects Add to Cart button for desired product.
 - **System:** checks for login
 - **If not logged in**
 - **System:** Redirects to login page.
 - **User:** Does login.
 - **Customer:** Selects Add to Cart button for desired product.
 - **System:** Adds the selected product to the customer's shopping cart
 - **Customer:** Press on + or - button to add quantity
 - **System:** Quantity increases or decreases
 - **Customer:** Press on remove product button
 - **System:** Product removed form cart
- **Checkout:**
Using this case, customers can proceed to checkout with items in their cart.
 - **Customer:** Proceeds to checkout.
 - **System:** Displays checkout page with summary of items in the cart.
 - **Customer:** shipping information.
 - **System:** Processes the order and asks for delivery address.
 - **User:** Chooses delivery address. And presses proceed to checkout.
 - **System:** Processes the order and provides confirmation.

User Profile Module:

- **Profile Management:** Users can view and update their personal information, such as contact details and addresses.
- **Order History:** Users can view their past orders and track the status of current orders.

Search and Filter Module:

- **Search Functionality:** Users can search for products using keywords.

Filtering Options: Users can filter products based on criteria such as category, price range, and ratings.

Description: Users can view and update their personal information, such as contact details and addresses.

View Profile:

- **User:** selects the “View Profile” option.
- **System:** Checks for logged in.
- **If logged in:**
 - **SYSTEM:** Displays the user's current personal information (e.g., name, email, address, phone number).
 - **USER:** Views their profile details.
- **Else:**
 - System: redirects to login page.

2. Admin Module

The Admin Module is maintained by the administrator of the system and allows authorized users to manage and control various aspects of the application. It includes the following components:

Product Management Module:

- **Description:** Admins can create, update, and delete product listings, including details such as descriptions, prices, and images.

Create Product:

- Admin: selects the “Add Product” option.
- **SYSTEM:** Displays a form to enter product details (e.g., name, description, price, images).
- **ADMIN:** Enters the product details and submits the form.
- **Output:** “Product added successfully.”
- **Output (Failure):** “Failed to add product, please try again.”
- **SYSTEM:** Displays error message.
- **ADMIN:** Corrects the details and resubmits the form.
- **SYSTEM:** “Product added successfully.”

Update Product:

- **Admin:** selects a product to update.
- **SYSTEM:** Displays a form with the current product details pre-filled.
- **ADMIN:** Updates the necessary details and submits the form.
- **Output:** “Product updated successfully.”
- **Output (Failure):** “Failed to update product, please try again.”
 - **SYSTEM:** Displays error message.
 - **ADMIN:** Corrects the details and resubmits the form.
 - **SYSTEM:** “Product updated successfully.”

Delete Product:

- **Input:** Admin selects a product to delete.
- **SYSTEM:** Displays a confirmation message.
- **ADMIN:** Confirms the deletion.
- **Output:** “Product deleted successfully.”
- **Output (Failure):** “Failed to delete product, please try again.”
- **SYSTEM:** Displays error message.
- **ADMIN:** Attempts to delete the product again.
- **SYSTEM:** “Product deleted successfully.”

Order Management Module:

Order Processing: Admins can view, update, and manage orders.

View Orders:

- **Admin:** selects the “View Orders” option.
- **SYSTEM:** Displays a list of orders with details (e.g., order number, customer name, items, total amount, status).
- **ADMIN:** Views the order list.

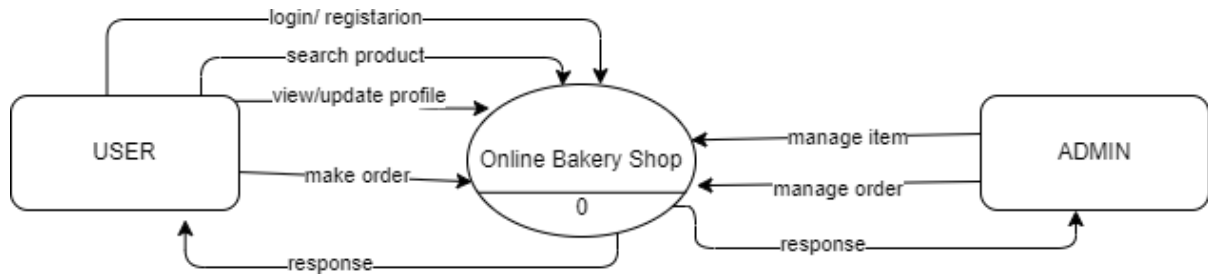
Update & Manage Order Status:

- **Admin:** selects an order to update its status.
- **SYSTEM:** Displays the current order details, including the status.
- **ADMIN:** Updates the order status (e.g., accepted, rejected, shipped, delivered) and submits.
- **Output:** “Order status updated successfully.”
- **Output (Failure):** “Failed to update order status, please try again.”
 - **SYSTEM:** Displays error message.
 - **ADMIN:** Corrects the details and resubmits the form.
 - **SYSTEM:** “Order status updated successfully.”

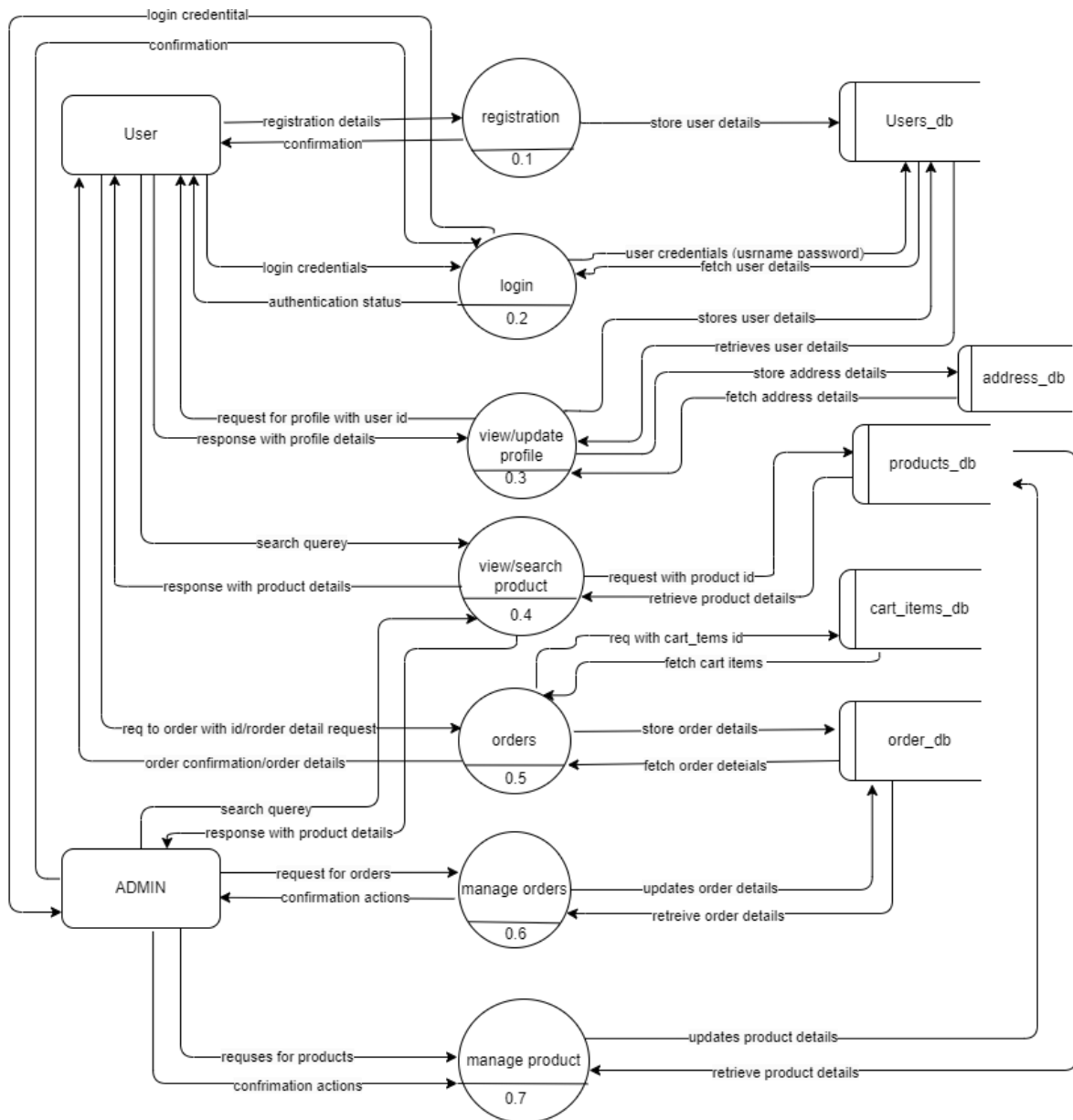
Overall, the User and Admin modules work together to provide a comprehensive end-to-end solution for bakery businesses looking to establish or expand their online presence, while offering customers a seamless and enjoyable shopping experience.

3.4 DFD

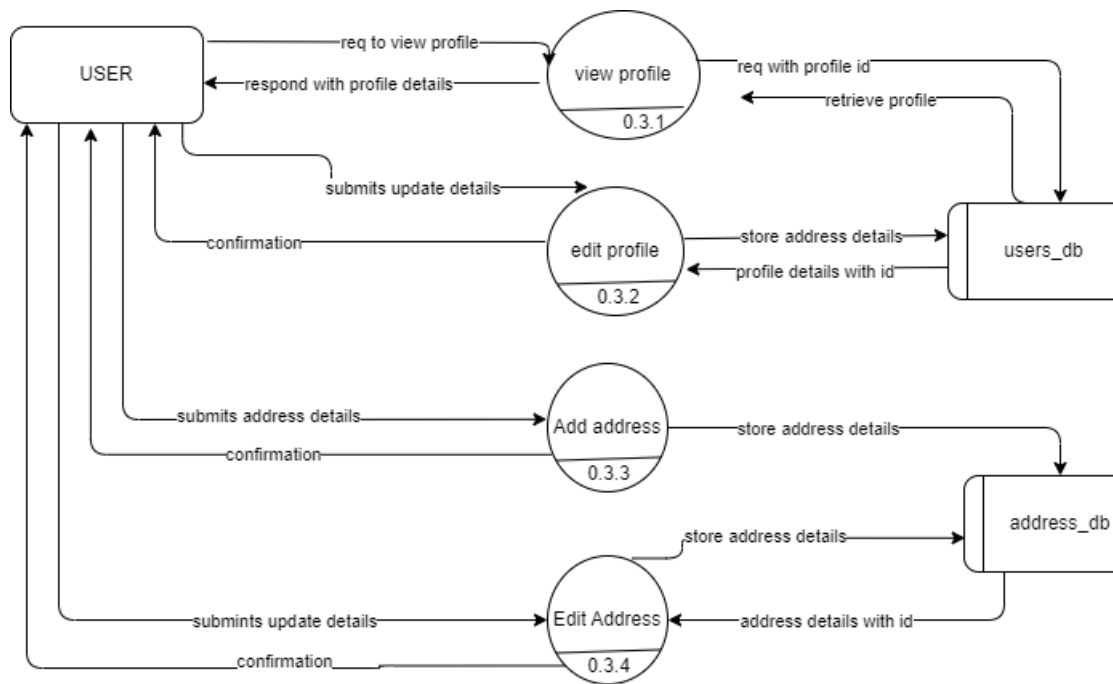
3.4.1 Context diagram



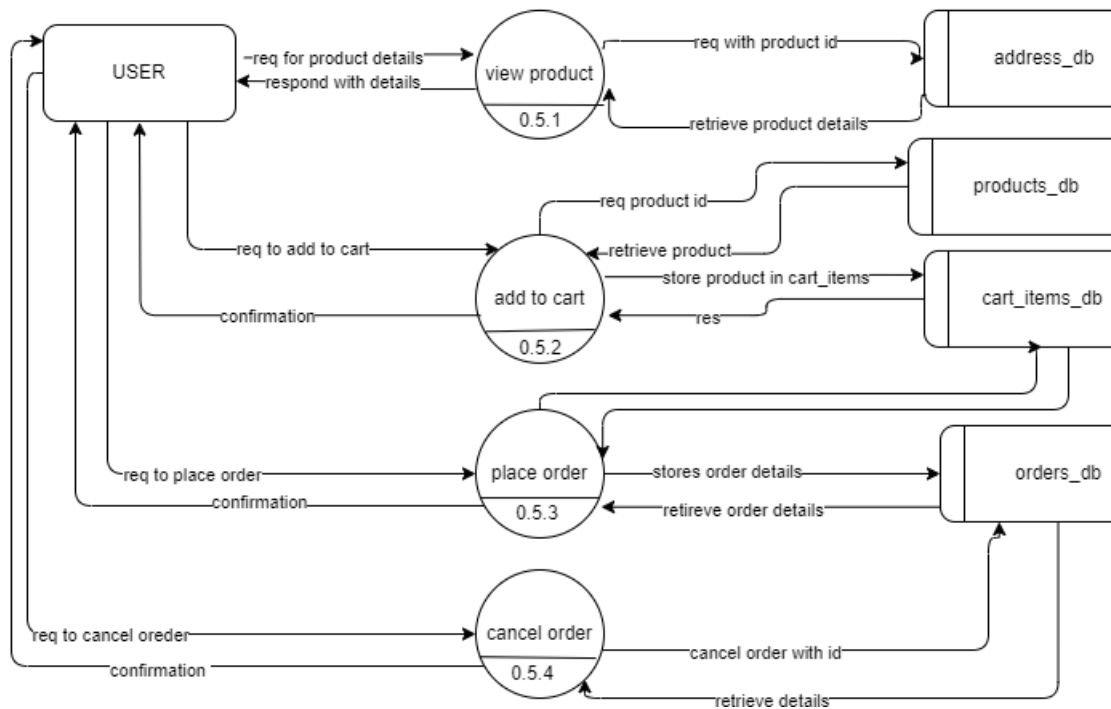
3.4.2 First Level DFD:



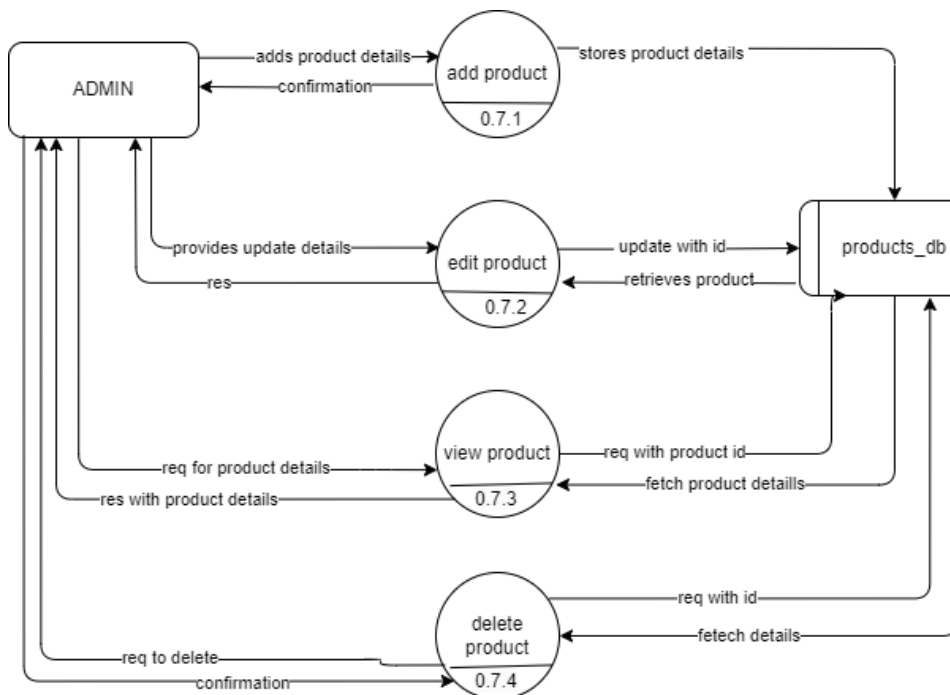
3.4.3 2nd level DFD for Customer: user account



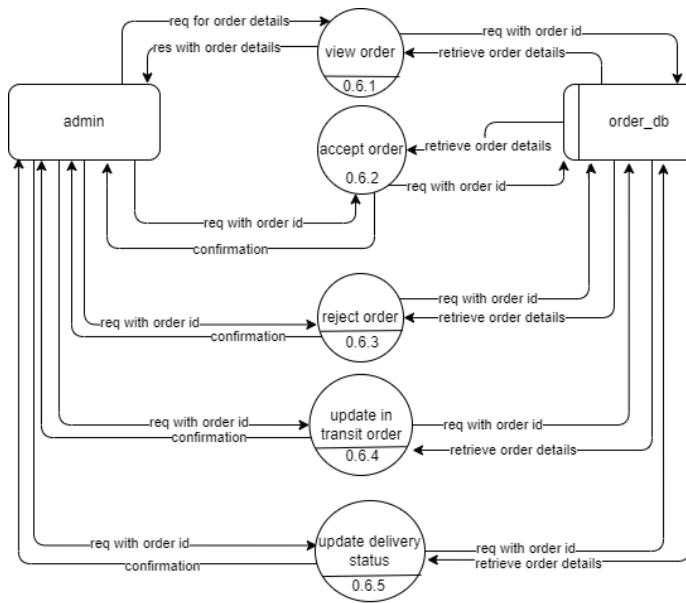
3.4.4 2nd level: User Order:



3.4.5 2nd level: admin: product manage

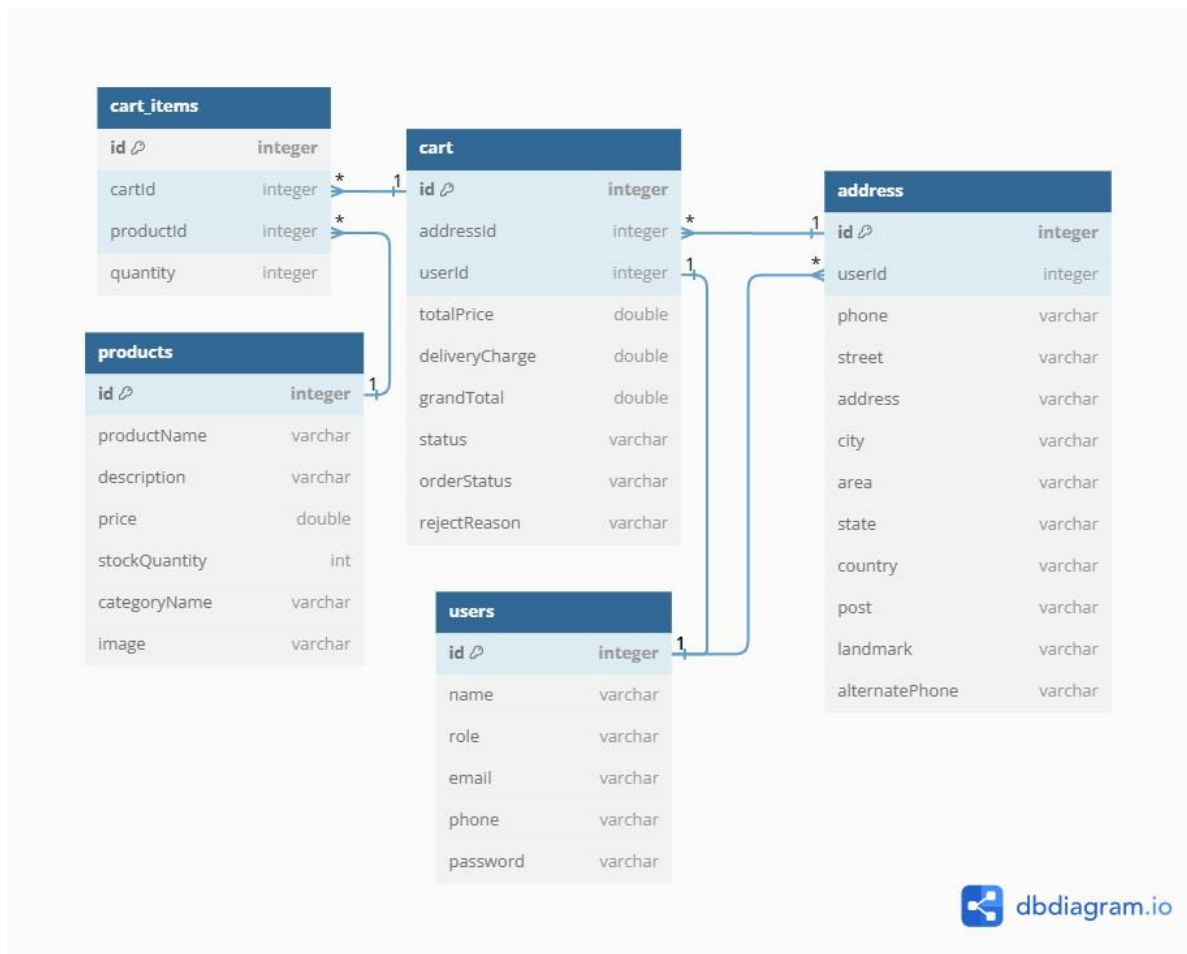


3.4.6 2nd level DFD: order Manage:

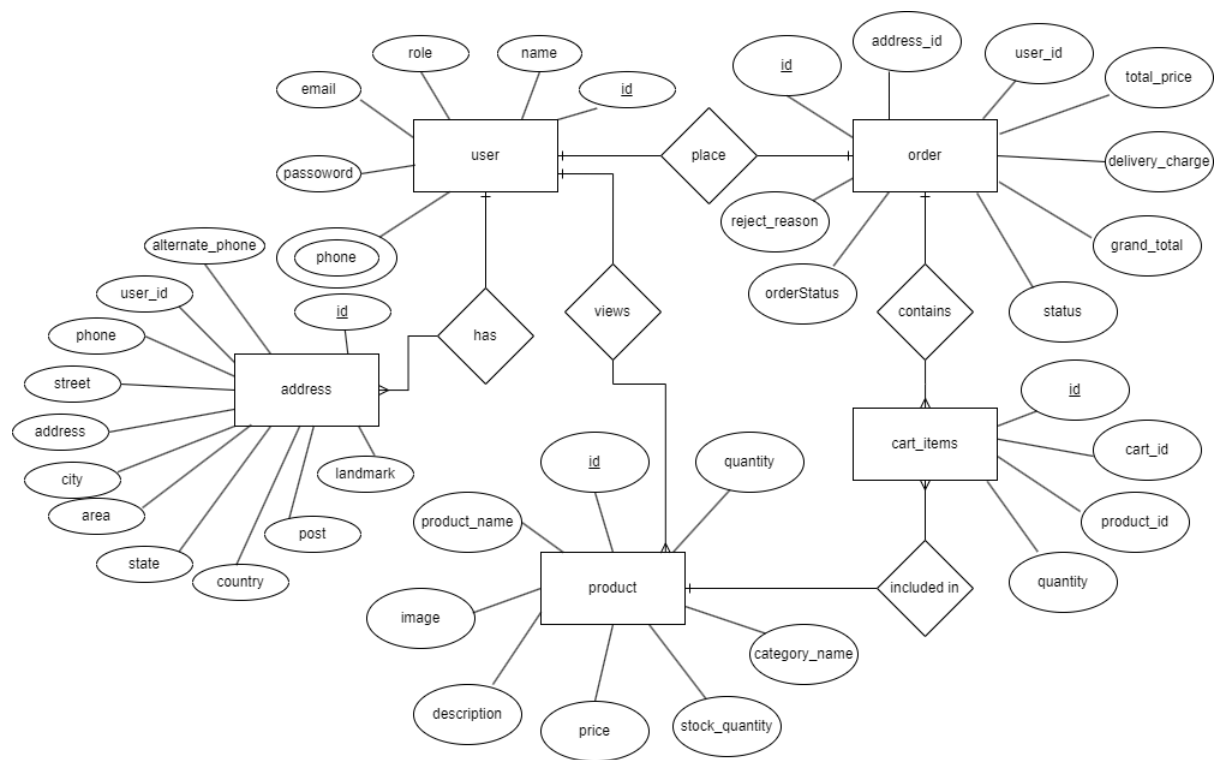


req with order id

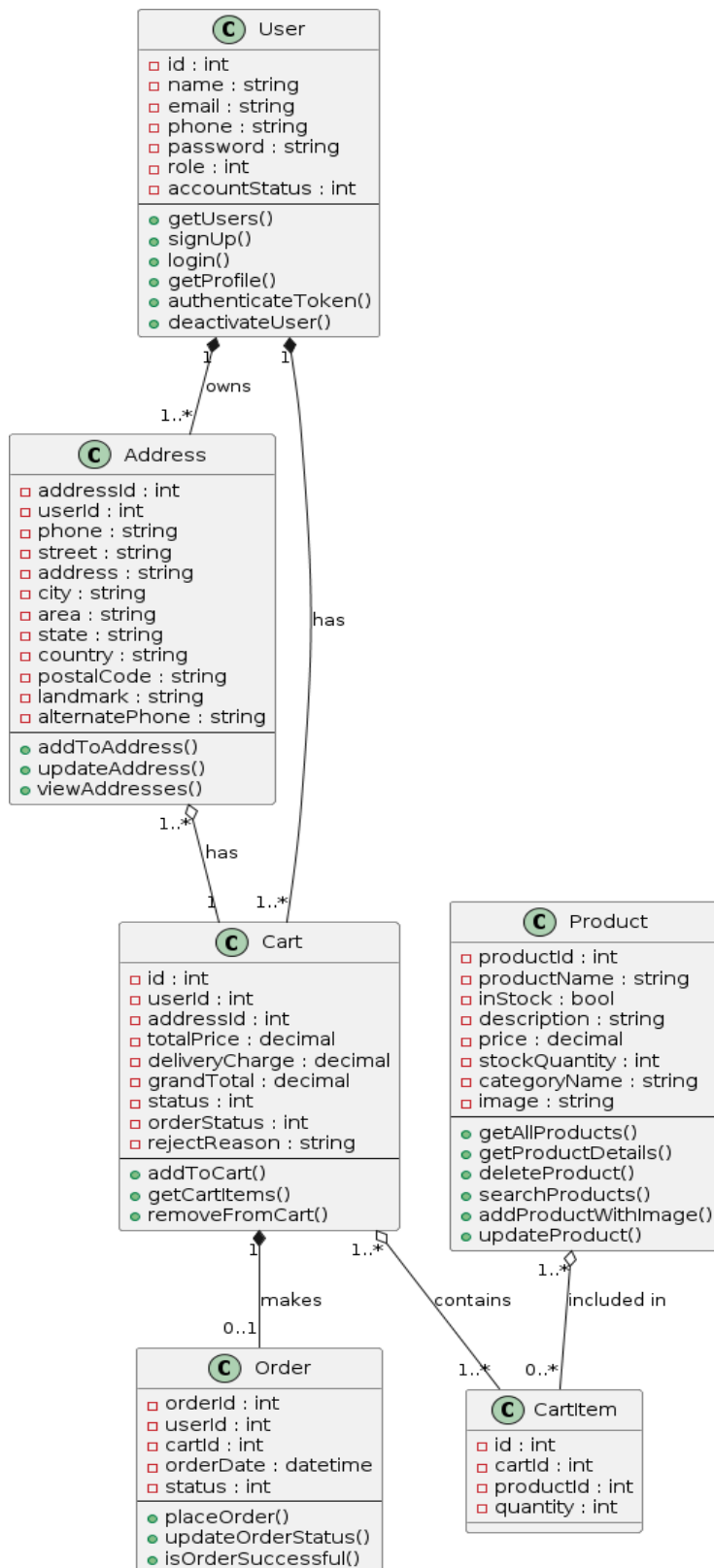
3.4.7 Database Structure



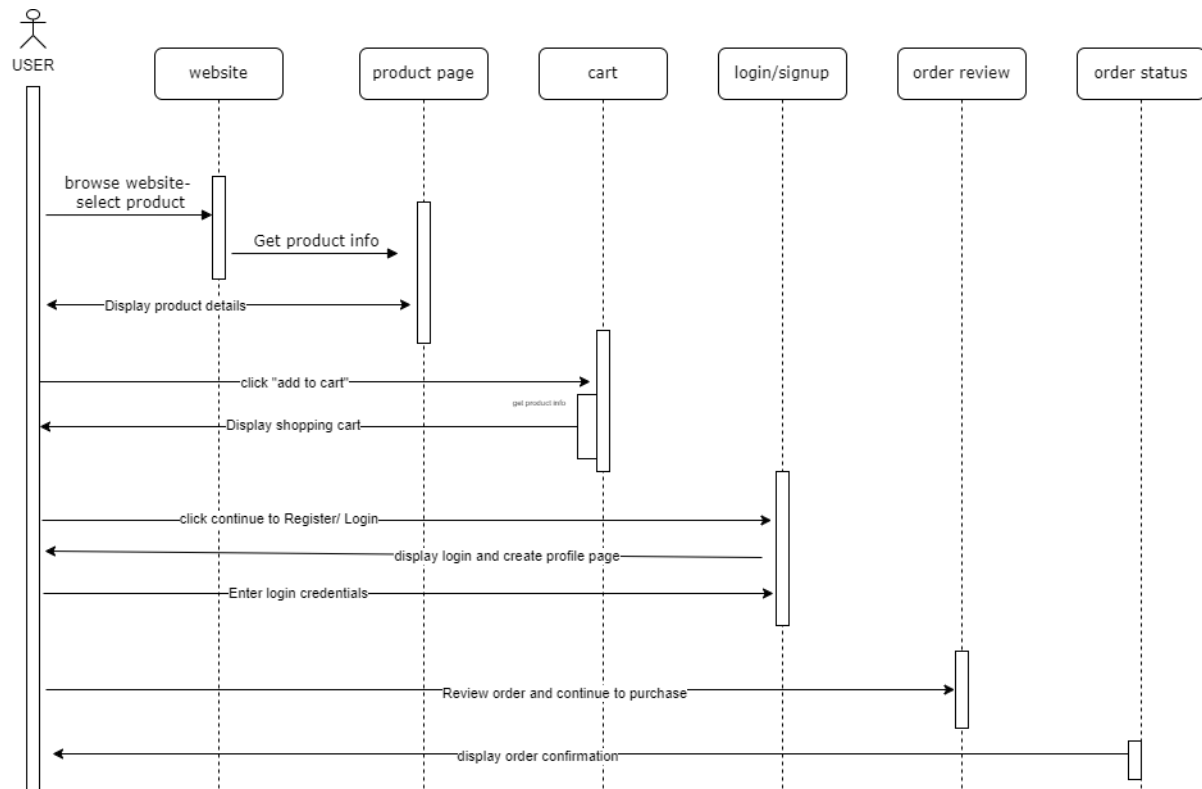
3.4.8 ER Diagram



3.4.9 Class Diagram



3.4.10 Sequence Diagram:



Chapter-5

4 Development and Coding:

For this online bakery shop e-commerce website, I leveraged React JS for the frontend, Node.js and Express.js for handling server-side requests, and MySQL for database management. Here's an overview of the completed development process:

4.1 Setup and Project Initialization and Development Environment Setup:

- Installed Node.js and npm (Node Package Manager) for managing React and Express.js.
- Installed MySQL for database management.

4.2 Project Creation:

- Initialized a new React project using Create React App.
- Set up a new Node.js project and installed Express.js.

4.3 Frontend Development with React:

User Interface Design:

- Created user interface components specific to the bakery shop using React.
- Implemented navigation between pages (e.g., home, product listing, product details, cart, checkout) using React Router.
- Integrated with backend APIs to fetch and display data (e.g., product listings, user details).

4.4 Key Features Development:

- Developed product listing with search functionality and filters.
- Created detailed product views.
- Implemented shopping cart functionality with add, update, and remove product capabilities.
- Implemented user authentication (login, registration).

Styling:

- Enhanced UI design and ensured responsiveness using CSS and styling libraries/frameworks such as Bootstrap and Material-UI.

4.5 Backend Development with Node.js and Express.js:

Server Setup:

- Set up the server with Express.js to handle client requests.
- Implemented RESTful APIs to manage products, users, orders, and cart functionality.
- Connected to the MySQL database to perform CRUD operations.

Database Integration:

- Designed and set up the MySQL database schema for products, users, orders, etc.
Configured the database connection for the Node.js application.

Backend Features Development:

- Implemented user registration and authentication.
- Managed product creation, reading, updating, and deletion.
- Developed shopping cart management.
- Processed and managed orders.

4.6 Integration of Frontend and Backend:

4.7 API Integration:

- Connected the React frontend with the Node.js/Express.js backend by making API calls using Axios and Fetch API.
- Handled responses to display data on the frontend and manage user interactions.

4.8 Authentication and Authorization:

- Implemented authentication mechanisms using JSON Web Tokens (JWT) to secure the backend APIs.
- Protected sensitive endpoints to ensure that only authorized users could access certain functionalities (e.g., order management, user profile).

Chapter 6

Testing:

5.1 Unit Testing:

- Tested individual components and functions in both the frontend and backend.
- Used testing frameworks like Jest and React Testing Library for React components.
- Utilized Mocha and Chai for testing backend functions and APIs in the Node.js/Express.js application.

5.2 Integration Testing:

- Verified the interaction between different modules and components.
- Ensured that the frontend correctly communicates with the backend APIs.
- Used Postman to test API endpoints and validate the data flow.

5.4 Component Tests:

- Verified that React components render correctly with various props and states.
- Ensured that user interactions (clicks, form submissions) trigger the expected outcomes.

5.5 UI/UX Tests:

- Validated the visual consistency of the application using snapshot testing.

5.6 Backend Testing:

5.6.1 API Tests:

- Ensured that each API endpoint returns the correct data and handles errors gracefully
- Tested CRUD operations for products, users, orders, and carts.

5.6.2 Database Tests:

- Verified data integrity and consistency in the MySQL database.
- Ensured that database queries perform optimally and do not cause bottlenecks.

5.7 Integration Tests:

5.7.1 Frontend-Backend Integration:

- Tested API calls from the React frontend to the Node.js/Express.js backend.
- Verified that data displayed in the UI matches the data in the database.

5.7.2 Authentication and Authorization:

- Tested secure endpoints to ensure proper access control.
- Verified JWT-based authentication flow, ensuring that only authorized users can access protected resources.

5.7.3 End-to-End Testing:

User Journeys:

- Simulated end-to-end user journeys such as product browsing, search functionality, adding products to the cart, checkout process, and user registration/login.
- Ensured that the user experience is smooth and free of critical bugs.

5.8 Error Handling:

- Tested the application's behavior in case of errors, such as network failures or server issues.
- Verified that user-friendly error messages are displayed and that the application recovers gracefully.

5.9 Manual Testing:

Registration					
Test ID	01				
Test Name	Registration				
Steps	Test Scope	Test Data	Expected Result	Result	Status
1	Adding new user Details	Filling Fields	Detail stored into database	Detail stored into database	PASS
2	Signup Validation	Empty Data in any field	Error display	Error display	PASS
3	Existing User	Enter existing email or username	Error display	Error display	PASS

Login	
Test ID	02

Test Name	Login				
Steps	Test Scope	Test Data	Expected Result	Result	Status
1	Login	Correct email password	Redirect to homepage	Redirect to homepage + successful login	PASS
2	Login Info	Incorrect email or password	Error display/stay in login page	Error display	PASS
3	Validation	Blank email or password	Error to insert data	Error display	PASS

Checkout					
Test ID	03				
Test Name	Checkout				
Steps	Test Scope	Test Data	Expected Result	Result	Status
1	Set address fields	All address field data	Successful order place.	Redirect to order history	PASS
2	Address info	Any empty field	Error display to insert	Error display	PASS

Chapter-7

6.1 Implementation

Implementation is the stage where the theoretical design is turned into a working system. The most crucial stage in achieving a new successful system and in giving confidence on the new system for the users that it will work efficiently and effectively.

The system can be implemented only after thorough testing is done and if it is found to work according to the specification.

It involves careful planning, investigation of the current system and its constraints on implementation, design of methods to achieve the change-over and an evaluation of change over methods a part from planning. Two major tasks of preparing the implementation are education and training of the users and testing of the system.

The more complex the system being implemented, the more involved will be the systems analysis and design effort required just for implementation.

The implementation phase comprises of several activities. The required hardware and software acquisition are carried out. The system may require some software to be developed. For this, programs are written and tested. The user then changes over to his new fully tested system and the old system is discontinued.

ONLINE BAKERY SHOP (**two way product service ecommerce platform**)

6.2 Maintenance

Maintenance tasks in my project Online Bakery Shop are essential to ensure the system's functionality, security, and efficiency. Here are some key maintenance tasks I have considered incorporating into my project:

6.2.1 Database Maintenance:

Using Firebase database provide integrity, security and even performance data-mange.

- **Regular backups:** Schedule automated database backups to prevent data loss in case of system failures.

6.2.2 Security maintenance:

The security of the vehicle service management system is a paramount concern and specific measures are taken to ensure ongoing protection.

- **Security patch updates:** Regularly update and apply security patches to protect against vulnerabilities.
- **Security audits:** Conduct regular security audits to identify and address potential risks.

To address evolving requirements and maintain system stability, user feedback and bug reports are prioritized.

Bug tracking: Establish a process for tracking and addressing reported bugs promptly.

User Feedback and Bug Reports

ONLINE BAKERY SHOP (**two way product service ecommerce platform**)

6.2.23 User support and training

Ongoing user support and training initiatives are integral to user satisfaction and system proficiency.

- **Help Desk Support:** A dedicated help desk will be established to address user queries and issues promptly.
- **User Training Sessions:** Regular training sessions are conducted to familiarize users with new features and functionalities.

6.2.3 Scalability and future enhancements

To ensure the system's adaptability to future requirements, scalability features and plans for future enhancements are considered.

- **Scalability Assessments:** Periodic assessments are conducted to evaluate the system's scalability in anticipation of increased user loads.
- **Feature Roadmap:** A roadmap for future enhancements and features was outlined, aligning with user feedback and evolving organizational needs.

The maintenance strategy for the Online Bakery Shop emphasizes proactive measures, ongoing security protocols, and user support to uphold its reliability and adaptability over time

Chapter-8

7.1 Result and Challenges

7.1.2 Result of the Project

- **Enhanced User Experience:** The online bakery shop e-commerce website provides customers with a convenient and user-friendly platform to purchase bakery products. Users can easily browse through available products, add items to their cart, track their orders in real time. This results in an improved user experience and increased customer satisfaction.
- **Efficient Service Management:** The web app allows users to store products in their cart with specified quantities and purchase them together in the future. They can easily manage their cart, update delivery addresses, and track product delivery updates. This streamlines the purchasing process and enhances service efficiency.
- **Technical Complexity:** Developing a robust and scalable ecommerce web app can be technically challenging. Integrating multiple functionalities such as cart management, order management, real-time tracking, and user management requires expertise in various technologies and APIs.
- **Integration with Third-party Services:** Integrating with external services, such as payment gateways or mapping APIs, may pose challenges due to compatibility issues, API limitations, or complex integration processes. Ensuring smooth communication between the web app and users requires careful planning and implementation.
- **Security and Privacy Considerations:** Protecting user data, ensuring secure transactions, and complying with data privacy regulations are crucial challenges. Implementing robust security measures, such as encryption and secure authentication, is essential to safeguard sensitive user information.
- **User Adoption and Change Management:** Introducing a new online platform may face resistance from customers or car service providers who are accustomed to traditional methods. Overcoming user adoption challenges and managing change by providing clear communication and training is important for successful implementation.

- **Testing and Quality Assurance:** Ensuring the Ib app's functionality, usability, and performance through comprehensive testing is a critical challenge. Thorough testing, including unit testing, integration testing, and user acceptance testing, is necessary to identify and resolve any bugs or issues before the app is deployed.

Chapter-9

8. Snap Shots



Please enter your login details to sign in

You are agree to our terms and policies

Login

New User? [Sign Up](#)



Sign Up

Create Your account

You agree to our terms and policies

Sign Up

Already have an account? [Login](#)



View all products



Sandwich Bread

Price: 130

Category: Bread



Not sweet bun

Price: 1111

Category: i dont know



Brown Bread

Price: 50

Category: Bread



Buttermilk Sweet Rusk Toast

Price: 50

Category: Rusk Toast



Wheat Rusk Toast

Price: 40

Category: Rusk Toast



POP

Price: 15

Category: POP

About Us

Welcome to our charming bakery shop, where the aroma of freshly baked goods greets you at the door and promises a delightful experience for your senses. Nestled in the heart of [insert location], our bakery is a haven for those who appreciate the craftsmanship and artistry of baking.

Contact Us

Lorem, ipsum dolor.
Lorem, ipsum dolor.
Lorem, ipsum dolor.



Cookies

Rating: 4.2 ★

Price: ₹50

Quantity

- @62.5/250g

Highlights

- Type: Cookies
- Quantity: 400 g
- Base Flavor: Chocolate
- Vegetarian

Description

- Hide and Seek Chocolate Chip 400g



ADD TO CART

About us

Welcome to our charming bakery shop, where the aroma of freshly baked goods greets you at the door and promises a delightful experience for your senses. Nestled in the heart of [insert location], our bakery is a haven for those who appreciate the craftsmanship and artistry of baking.

Contact Us

Email: aslfjslfj@gmail.com
kifjlsdlfjsjf@gmail.com

Phone: +91 90xxxxxxx
+91 81xxxxxxx

Filters

Categories

Price

Customer Rating



Cookies

Price: ₹50

Rating: 4.3 ★

- Type: Cookies
- Quantity: 600 g
- Base Flavor: Pist, Badam
- Vegetarian



Cookies

Price: ₹50

Rating: 4.2 ★

- Type: Cookies
- Quantity: 600 g
- Base Flavor: Pist, Badam
- Vegetarian



Cookies

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Previous | 1 | 2 | 3 | 4 | ... | 5 | Next

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Contact Us

Email: aslfjslfj@gmail.com
kljfljsdlfjsjf@gmail.com

Phone: +91 90xxxxxxx
+91 81xxxxxxx



Sandwich Bread

Bread

Ingredients: Wheat Flour, Water, Vanspati Oil, salt, Improver, Calcium, Yeast, Sugar Pack Size: 25 Pieces Pack Type: Packet Shelf Life: 5 - 6 Days Weight: 250g

₹130

Add to Cart

About Us

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Contact Us

Lorem, ipsum dolor.
Lorem, ipsum dolor.
Lorem, ipsum dolor.

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Add address page

Name	Phone number
<input type="text"/>	<input type="text"/>
Pincode	Locality
<input type="text"/>	<input type="text"/>
Address (Area and street)	
<input type="text"/>	
City/District/Town	State
<input type="text"/>	<input type="text"/>
Landmark	Alternate Phone(Optional)
<input type="text"/>	<input type="text"/>
<input type="button" value="Continue"/>	

Chapter-10

Conclusion:

In conclusion, the online bakery shop app project aims to provide a convenient and efficient platform for users to order baked goods, manage orders, make payments, and access their profiles. The project involves the development of both front-end and back-end components, including database design, user interface implementation, integration of payment systems, and testing.

By utilizing technologies such as MySQL for the back-end, React for the front-end, Node.js and Express for the server, and Bootstrap for styling, the project seeks to deliver a reliable and scalable solution. The app's features enable users to browse products, place orders, make secure payments, and manage their profiles, while bakery owners can offer products and manage orders.

The successful completion of this project will result in a fully functional online bakery shop app that enhances customer convenience, streamlines bakery operations, and offers a seamless experience for all stakeholders involved. The app's launch will mark a significant step towards modernizing and digitizing the bakery industry, providing users with a reliable and efficient way to access and manage bakery services.

Chapter-11

11. References

For React

- <https://legacy.reactjs.org/docs/getting-started.html>
- concept of Axios, Hooks, Context API, Reducer

For Firebase

- <https://firebase.google.com/docs?authuser=0&hl=en>

Books

- **Fundamentals of Software Engineering (Rajib Mall)**

For Redux

- <https://getbootstrap.com/>

For Node

- <https://nodejs.org/>