INSTITUTE FOR ADVANCED COMPUTING AND SOFTWARE DEVELOPMENT AKURDI, PUNE

Documentation On

BOOK HAVEN APPLICATION

PG-DAC MARCH 2023

Submitted By:

Group No: 84

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Course Coordinator	**Centre Coordinator**	**Project Guide**

ABSTRACT

This project is a web-based books shopping system for multiple customer. The project objective is to deliver Book Haven's shopping application into web platform.

This project is an attempt to provide the advantages of online book shopping to customers of a real shop. It helps buying the books in the shop anywhere through internet by using a website device. Thus, the customer will get the service of online book shopping and home delivery at affordable price. This system can be used by any admin whose is willing to sell the books online and a well known editorial house can directly sell their book by using this platform.

If admin are providing an online portal where their customers can enjoy easy book shopping from anywhere, the admin won't be losing any more customers . And it helps the customer to find their favorite without any problem .

ACKNOWLEDGEMENT

I take this occasion to thank God, almighty for blessing us with his grace and taking our endeavor to a successful culmination. I extend my sincere and heartfelt thanks to our esteemed guide, **Mrs. Rupali Thorat** for providing me with the right guidance and advice at the crucial juncture sand for showing me the right way. I extend my sincere thanks to our respected **Centre Co-Ordinator Mr. Narendra Pawar**, for allowing us to use the facilities available. I would like to thank the other faculty members also, at this occasion. Last but not the least, I would like to thank my friends and family for the support and encouragement they have given me during the course of our work.

Pratiksha Patil (233188)

Snehal Patil (233180)

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INTRODUCTION

Book Haven is a web application that provides the function and features to authenticate and identify the users and provide then with easy, intuitive, personalized and user-customizable web-interface for facilitating access to information and services that are of primary relevance and interests to the users. Book Haven User can purchase the book online instead of going out to a book store.

The Purpose of project is to make a full functional Book Haven(online book store system) that allows its users to search and purchase a book online based on category, can add the book in shopping cart and place order online**.**

Features: -

1. Login/Register
2. Search for books
3. Category of Books.
4. The admin can add/delete category and product.
5. Cart feature
6. Allows the customers to maintain cart.
7. Logout

1.1 PROJECT OBJECTIVE

The objective of project is to make a full functional Book Haven system that allows its users to search and purchase a book online based on category. Book Haven's main Actros are divided into two categories, one is the front user, one is the background user (Admin). Front-end users are mainly customers who will buy books from online bookstore. Front-end users can register, login, search the books ,add the book to shopping cart And place orders .The background user (Admin) will be able add, modify or delete the book details , can add the latest books. Also admin will be able to manage category i.e add , update ,delete category as per requirement .

Specific goals are: -

•To produce a web-based system that allow the admin to add the book and category as per availability of book and able to update delete book .

•To ease user by providing different functionalities to it.

•User can buy book online based on category

1.2 PROJECT OVERVIEW

The central concept of the application is to allow the customer to shop virtually using the internet and allow customers to buy the books from multiple website. The information pertaining to the books are stores on an RDBMS at the server side (store).

The server processes the customers, and the books are shipped to the address submitted by them. The application was designed into two modules first is for the customers who wish to buy the books. Second is for the admin who maintains and updates the information pertaining to the books. where the application is hosted on the web and the administrator maintains the database. The application, which is deploy the customer database, the details of the items are brought forward from the database for the customer view based on the selection through the menu and the database

1.3 PROJECT SCOPE

Book Haven's main Actros are divided into two categories, one is the front user, one is the background user (Admin). Front-end users are mainly customers who will buy books from Book Haven. Front-end users can register, login, search the books, add the book to shopping cart and place orders. The background user (Admin) will be able add, modify or delete the book details, can add the latest books. Also admin will be able to manage category i.e add, update, delete category as per requirement.

1.4 STUDY OF THE SYSTEM

1.4.1 MODULES:

The system after careful analysis has been identified to be presented with the following modules and roles.

The modules involved are:

- Administrator
- Users

1.4.1.1 Administrator:

The administrator is the super user of this application. Only admin have access into this admin page. The administrator has all the information about the users and about all products.

This module is divided into different sub modules.

1. Login
2. Manage Book
3. Manage Category

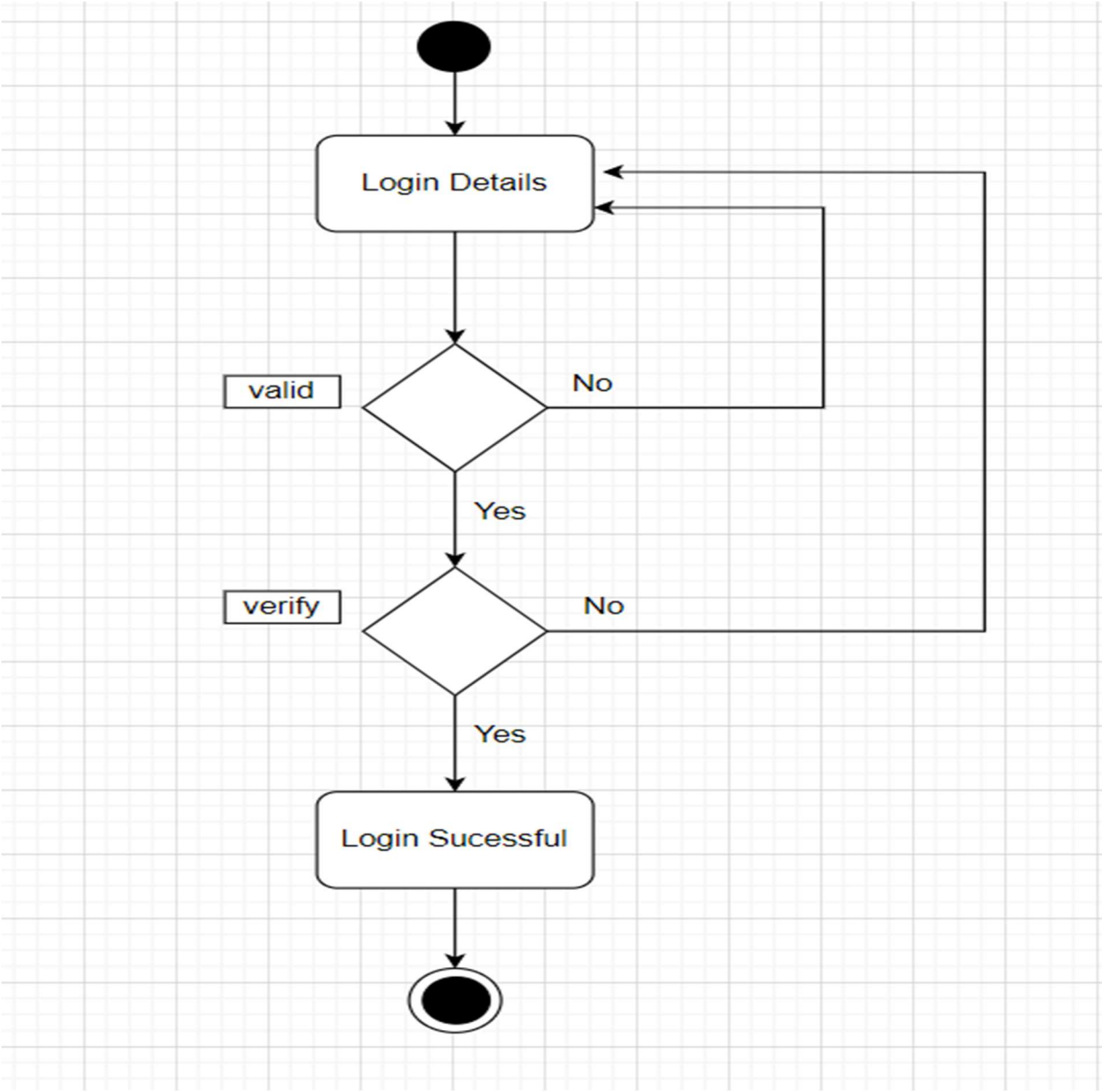


Figure 1 Login Activity Diagram

- **Add Category**

  Administrator can add category.

- **Update Category**

  Admin can edit/update the category..

- **Delete Category**

  Admin can delete the category.

- **Add Product**

  Administrator can add products.

- **Update Product**

  Administrator can edit/update the product.

- **Delete Product**

  Administrator can delete products.

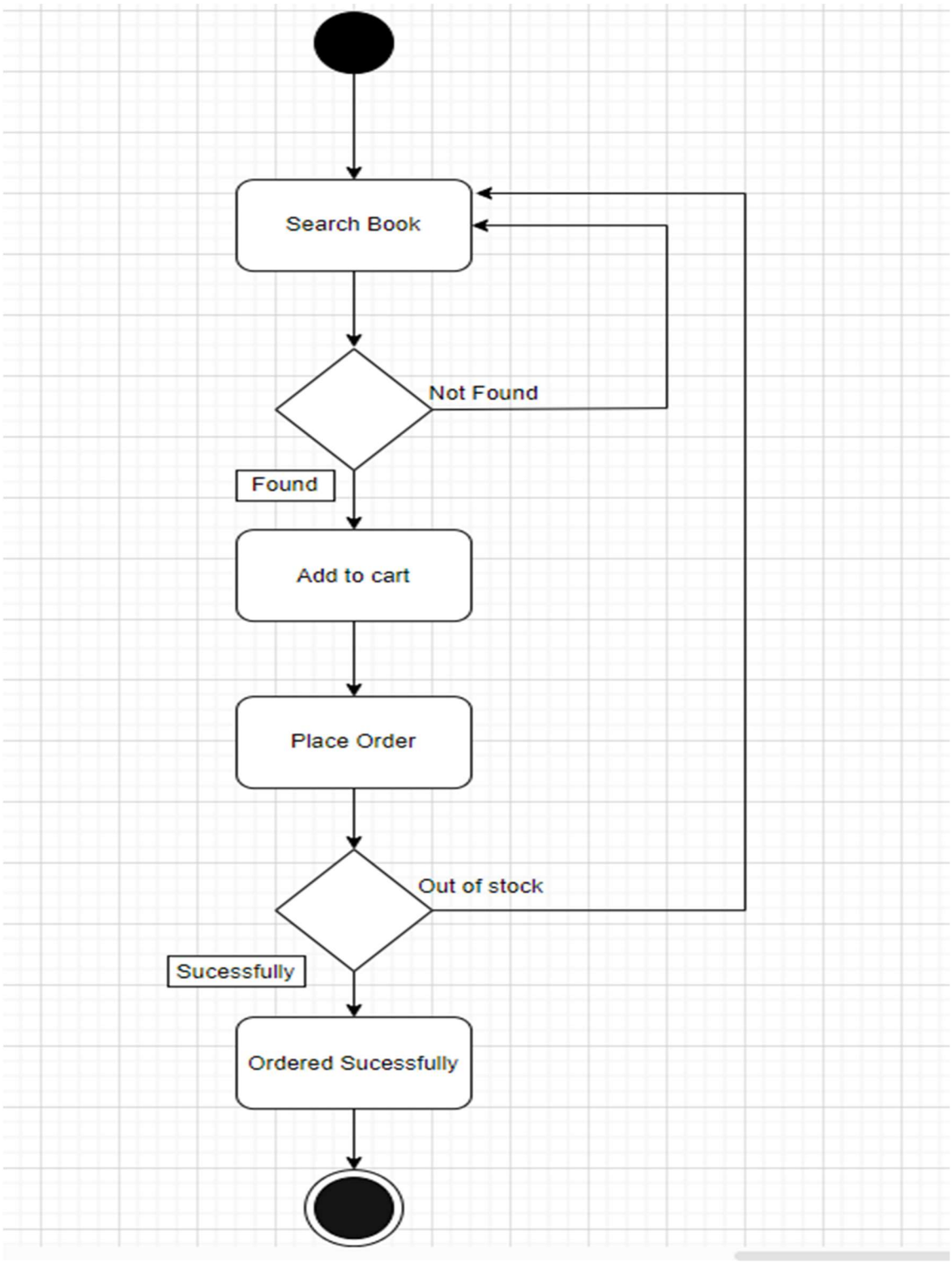


Figure 2 Buy Product Activity Diagram

- **User/Customer Sign in, Sign out, Create Account**

  This feature is provided to customer so he can sign in, sign out and create account for new customer.

- **Add to cart**

  Customer can add products to cart which he wants to buy the products

- **Payments**

  Customer can do payment.

- **Delete Product**

  Admin can delete the product .

- **Order Details**

  Customer have a privilege to his order he can see his order details.

- **Buy Product**

  Customers can buy product from his cart by doing payment.

SYSTEM ANALYSIS

System analysis is the process of gathering and interpreting facts, diagnosing problems, and using the information to recommend improvements on the system. System analysis is a problem-solving activity that requires intensive communication between the system users and system developers.

System analysis or study is an important phase of any system development process. The system is viewed as a whole, the inputs are identified, and the system is subjected to close study to identify the problem areas. The solutions are given as a proposal. The proposal is reviewed on user request and suitable changes are made. This loop ends as soon as the user is satisfied with the proposal.

2.1 EXISTING SYSTEM

The current system for shopping is to visit the shop manually and from the available product choose the item customer want and buying the item by payment of the price of the item.

- ✓ It is less user-friendly.
- ✓ User must go to shop and select products.
- ✓ It is difficult to identify the required product.
- ✓ Description of the product limited.
- ✓ It is a time-consuming process
- ✓ Not in reach of distant users.

2.2 PROPOSED SYSTEM

In the proposed system customer need not go to the shop for buying the products. He can order the product he wish to buy through the web application . If the book is not available in your area you can order from other vendor . The system also recommends a home delivery system for the purchased products.

2.3 SYSTEM REQUIREMENT SPECIFICATION

2.3.1 GENERAL DESCRIPTION

Product Description:

A web application which can provide the online shopping service for the customer to access the web service from his Smartphone/System. Web application should be able to help the customer for selecting his item and to help the owner in managing the orders from the customers.

Problem Statement:

Nowadays, the network plays an import role in people's life. In the process of the improvement of the people's living standard, people's demands of the life's quality and efficiency is more higher , the traditional bookstore's inconvenience gradually emerge, and the Book Haven has gradually be used in public. Book Haven is a revolution of book industry. The traditional bookstores' operation time, address and space is limited, so the types of books and books to find received a degree of restriction. But Book Haven broke the management mode of traditional bookstore, as long as you have a computer, you can buy the book anywhere, saving time and effort, shortening the time of book selection link effectively. Book Haven system based on the principle of provides convenience and service to people and provide facility to users to buy the book online.

2.3.2 SYSTEM OBJECTIVES

- To provide a Web application for online shopping of books.
- To provide an online platform for multiple Customer and Admin.

2.3.3 SYSTEM REQUIREMENTS

2.3.3.1 NON-FUNCTIONAL REQUIREMENTS

i. EFFICIENCY REQUIREMENT

When an online shopping cart android application implemented customer can purchase product in an efficient manner.

ii. RELIABILITY REQUIREMENT

The system should provide a reliable environment to both customers and owner. All orders should be reaching at the admin without any errors.

iii. USABILITY REQUIREMENT

The Web application is designed for user friendly environment and ease of use.

iv. IMPLEMENTATION REQUIREMENT

Implementation of the system using React in front end with Spring Boot as back end and it will be used for database connectivity. And the database part is developed by MySQL. Responsive web designing is used for making the website compatible for any type of screen.

v. DELIVERY REQUIREMENT

The whole system is expected to be delivered in four months of time with a weekly Evaluation by the project guide.

vi. AVAILABILITY

Book Haven System should be available for 24 hours because it offers international tourists reserved packages from different countries so it should be available for 24 hours.
.

2.1.1.1 FUNCTIONAL REQUIREMENTS

USER

- **USER LOGIN**

Description offeature

This feature used by the user to login into system. A user must login with his username and password to the system after registration. If they are invalid, the user not allowed to enter the system.

Functional Requirement

- Username and password will be provided after user registration is confirmed.
- Password should be hidden from others while typing it in the field

- **REGISTER NEW**

  USER Description of feature

A new user will have to register in the system by providing essential details in order to view the products in the system. The admin must accept new user by unblocking him.

Functional Requirement

- System must be able to verify and validate information.
- The system must encrypt the password of the customer to provide security.

- **PURCHASING AN ITEM**

  Description of feature

The user can add the desired product into his cart by clicking add to cart option on the product. He can view his cart by clicking on the cart button. All products added by cart can be viewed in the cart. User can remove an item from the cart by clicking remove. After confirming the items in the cart, the user can submit the cart by providing a delivery address. On successful submitting the cart will become empty.

Functional Requirement

- System must ensure that, only a registered customer can purchase items.
- System must ensure that only the register admin can sell their book on the platform.

ADMIN

- **MANAGE CATEGORY**

Description of features

The administrator can add category, delete category, view all category list

- **MANAGE PRODUCTS**

Description of features

The administrator can add product, delete product, and view product.

Functional Requirements:

- The system must identify the login of the admin
- System must ensure that only the register admin can sell their book on the platform.

SYSTEM DESIGN

System design is the solution for the creation of a new system. This phase focuses on the detailed implementation of the feasible system. Its emphasis on translating design. Specifications to performance specification. System design has two phases of development.

- Logical Design
- Physical Design

During logical design phase the analyst describes inputs (sources), outputs(destinations), databases (data sores) and procedures (data flows) all in a format that meets the user requirements. The analyst also specifies the needs of the user at a level that virtually determines the information flow in and out of the system and the data resources. Here the logical design is done through data flow diagrams and database design. The physical design is followed by physical design or coding. Physical design produces the working system by defining the design specifications, which specify exactly what the candidate system must do. The programmers write the necessary programs that accept input from the user, perform necessary processing on accepted data and produce the required report on a hard copy or display it on the screen.

3.1 INPUT AND OUTPUT DESIGN

3.1.1 INPUT DESIGN:

Input design is the link that ties the information system into the world of its users. The input design involves determining the inputs, validating the data, minimizing the data entry and provides a multi-user facility. Inaccurate inputs are the most common cause of errors in data processing. Errors entered by the data entry operators can be controlled by input design. The user-originated inputs are converted to a computer-based format in the input design. Input data are collected and organized into groups of similar data. Once identified, the appropriate input media are selected for processing. All the input data are validated and if any data violates any conditions, the user is warned by a message. If the data satisfies all the conditions, it is transferred to the appropriate tables in the database. In this project the student details are to be entered at the time of registration. A page is designed for this purpose which is user friendly and easy to use. The design is done such that users get appropriate messages when exceptions occur.

3.1.2 OUTPUT DESIGN:

Computer output is the most important and direct source of information to the user. Output design

is a very important phase since the output needs to be in an efficient manner. Efficient and intelligible output design improves the system relationship with the user and helps in decision making. Allowing the user to view the sample screen is important because the user is the ultimate judge of the quality of output. The output module of this system is the selected notifications.

DATABASE DESIGN

3.2 DATABASE

Databases are the storehouses of data used in the software systems. The data is stored in tables inside the database. Several tables are created for the manipulation of the data for the system. Two essential settings for a database are

- Primary key - the field that is unique for all the record occurrences
- Foreign key - the field used to set relation between tables

Normalization is a technique to avoid redundancy in the tables.

3.3 SYSTEM TOOLS

The various system tools that have been used in developing both the front end and the back end of the project are being discussed in this chapter.

3.3.1 FRONT END:

React is a library which is developed by Facebook are utilized to implement the frontend. React (also known as React.js or ReactJS) is a free and open-source front-end JavaScript library for building user interfaces or UI components. It is maintained by Facebook and a community of individual developers and companies. React can be used as a base in the development of single page or mobile applications. However, React is only concerned with state management and rendering that state to the DOM, so creating React applications usually requires the use of additional libraries for routing, as well as certain client-side functionality.

3.3.2 BACKEND:

The back end is implemented using MySQL which is used to design databases.

MySQL:

MySQL is the world's second most widely used open-source relational database management system (RDBMS). The SQL phrase stands for Structured Query Language. An application software called Navicert was used to design the tables in MySQL.

Spring-Boot:

This is used to connect MYSQL and fetch data from database and store the data in database. The Spring Framework is an application framework and inversion of control container for the Java platform. The framework's core features can be used by any Java application, but there are extensions for building web applications on top of the Java EE (Enterprise Edition) platform. Although the framework does not impose any specific programming model, it has become popular in the Java community as an addition to the Enterprise JavaBeans (EJB) model. The Spring Framework is Open-source Framework.

0 Level DFD for CUSTOMER

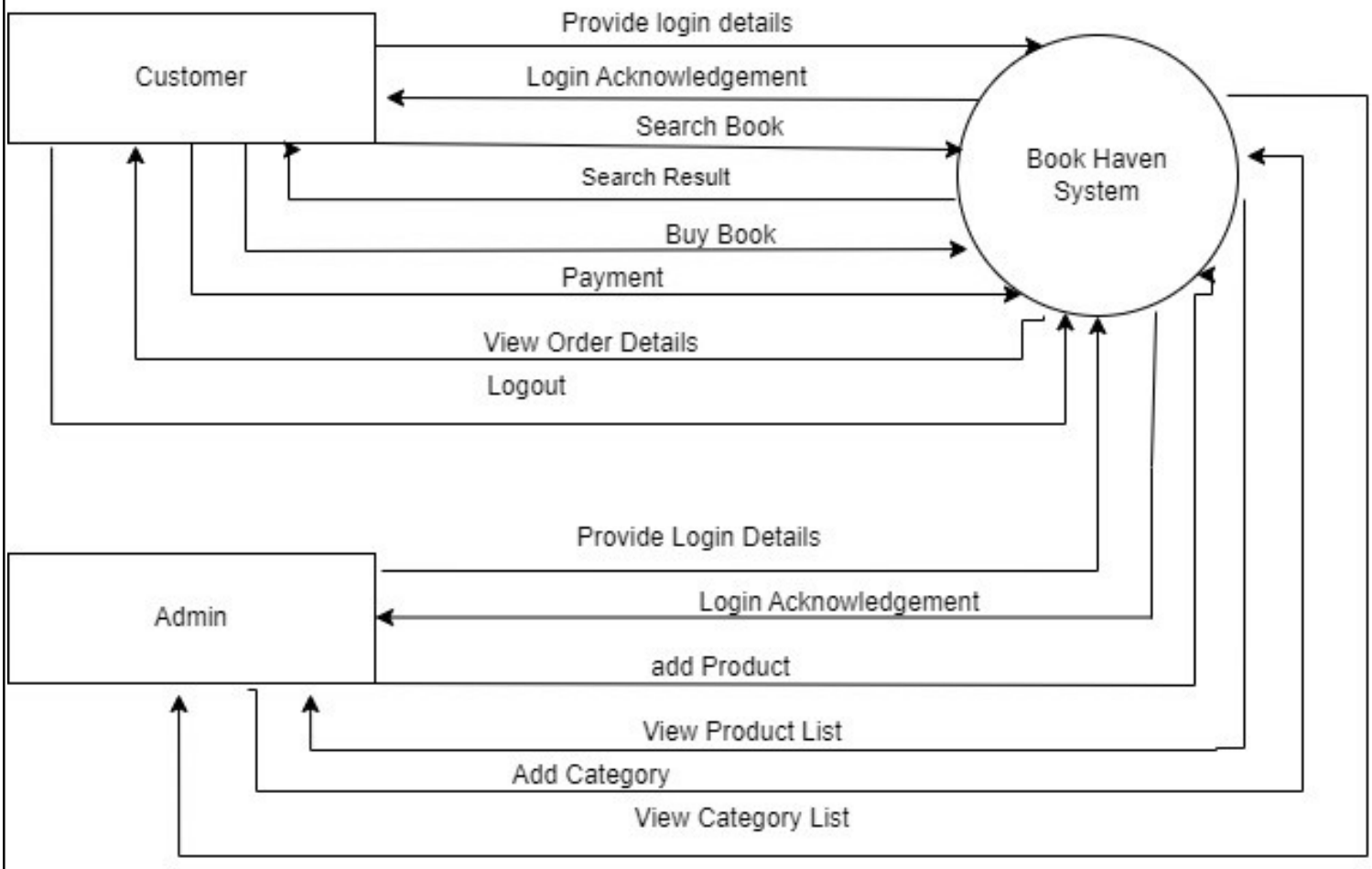


Figure 6 Zero Level DFD for CUSTOMER

1 Level DFD for CUSTOMER

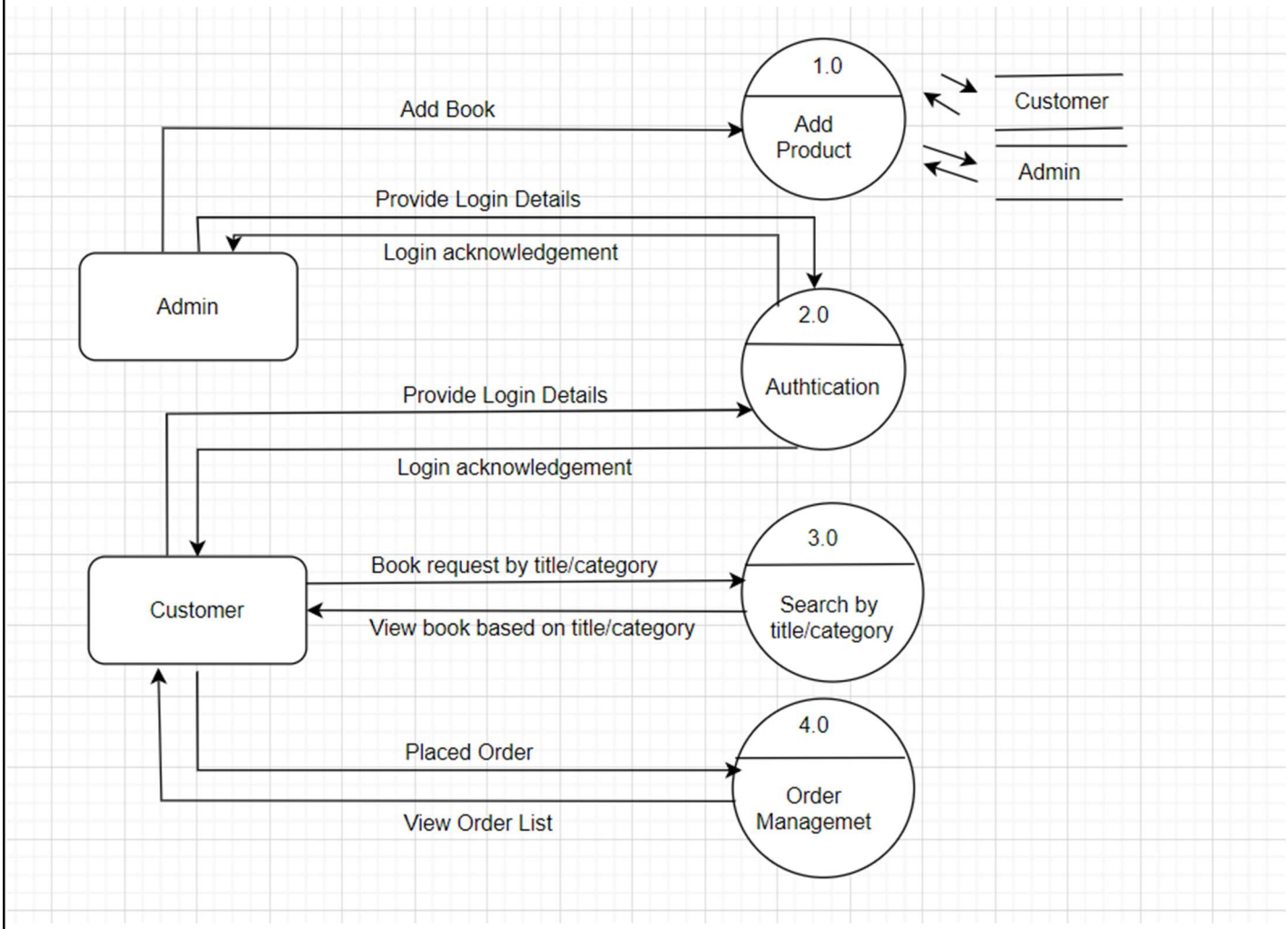


Figure 6.1 1 Level DFD for CUSTOMER

E-R Diagram:

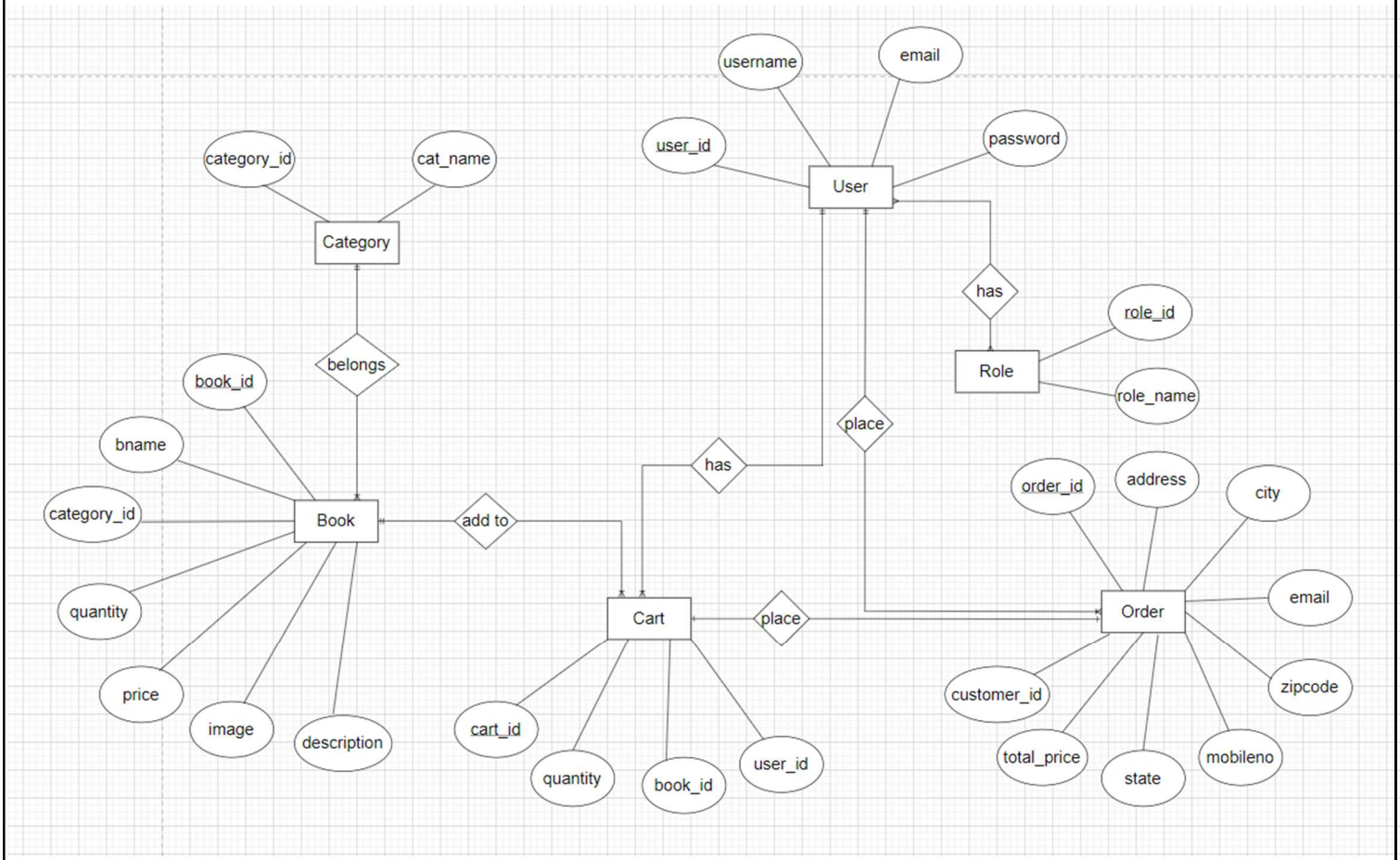


Figure 7.1 E-R Diagram

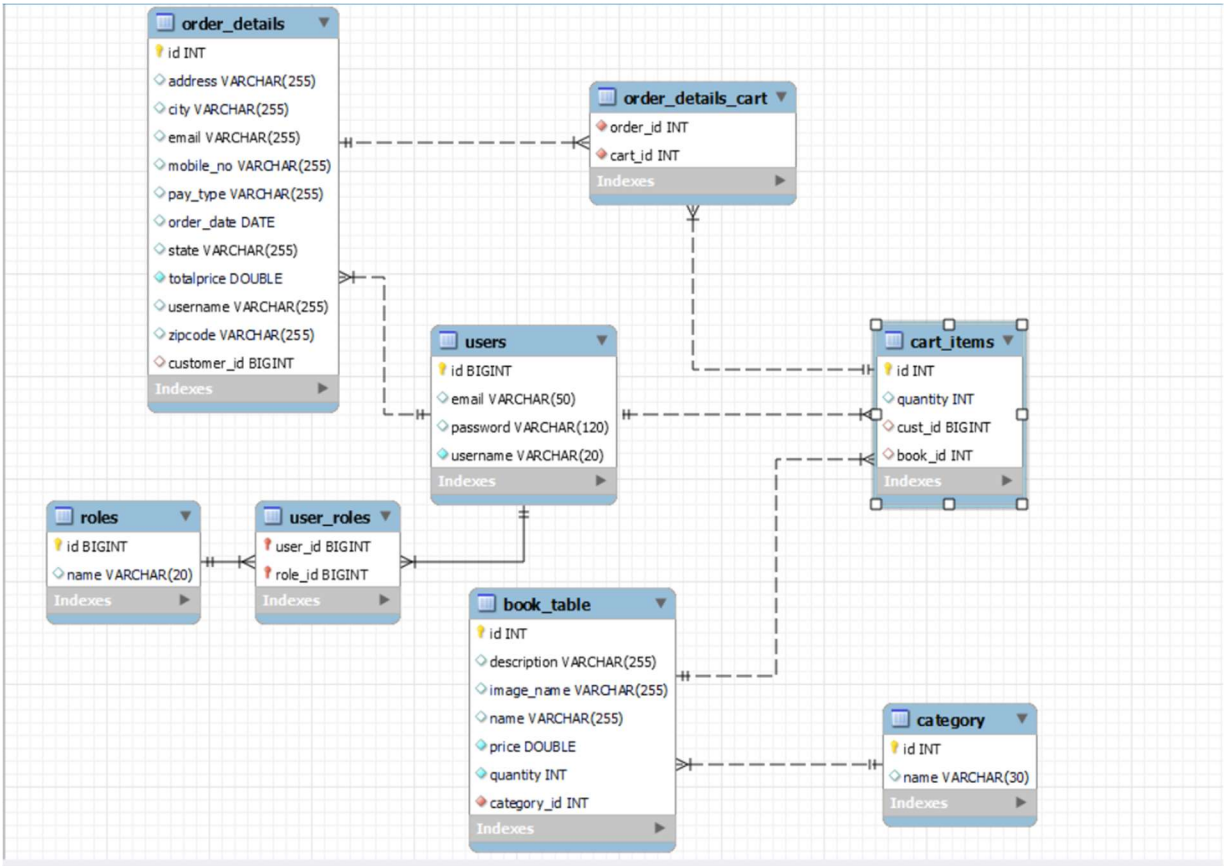


Figure 7.2 E-R diagram (Generated by Mysql)

Class Diagram

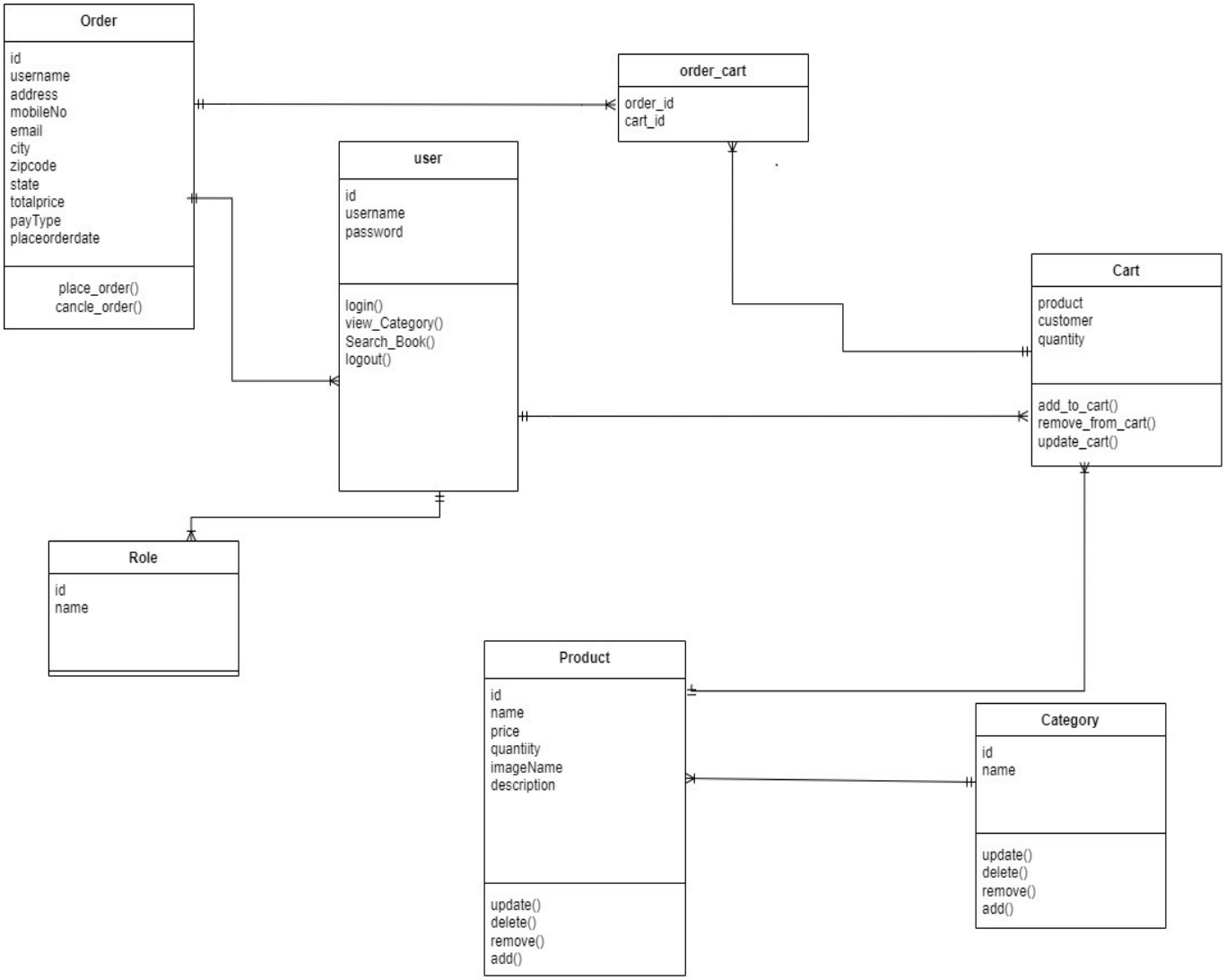


Figure 8 Class Diagram

Use Case Diagram

Figure 8 Use Case Diagram

Sequence Diagram

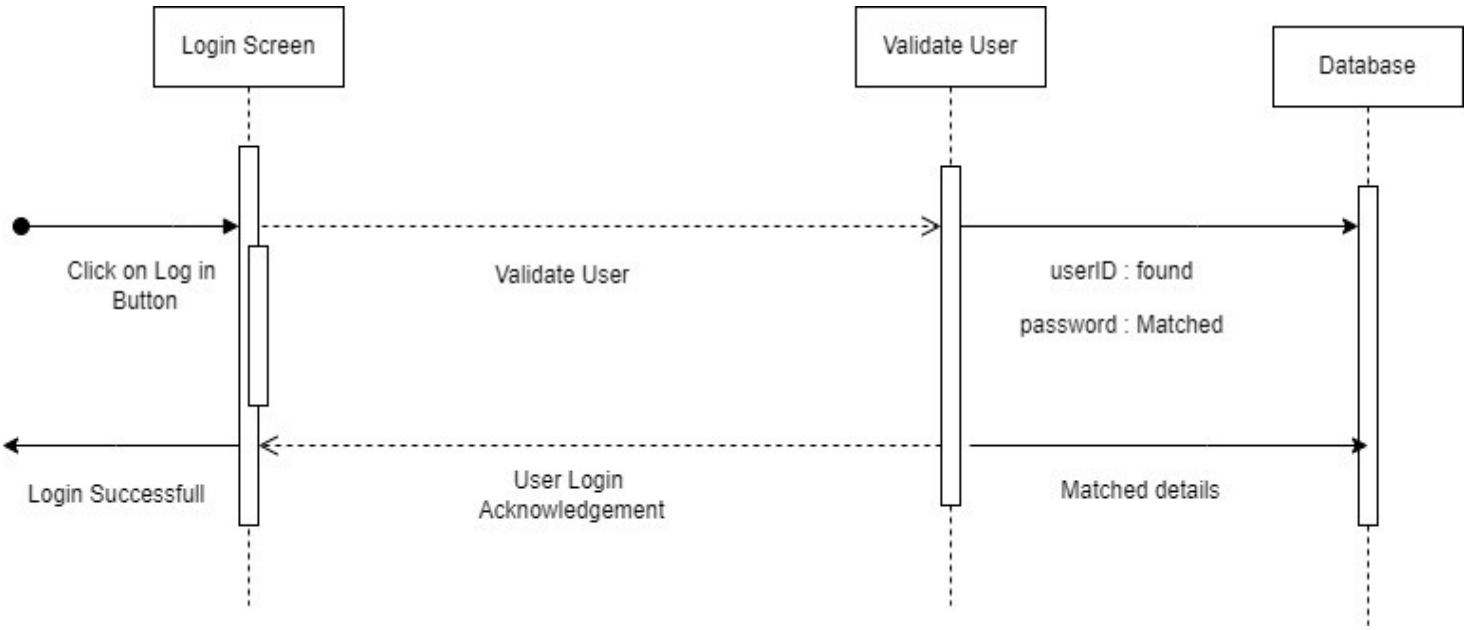


Figure 8 Sequence Diagram

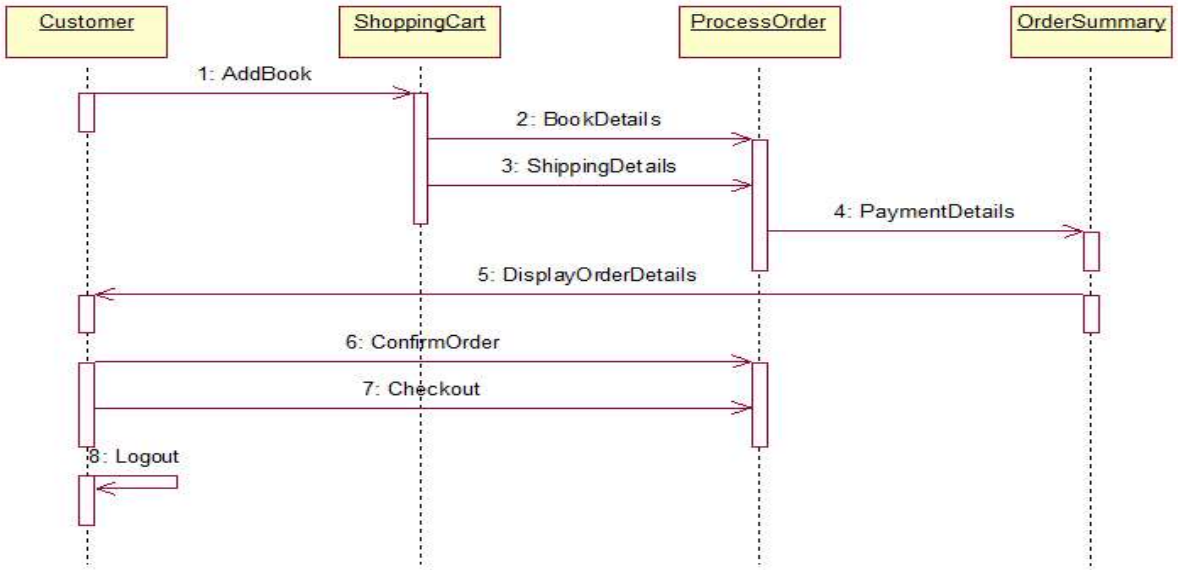


Figure 8 Sequence Diagram

TABLE STRUCTURE:

Tables:

Tables_in_book
book_table
cart_items
category
hibernate_sequence
order_details
order_details_cart
roles
user_roles
users

Book_table:

Field	Type	Null	Key	Default	Extra
id	int	NO	PRI	NULL	auto_increment
description	varchar(255)	YES		NULL	
image_name	varchar(255)	YES		NULL	
name	varchar(255)	YES		NULL	
price	double	NO		NULL	
quantity	int	NO		NULL	
category_id	int	NO	MUL	NULL	

Cart_items:

	Field	Type	Null	Key	Default	Extra
▶	id	int	NO	PRI	NULL	auto_increment
	quantity	int	YES		NULL	
	cust_id	bigint	YES	MUL	NULL	
	book_id	int	YES	MUL	NULL	

Category:

Field	Type	Null	Key	Default	Extra
id	int	NO	PRI	NULL	auto_increment
name	varchar(30)	YES		NULL	

Order_details:

Field	Type	Null	Key	Default	Extra
id	int	NO	PRI	NULL	
address	varchar(255)	YES		NULL	
city	varchar(255)	YES		NULL	
email	varchar(255)	YES		NULL	
mobile_no	varchar(255)	YES		NULL	
pay_type	varchar(255)	YES		NULL	
order_date	date	YES		NULL	
state	varchar(255)	YES		NULL	
totalprice	double	NO		NULL	
username	varchar(255)	YES		NULL	
zipcode	varchar(255)	YES		NULL	
customer_id	bigint	YES	MUL	NULL	

Order_details_cart:

Field	Type	Null	Key	Default	Extra
order_id	int	NO	MUL	NULL	
cart_id	int	NO	PRI	NULL	

Roles:

Field	Type	Null	Key	Default	Extra
id	bigint	NO	PRI	NULL	auto_increment
name	varchar(20)	YES		NULL	

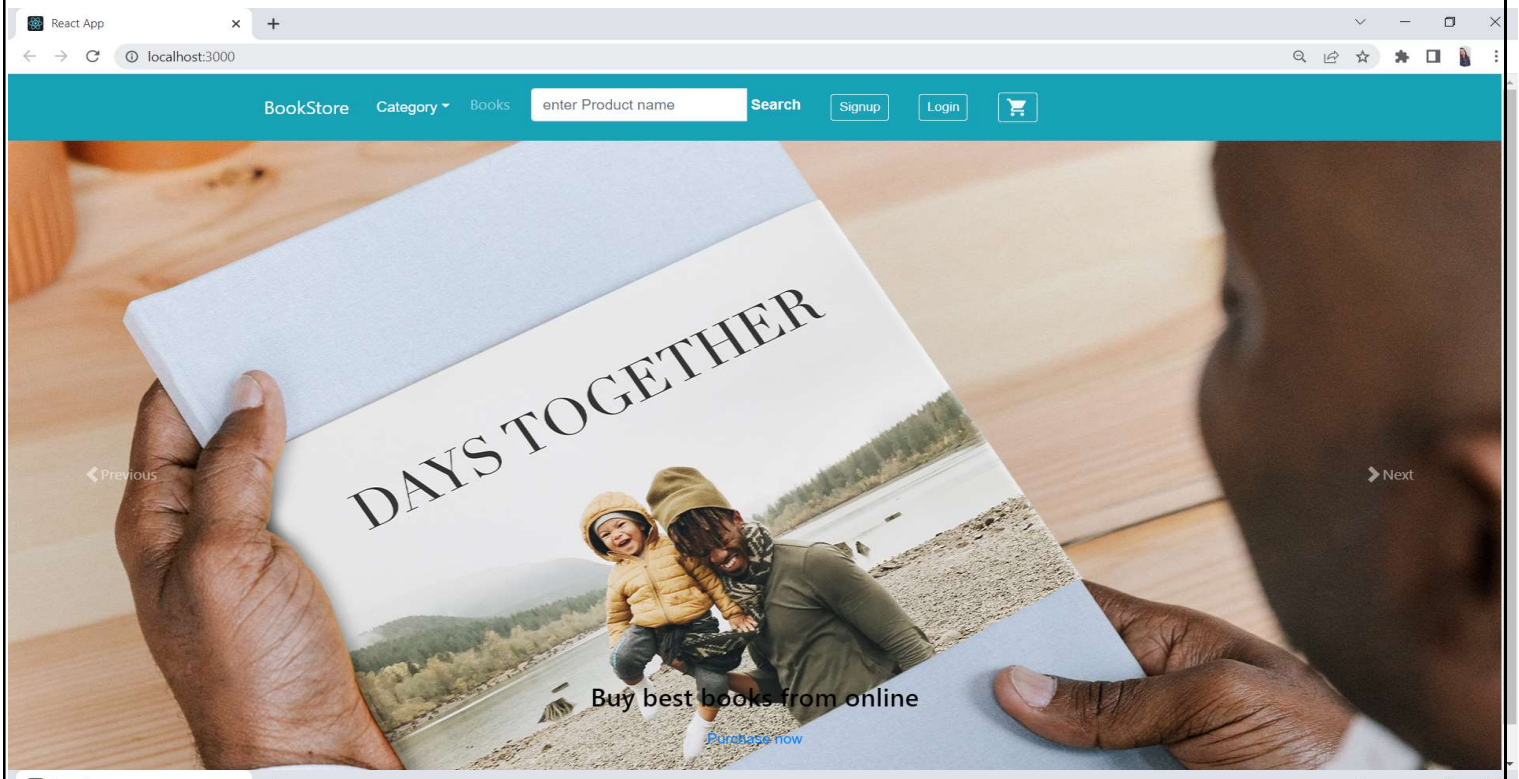
User_roles:

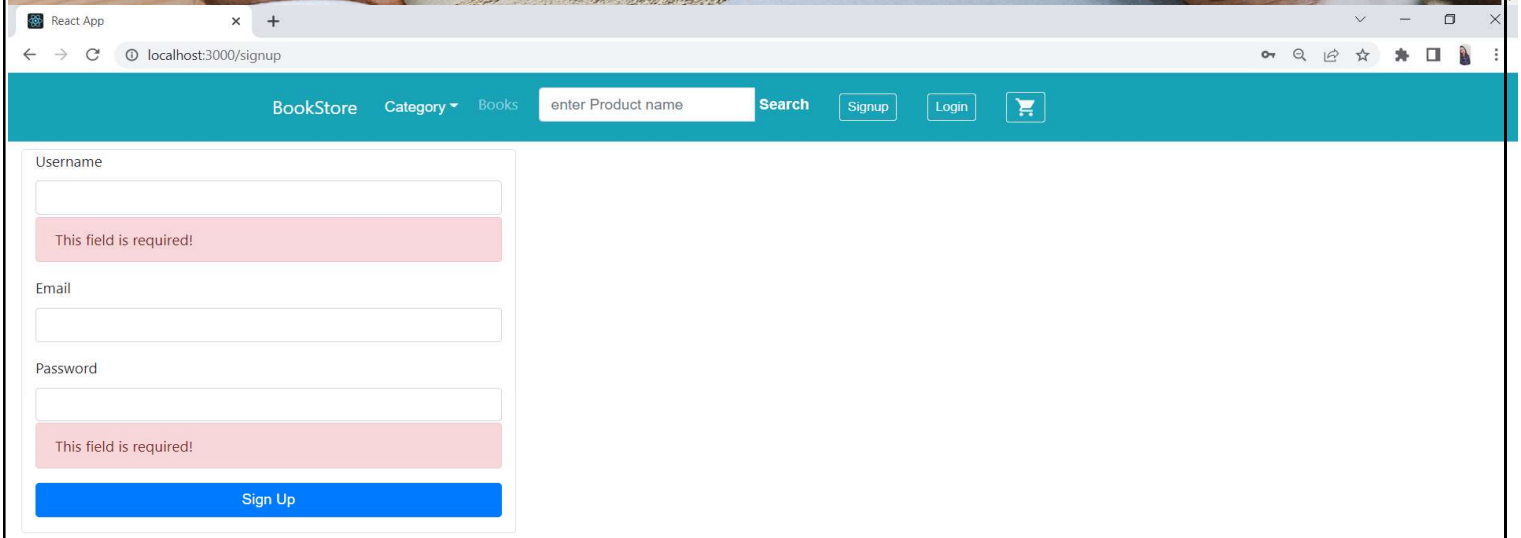
	Field	Type	Null	Key	Default	Extra
▶	user_id	bigint	NO	PRI	NULL	
	role_id	bigint	NO	PRI	NULL	

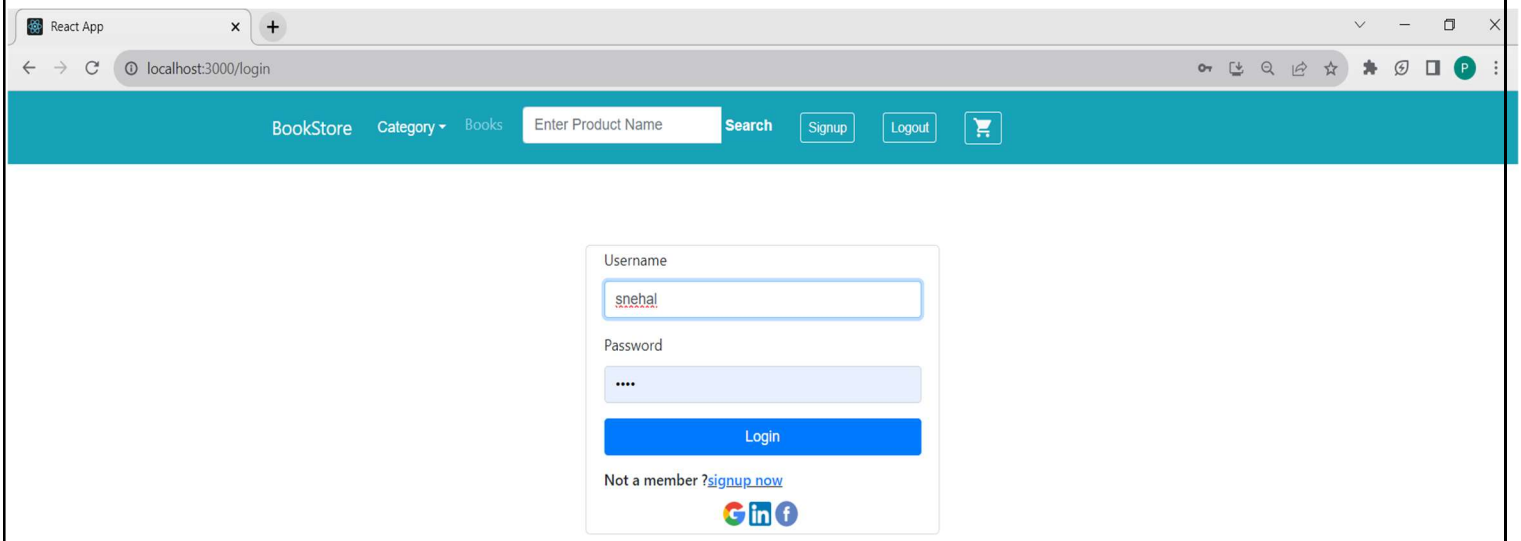
User:

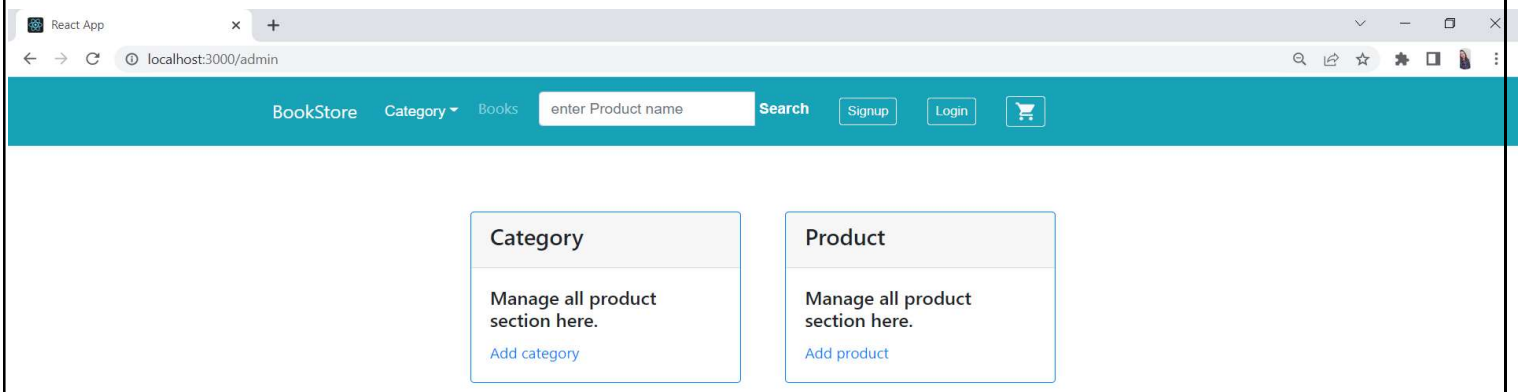
	Field	Type	Null	Key	Default	Extra
▶	id	bigint	NO	PRI	NULL	auto_increment
	email	varchar(50)	YES	UNI	NULL	
	password	varchar(120)	YES		NULL	
	username	varchar(20)	YES	UNI	NULL	

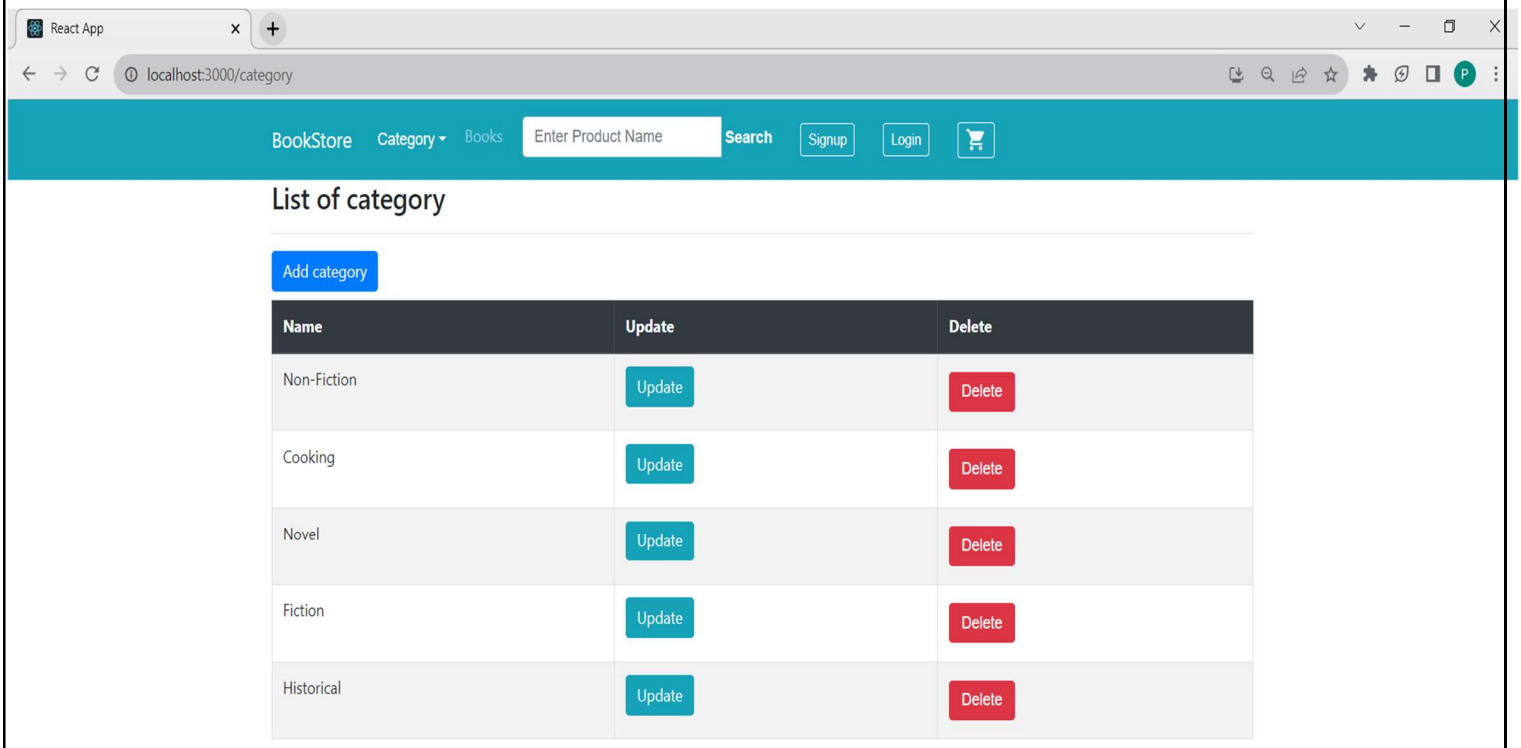
PROJECT DIAGRAMS

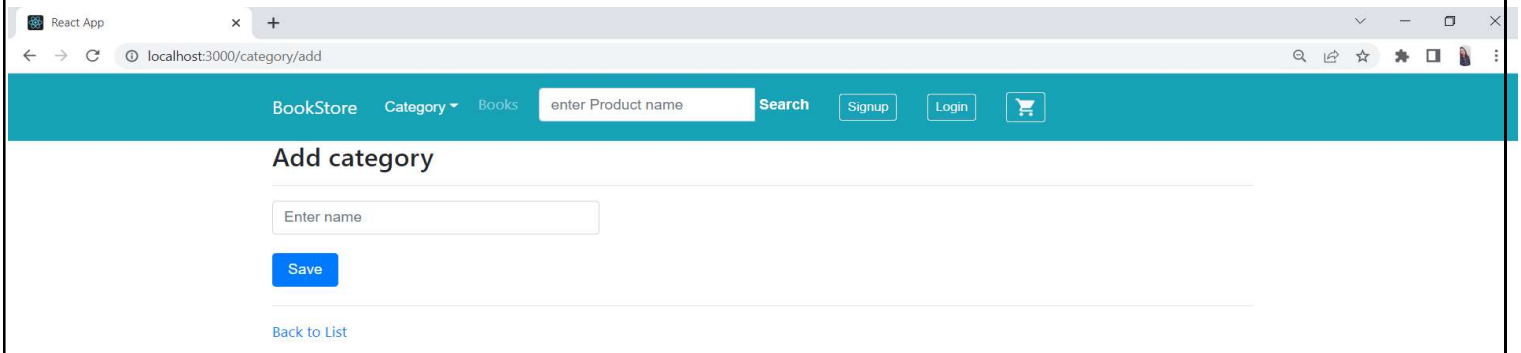


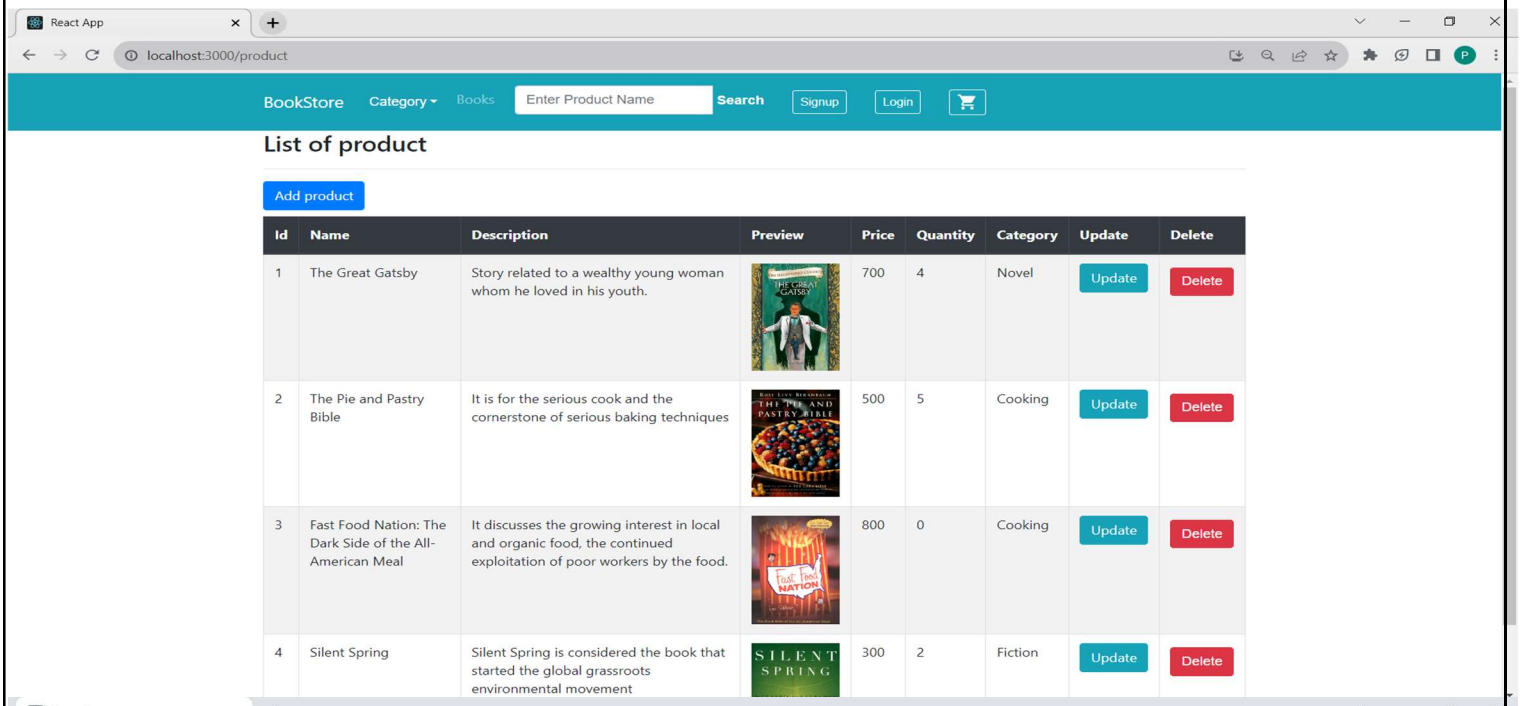


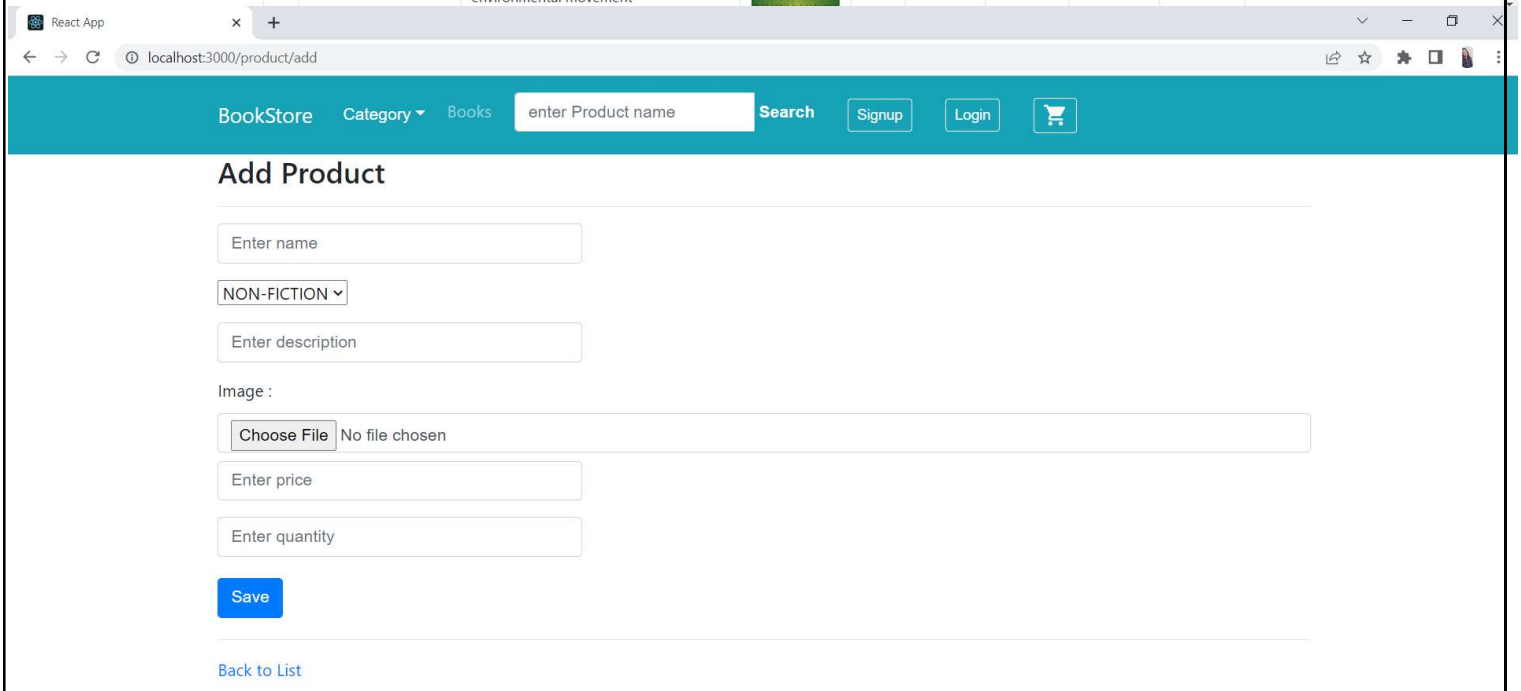

React App
localhost:3000/login
BookStore
Category
Books
Enter Product Name
Search
Signup
Logout
Username
snehal
Password
Login
Not a member ?signup now


React App
localhost:3000/admin
BookStore
Category
Books
enter Product name
Search
Signup
Login
Category
Manage all product section here.
Add category
Product
Manage all product section here.
Add product


React App
localhost:3000/category
BookStore
Category
Books
Enter Product Name
Search
Signup
Login
List of category
Add category
Name
Update
Delete
Non-Fiction
Update
Delete
Cooking
Update
Delete
Novel
Update
Delete
Fiction
Update
Delete
Historical
Update
Delete


React App
localhost:3000/category/add
BookStore
Category
Books
enter Product name
Search
Signup
Login
Add category
Enter name
Save
Back to List


React App
localhost:3000/product
BookStore
Category
Books
Enter Product Name
Search
Signup
Login
List of product
Add product
Id
Name
Description
Preview
Price
Quantity
Category
Update
Delete
1
The Great Gatsby
Story related to a wealthy young woman whom he loved in his youth.
700
4
Novel
Update
Delete
2
The Pie and Pastry Bible
It is for the serious cook and the cornerstone of serious baking techniques
500
5
Cooking
Update
Delete
3
Fast Food Nation: The Dark Side of the All-American Meal
It discusses the growing interest in local and organic food, the continued exploitation of poor workers by the food.
800
0
Cooking
Update
Delete
4
Silent Spring
Silent Spring is considered the book that started the global grassroots environmental movement
300
2
Fiction
Update
Delete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Category
Books
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Search
Signup
Login
Add Product
Enter name
NON-FICTION
Enter description
Image :
Choose File
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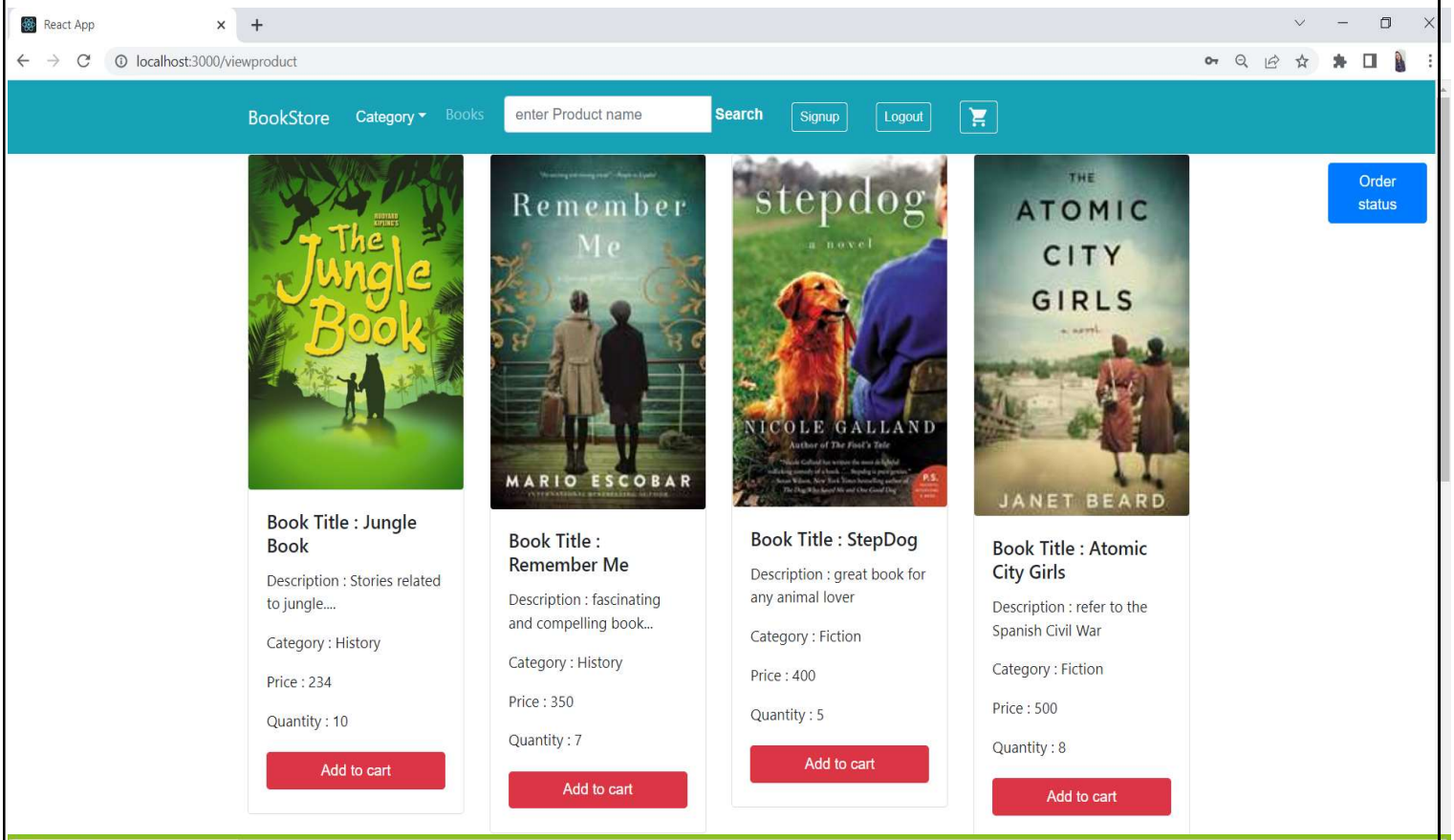
Enter price
Enter quantity
Save
Back to List


React App
localhost:3000/viewproduct
BookStore
Category
Books
enter Product name
Search
Signup
Logout
Order status
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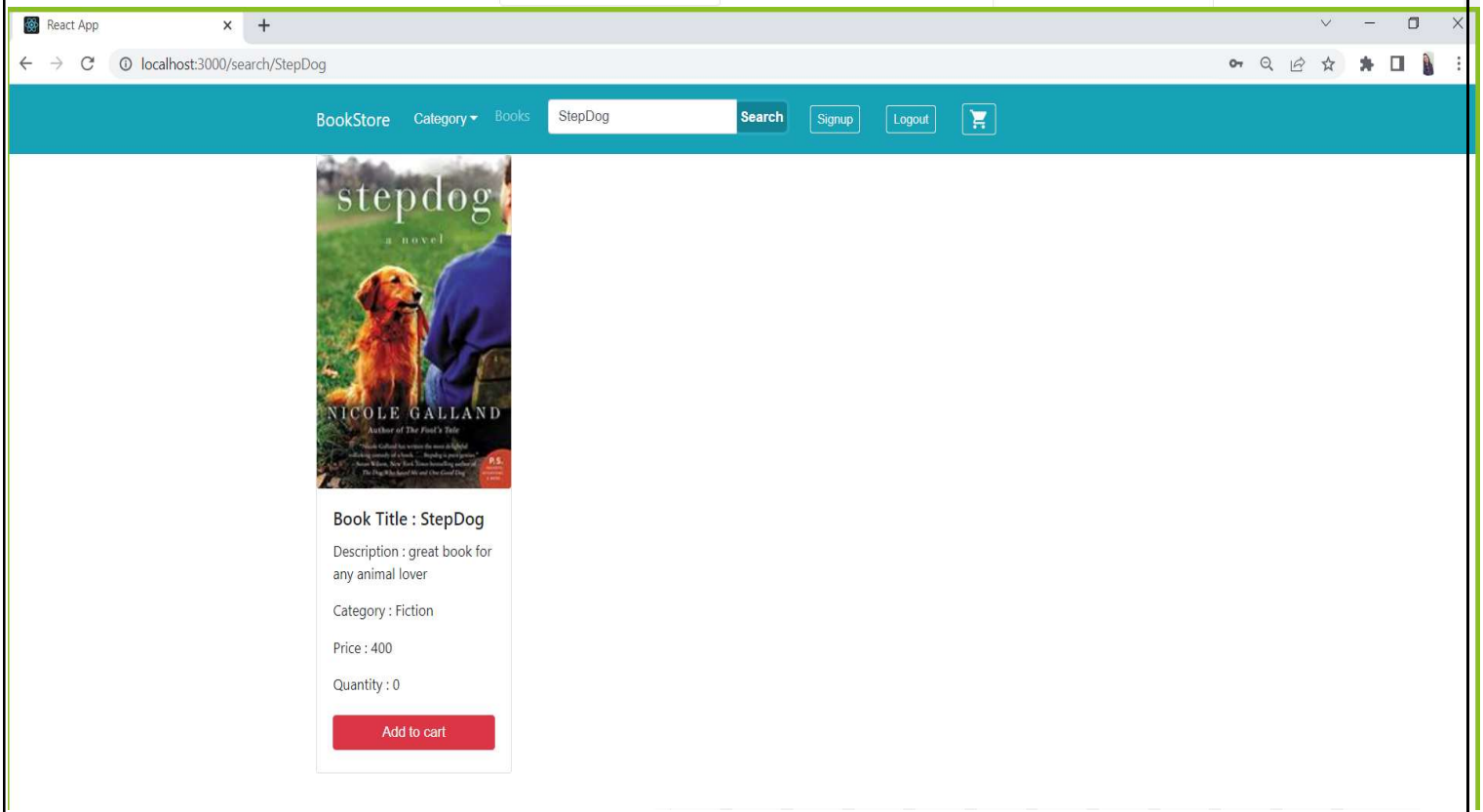
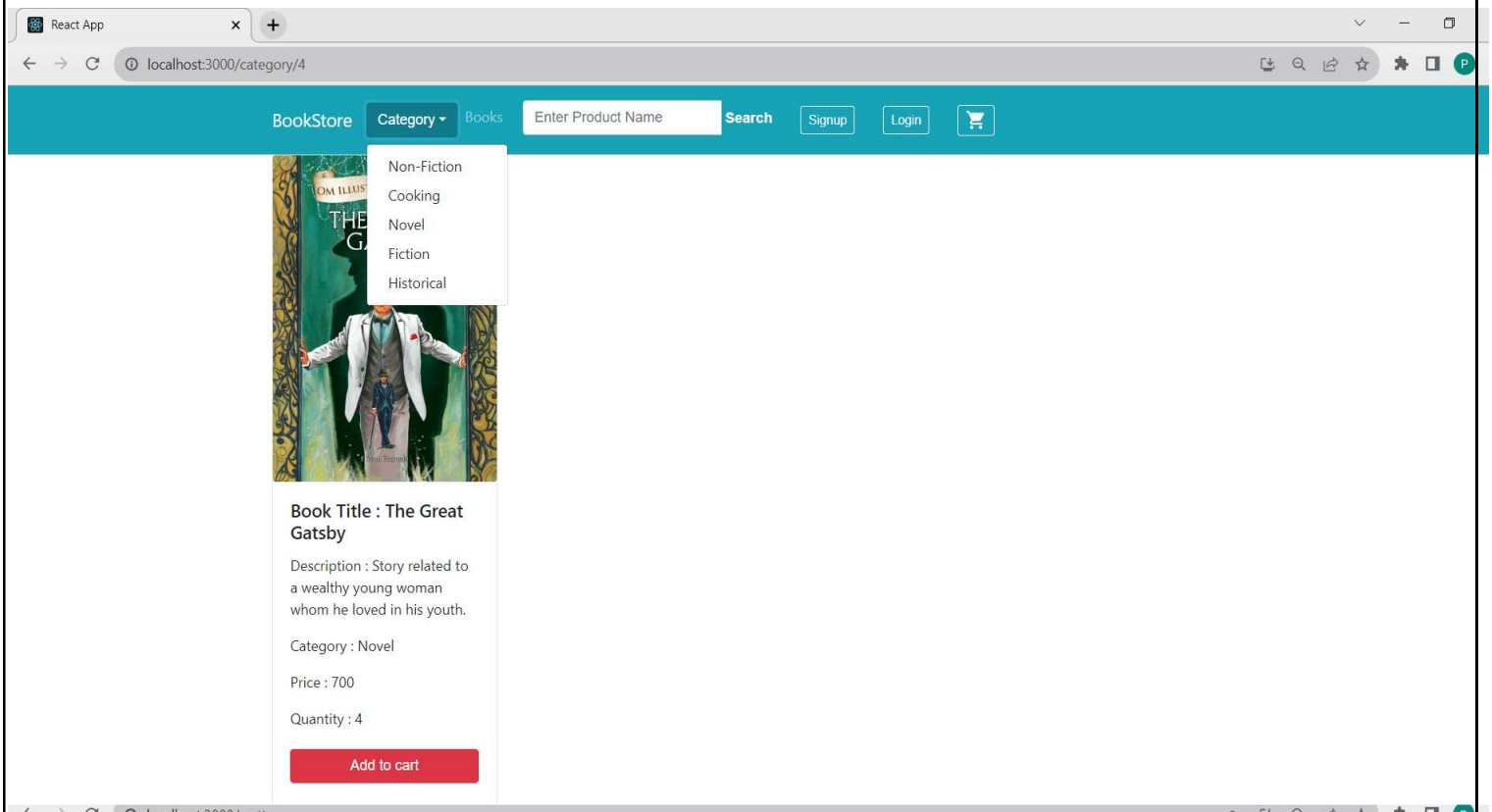
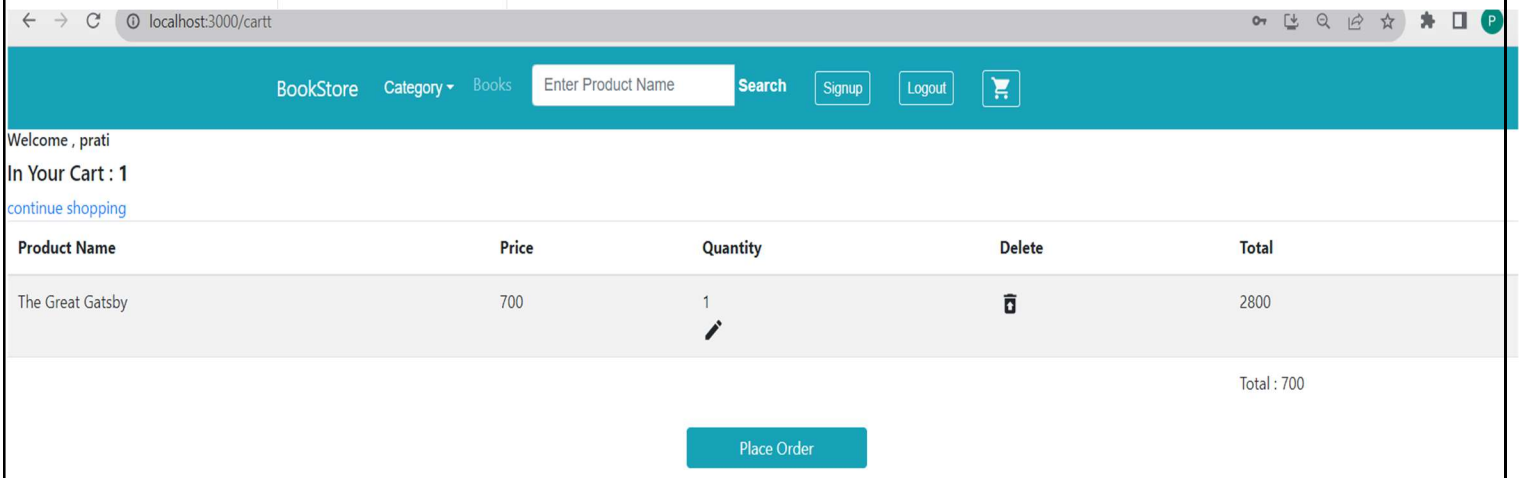
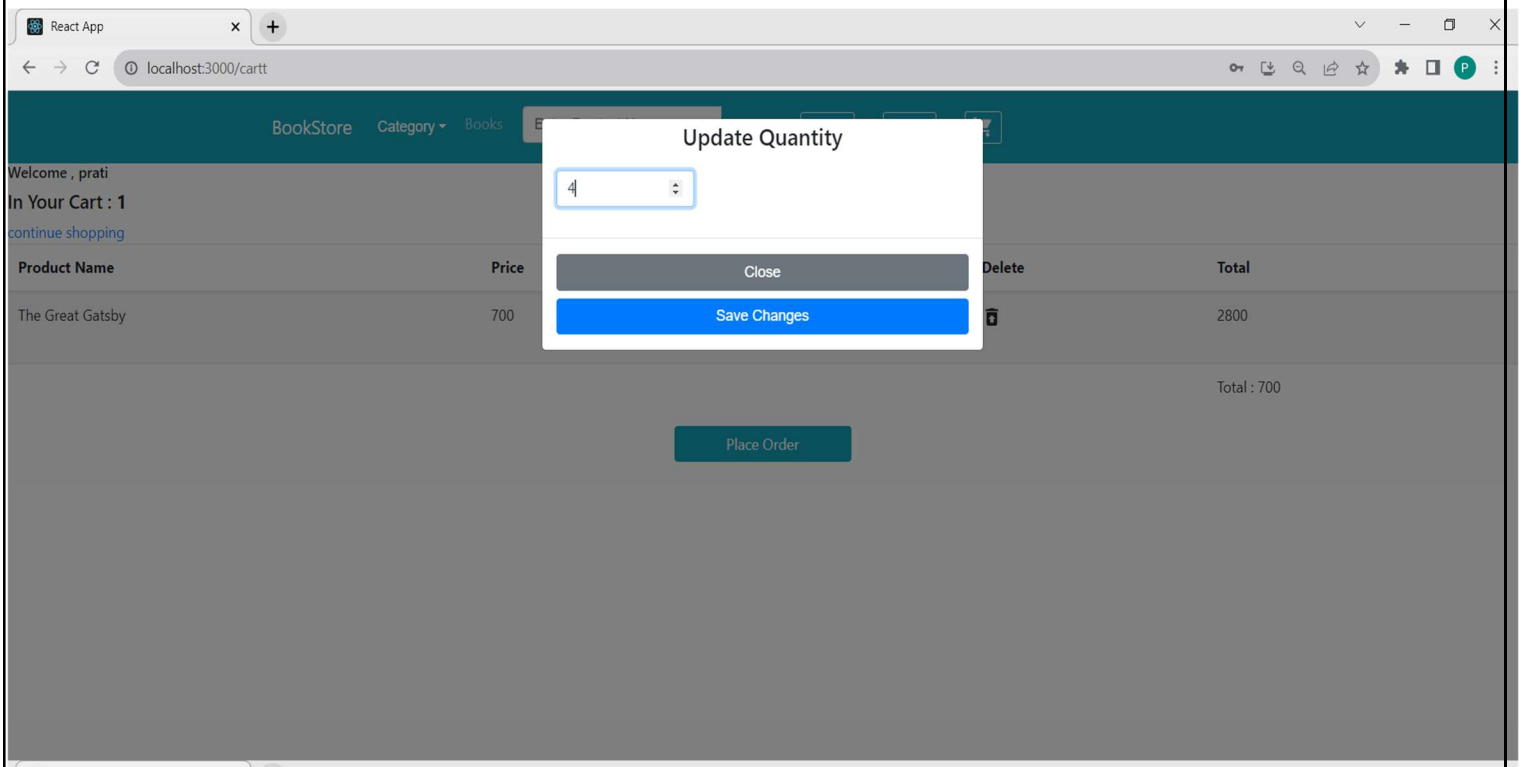
Description : Stories related to jungle....
Category : History
Price : 234
Quantity : 10
Add to cart
Book Title : Remember Me
Description : fascinating and compelling book...
Category : History
Price : 350
Quantity : 7
Add to cart
Book Title : StepDog
Description : great book for any animal lover
Category : Fiction
Price : 400
Quantity : 5
Add to cart
Book Title : Atomic City Girls
Description : refer to the Spanish Civil War
Category : Fiction
Price : 500
Quantity : 8
Add to cart


React App
localhost:3000/search/StepDog
BookStore
Category
Books
StepDog
Search
Signup
Logout
Book Title : StepDog
Description : great book for any animal lover
Category : Fiction
Price : 400
Quantity : 0
Add to cart


React App
localhost:3000/category/4
BookStore
Category
Books
Enter Product Name
Search
Signup
Login
Non-Fiction
Cooking
Novel
Fiction
Historical
Book Title : The Great Gatsby
Description : Story related to a wealthy young woman whom he loved in his youth.
Category : Novel
Price : 700
Quantity : 4
Add to cart


localhost:3000/cartt
BookStore
Category
Books
Enter Product Name
Search
Signup
Logout
Welcome , prati
In Your Cart : 1
continue shopping
Product Name
Price
Quantity
Delete
Total
The Great Gatsby
700
1
2800
Total : 700
Place Order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BookStore
Category
Books
Update Quantity
4
Close
Save Changes
Welcome , prati
In Your Cart : 1
continue shopping
Product Name
Price
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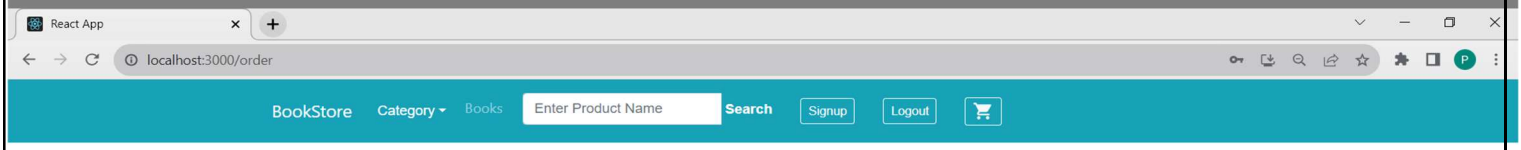
The Great Gatsby
700
2800
Total : 700
Place Order


React App
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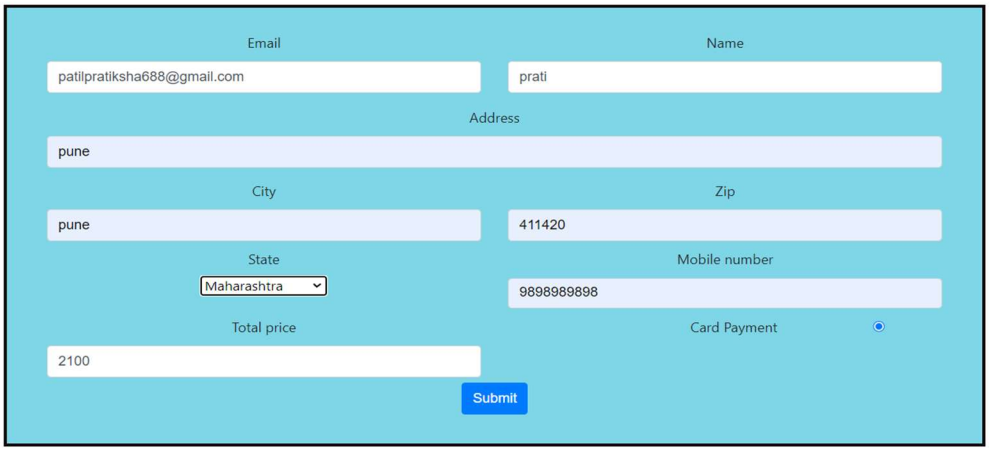
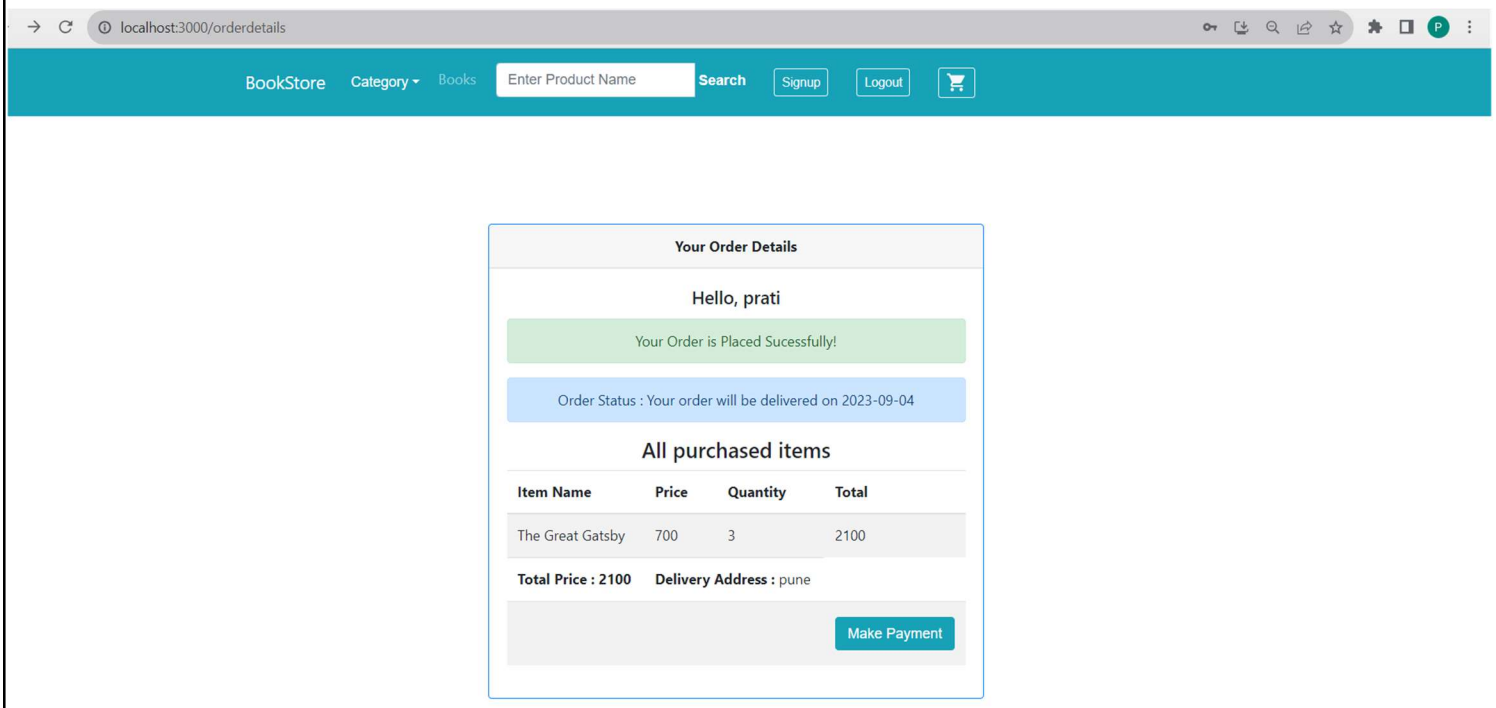
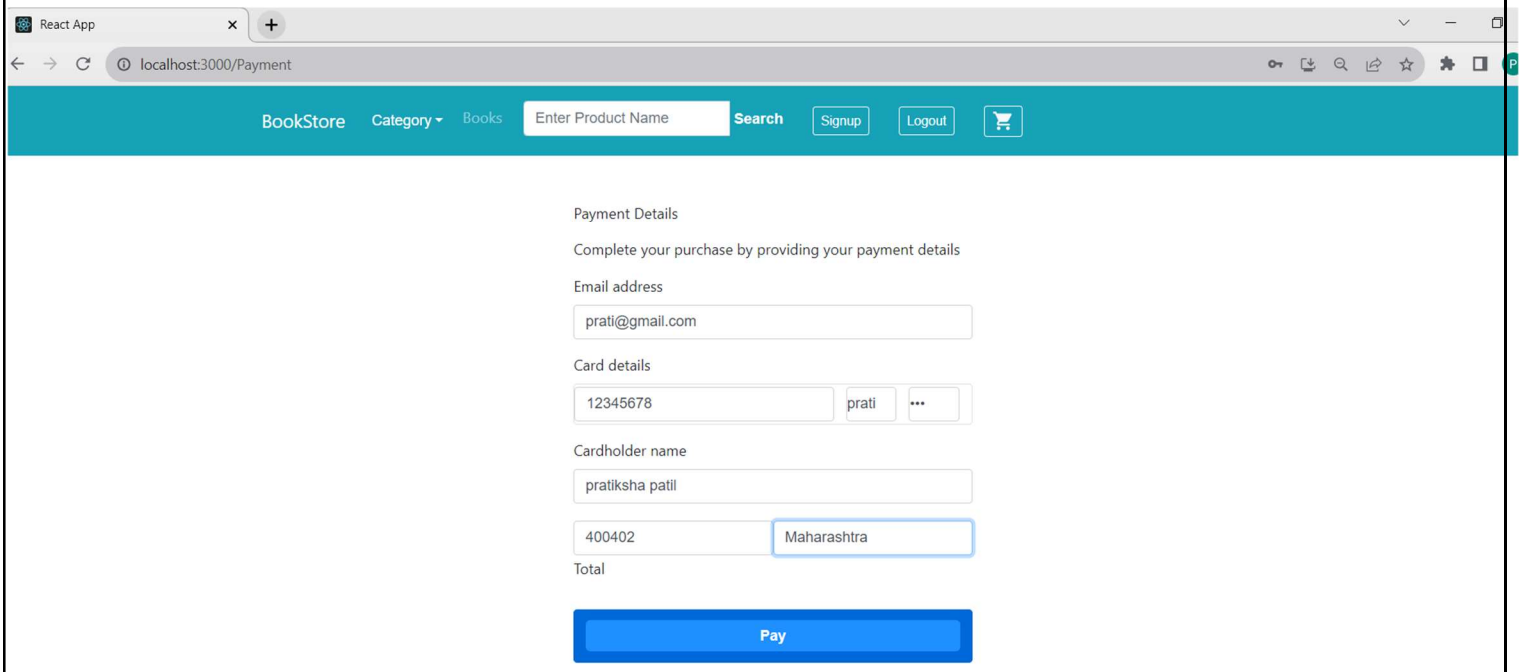
BookStore
Category
Books
Enter Product Name
Search
Signup
Logout


Email
patilpratiksha688@gmail.com
Name
prati
Address
pune
City
pune
Zip
411420
State
Maharashtra
Mobile number
9898989898
Total price
2100
Card Payment
Submit


localhost:3000/orderdetails
BookStore
Category
Books
Enter Product Name
Search
Signup
Logout
Your Order Details
Hello, prati
Your Order is Placed Sucessfully!
Order Status : Your order will be delivered on 2023-09-04
All purchased items
Item Name
Price
Quantity
Total
The Great Gatsby
700
3
2100
Total Price : 2100
Delivery Address : pune
Make Payment


React App
localhost:3000/Payment
BookStore
Category
Books
Enter Product Name
Search
Signup
Logout
Payment Details
Complete your purchase by providing your payment details
Email address
prati@gmail.com
Card details
12345678
prati
Cardholder name
pratiksha patil
400402
Maharashtra
Total
Pay

CONCLUSION

The project entitled **BOOKHAVEN** was completed successfully.

The system has been developed with much care and free of errors and at the same time it is efficient and less time consuming. The purpose of this project was to develop a web application and an android application for purchasing book from multiple vendors.
This project helped us in gaining valuable information and practical knowledge on several topics like designing web pages using React.js, usage of responsive templates, and management of database using MySQL. The entire system is secured. Also, the project helped us understanding about the development phases of a project and software development life cycle.
This project has given us great satisfaction in having designed an application and deployed globally so the book lover all over the world can access the website anywhere in the world and get the book they want on their doorstep.

There is a scope for further development in our project to a great extent. A number of features can be added to this system in future like providing moderator more control over products so that each moderator can verify the Admin . Another feature we wished to implement was providing classes for customers so that different offers can be given to each class. System may keep track of history of purchases of each customer and provide suggestions based on their history. These features could have implemented unless the time did not limit us.

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[5] https://javaee.github.io/javaee-spec/javadocs/