FULL STACK

Full Stack Java Developer: Capstone Project

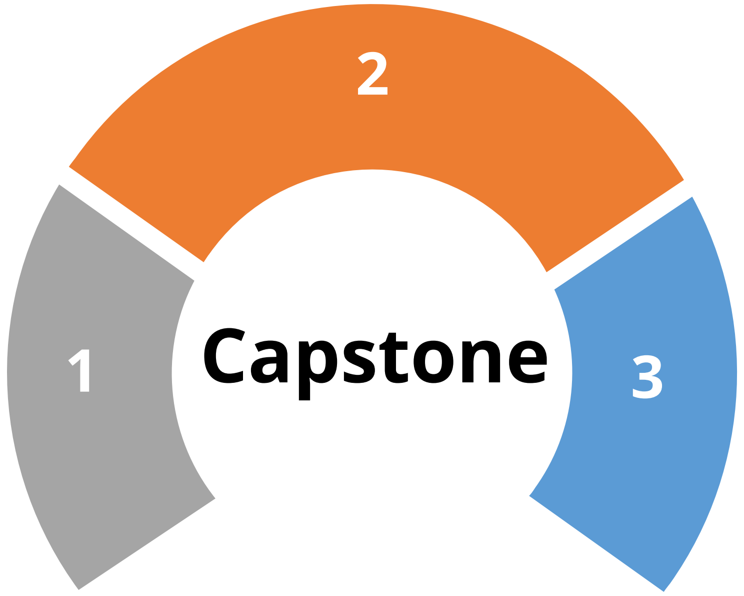
```
#include <iostream>
#include <cstdlib>
using namespace std;
int main()
{
    cout << "Hello, world!" << endl;
    return 0;
}
```

Capstone Project: Introduction

Capstone project is a comprehensive project that aims to deliver end-to-end functionality of a business application.

Multiple technologies

Every stage of a capstone project can be implemented with different services present for the operations.

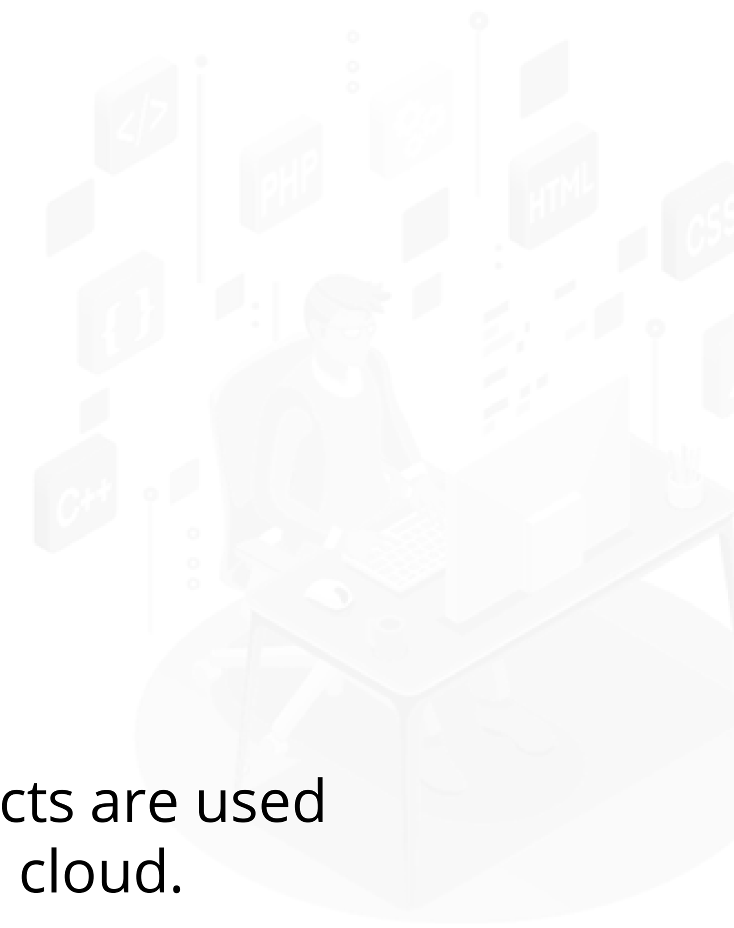


Scalable

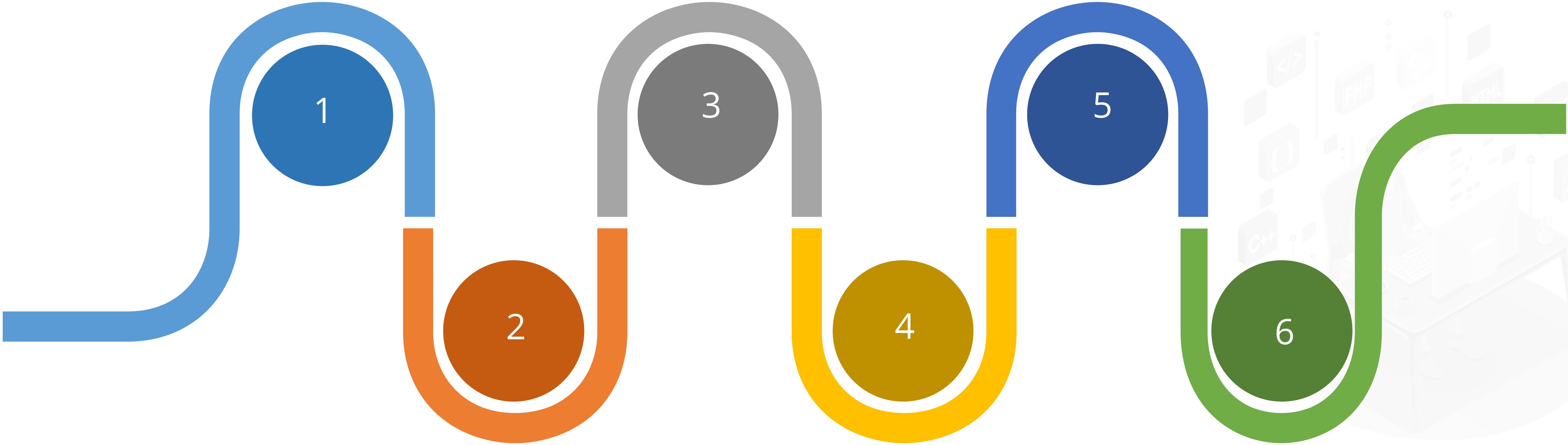
Due to its dynamic nature, it is built around various domains and business use cases which make it scalable.

Multi-level

Multi-level projects are used to deploy on the cloud.



Project Development Flow



Agile planning

Project delivery divided into sprints

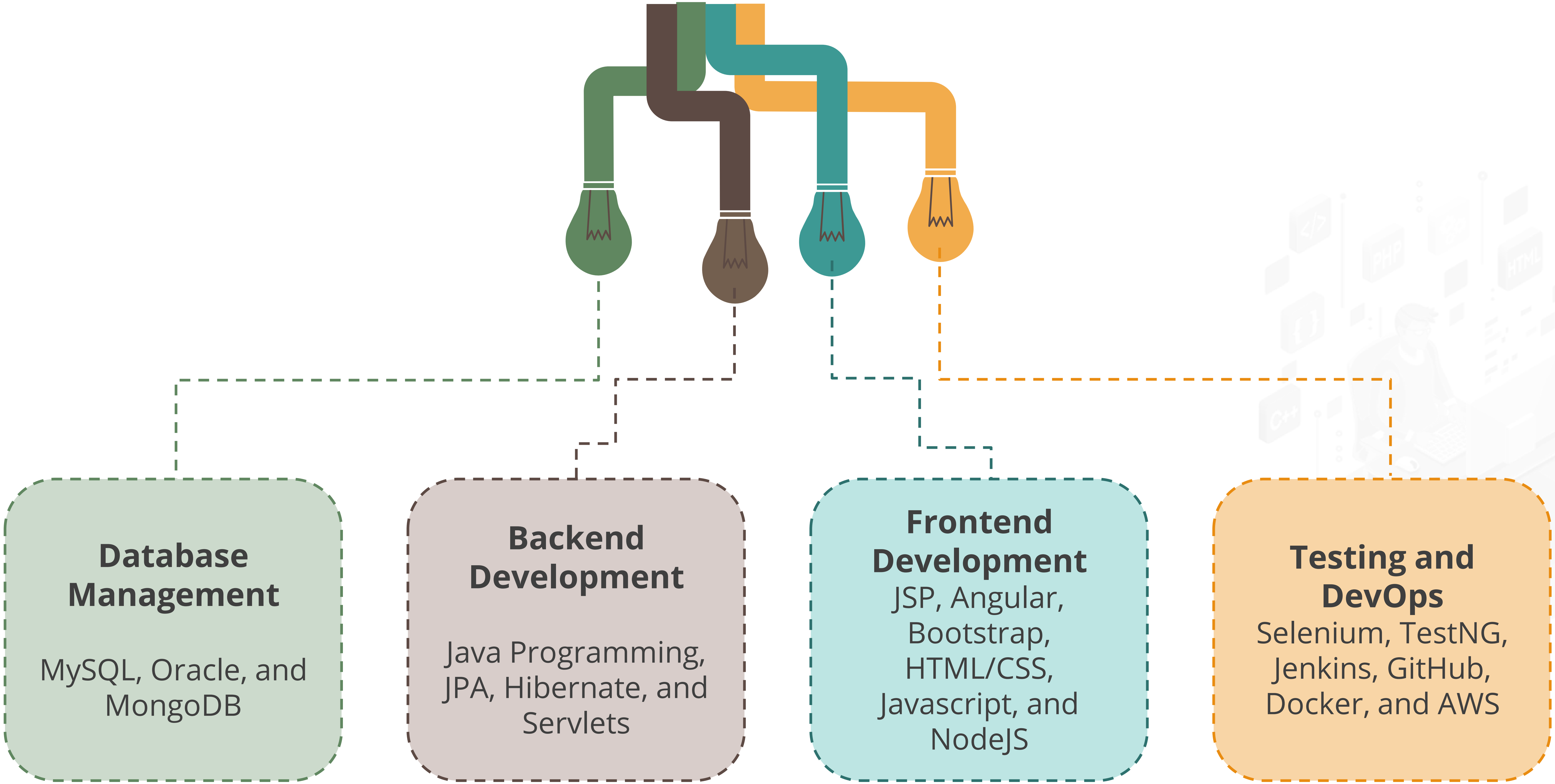
Database management

Backend

Frontend

DevOps and testing

Technologies



Database Management

MySQL, Oracle, and MongoDB

Backend Development

Java Programming, JPA, Hibernate, and Servlets

Frontend Development
JSP, Angular, Bootstrap, HTML/CSS, Javascript, and NodeJS

Testing and DevOps
Selenium, TestNG, Jenkins, GitHub, Docker, and AWS

FULL STACK

Domain: Healthcare

Domain: Healthcare

Project Objective:

Create a dynamic and responsive Java e-healthcare web application for online ordering of medicines.

Background of the project:

Medicare is a company that supplies medicines and a couple of other healthcare essentials at an affordable price. It was established in 2012 in Delhi, India.

It had been serving fine all these years, however, the business analysts noticed a drop in the selling since 2015. They found out that online ordering of medicines with companies, such as 100mg and mfine are gaining more profits by eliminating middlemen from the equation. As a result, the team decided to hire a Full Stack developer who could develop a healthcare web application with a rich and user-friendly interface.

You are hired as the Full Stack Java developer and are asked to develop the web application. The management team has provided you with the requirements and their business model so that you can easily arrange different components of the application.

Admin Portal Features

Below are the key responsibilities and functionalities to be implemented in the admin portal. The admin user should be able to:

Administrator

Add or remove medicine details from the application to build a rich product line

Edit medicine details like name, price, seller, and description to keep the product information updated with the current prices

Enable or disable the medicines

User Portal Features

Below are the key responsibilities and functionalities to be implemented in the user portal. The end user must be able to:

User Portal

- Sign in to the application to maintain the record of activities
- Search for products based on the search keyword
- Apply filters and sort results based on different categories

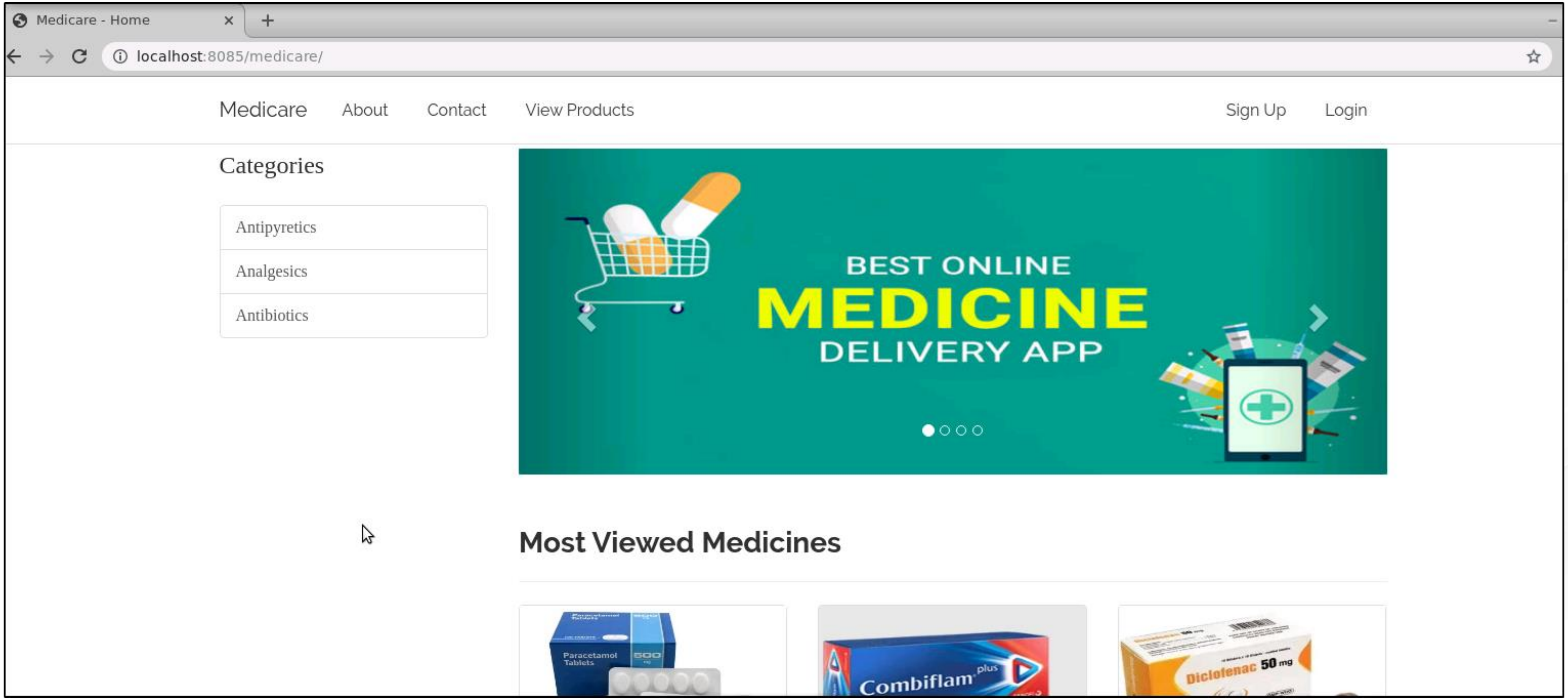
User Portal Features

Below are the key responsibilities and functionalities to be implemented in the user portal. The end user must be able to:

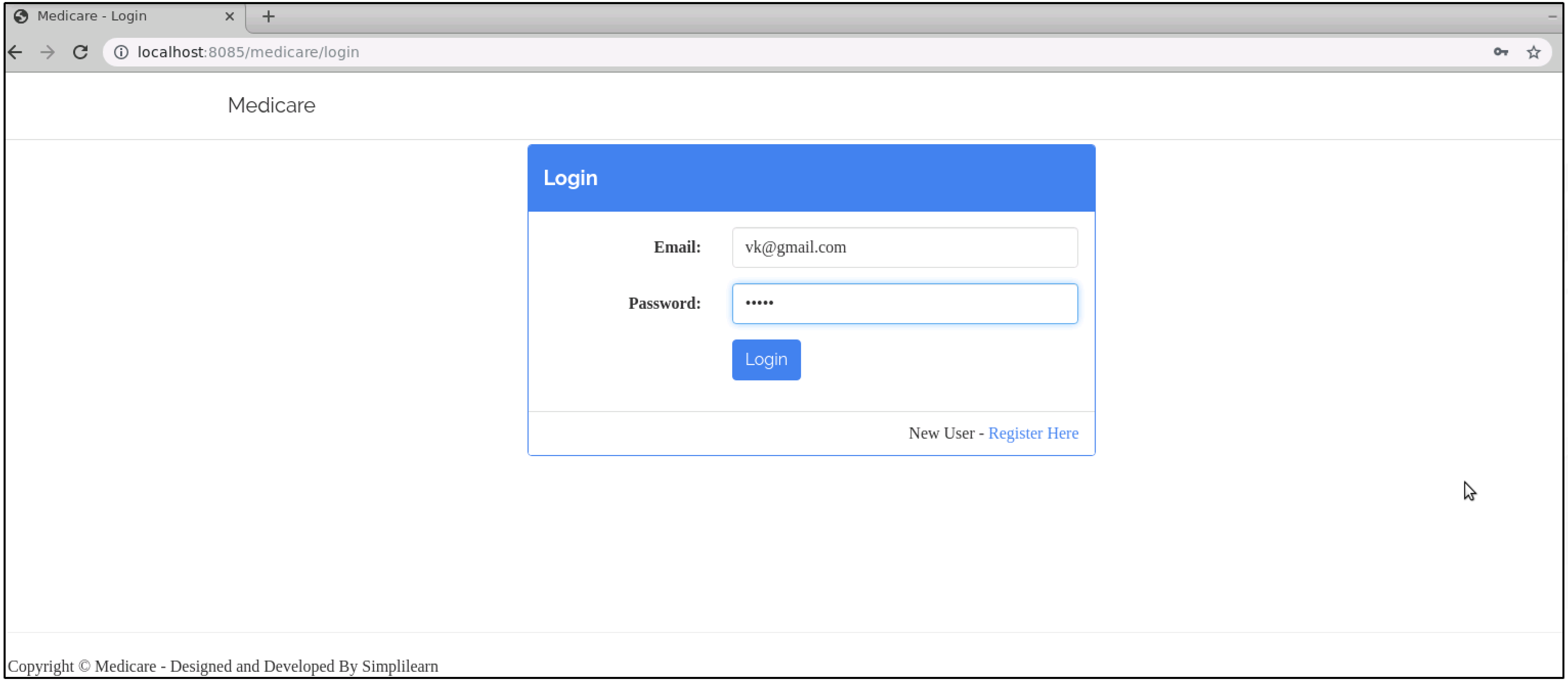
User Portal

- Add all the selected products and customize the purchase at the end
- Experience a seamless payment process
- Receive an order summary page once the payment is complete

Project Reference Outputs


Medicare - Home
localhost:8085/medicare/
Medicare
About
Contact
View Products
Sign Up
Login
Categories
Antipyretics
Analgesics
Antibiotics
BEST ONLINE
MEDICINE
DELIVERY APP
Most Viewed Medicines
Paracetamol Tablets 500
Combiflam plus
Diclofenac 50 mg

Project Reference Outputs



Medicare - Login
localhost:8085/medicare/login
Medicare
Login

Email: vk@gmail.com

Password: •••••

Login
New User - Register Here

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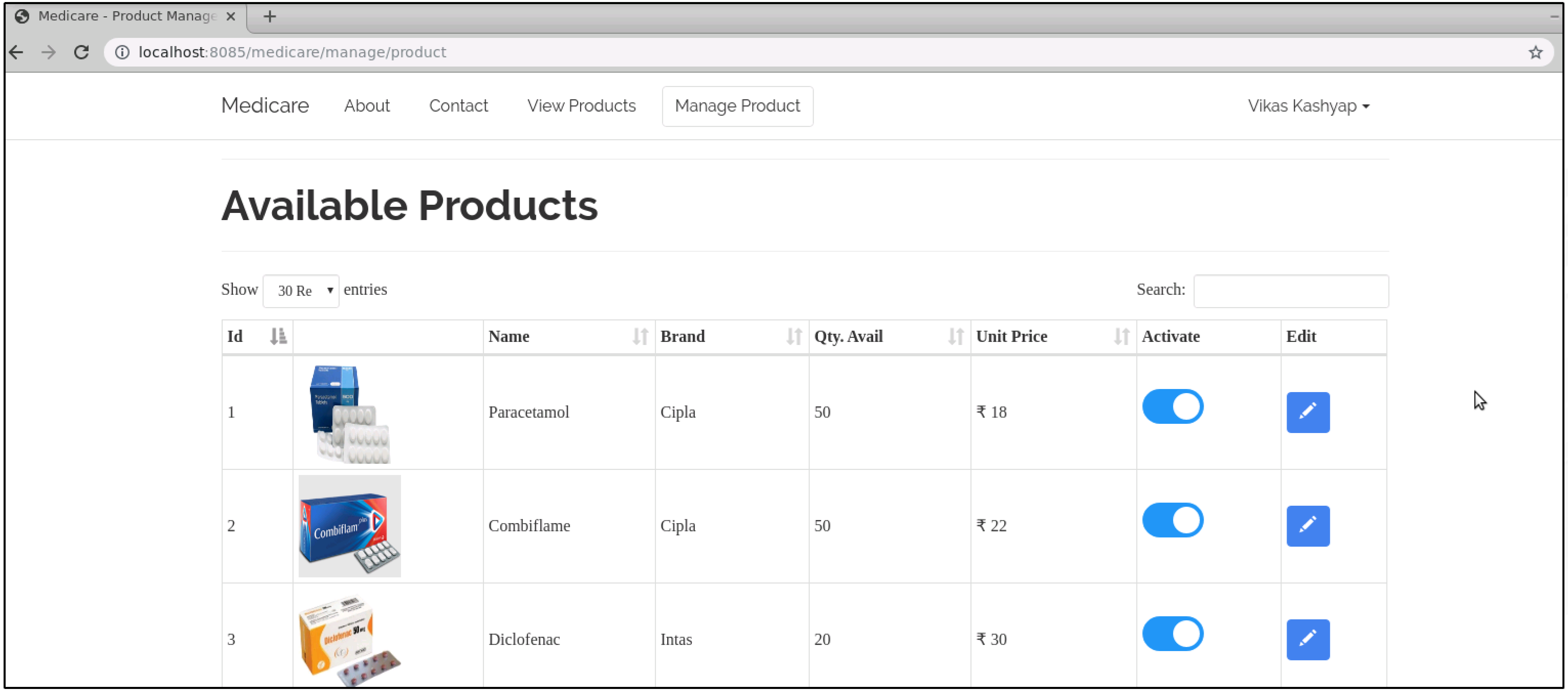
Project Reference Outputs


Medicare - Product Manage
localhost:8085/medicare/manage/product
Medicare
About
Contact
View Products
Manage Product
Vikas Kashyap

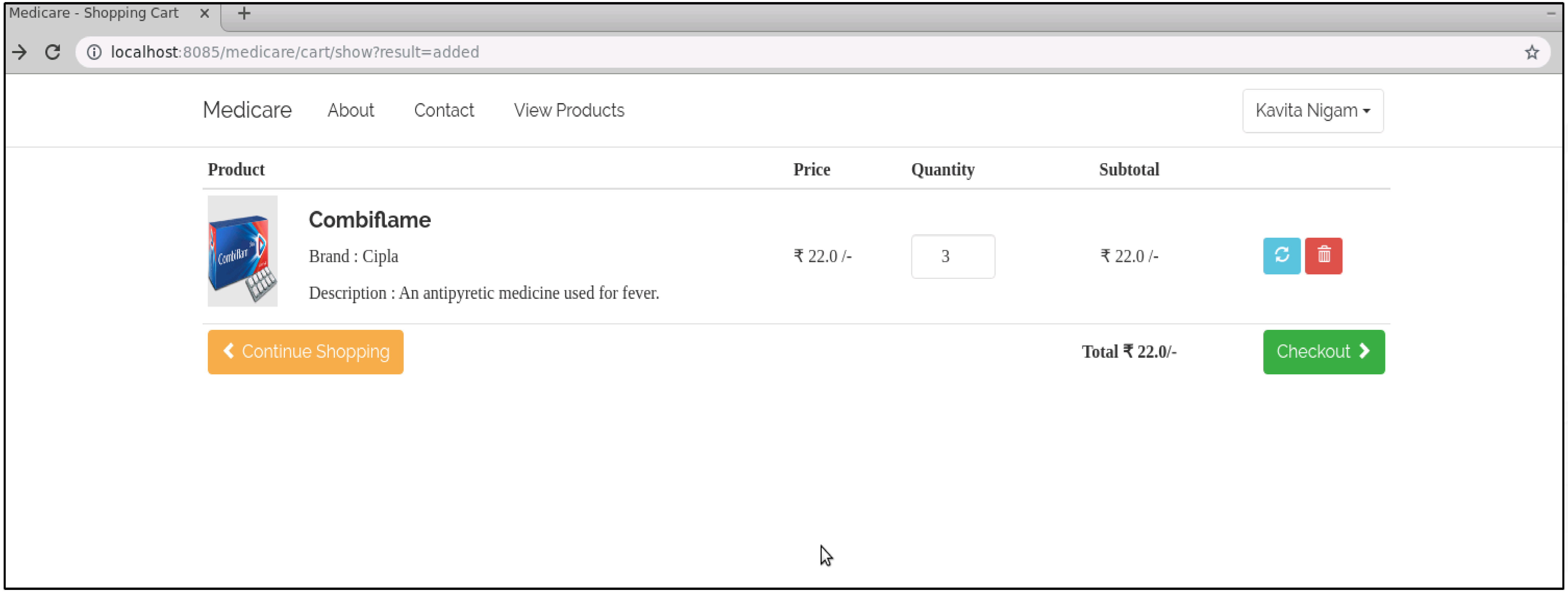
Available Products

Show 30 Re entries

Search:

Id		Name	Brand	Qty. Avail	Unit Price	Activate	Edit
1		Paracetamol	Cipla	50	₹ 18	●	✎
2		Combiflame	Cipla	50	₹ 22	●	✎
3		Diclofenac	Intas	20	₹ 30	●	✎

Project Reference Outputs


Medicare - Shopping Cart
localhost:8085/medicare/cart/show?result=added
Medicare
About
Contact
View Products
Kavita Nigam

Product	Price	Quantity	Subtotal
Combiflame Brand : Cipla Description : An antipyretic medicine used for fever.	₹ 22.0 /-	3	₹ 22.0 /-

Continue Shopping
Checkout

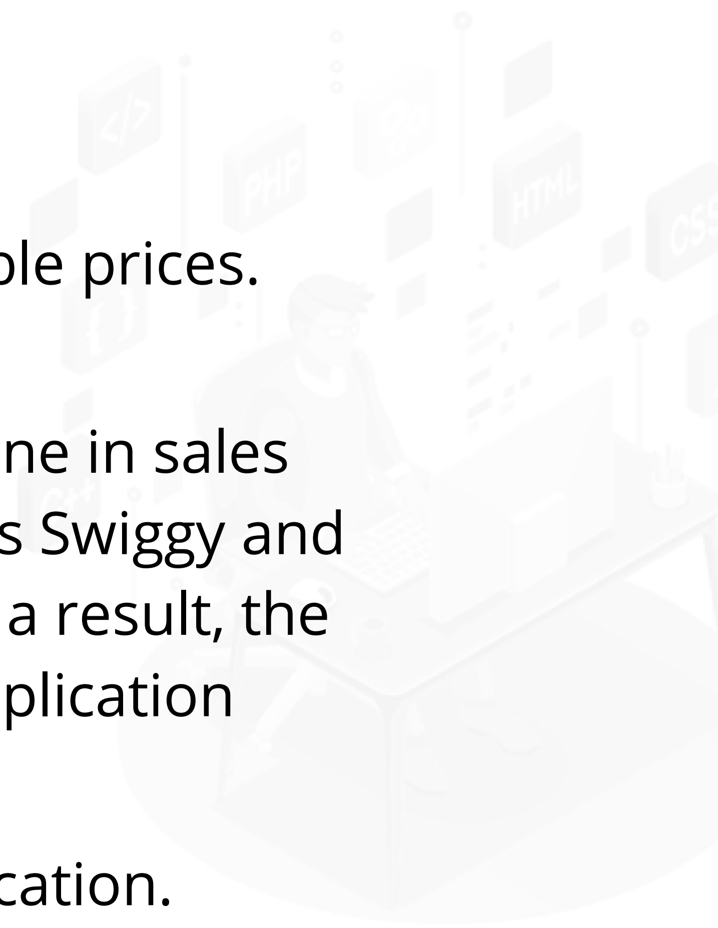
Total ₹ 22.0/-

Domain: Food Delivery

Domain: Food Delivery

Project Objective:

Create a dynamic and responsive online food delivery web application for ordering food items of different cuisines from a restaurant.



Background of the project:

Foodbox is a restaurant chain that delivers food items of different cuisines at affordable prices. It was established in 2014 in Bengaluru, India.

It had been serving fine all these years, however, the business analysts noticed a decline in sales since 2016. They found out that online ordering of food items with companies, such as Swiggy and Foodpanda are gaining more profits by eliminating middlemen from the equation. As a result, the team decided to hire a Full Stack developer to develop an online food delivery web application with a rich and user-friendly interface.

You are hired as the Full Stack Java developer and are asked to develop the web application. The management team has provided you with the requirements and their business model so that you can easily arrange different components of the application.

Admin Portal Features

Below are the key responsibilities and functionalities to be implemented in the admin portal. The admin user should be able to:

Add or remove cuisines to or from the application to build a rich product line

Edit food item details like name, price, cuisine, description, and offers to keep it aligned to the current prices

Administrator

Enable or disable the food items

User Portal Features

Below are the key responsibilities and functionalities to be implemented in the user portal. The end user must be able to:

User Portal

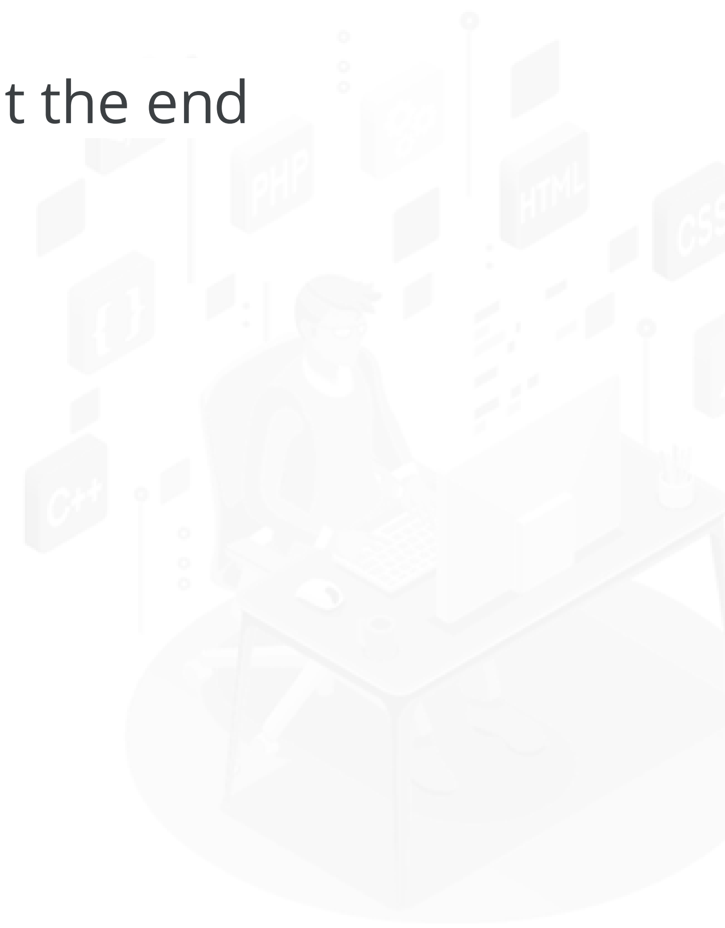
- Sign in to the application to maintain the record of activities
- Search for food items based on the search keyword
- Apply filters and sort results based on different cuisines to get the best deals

User Portal Features

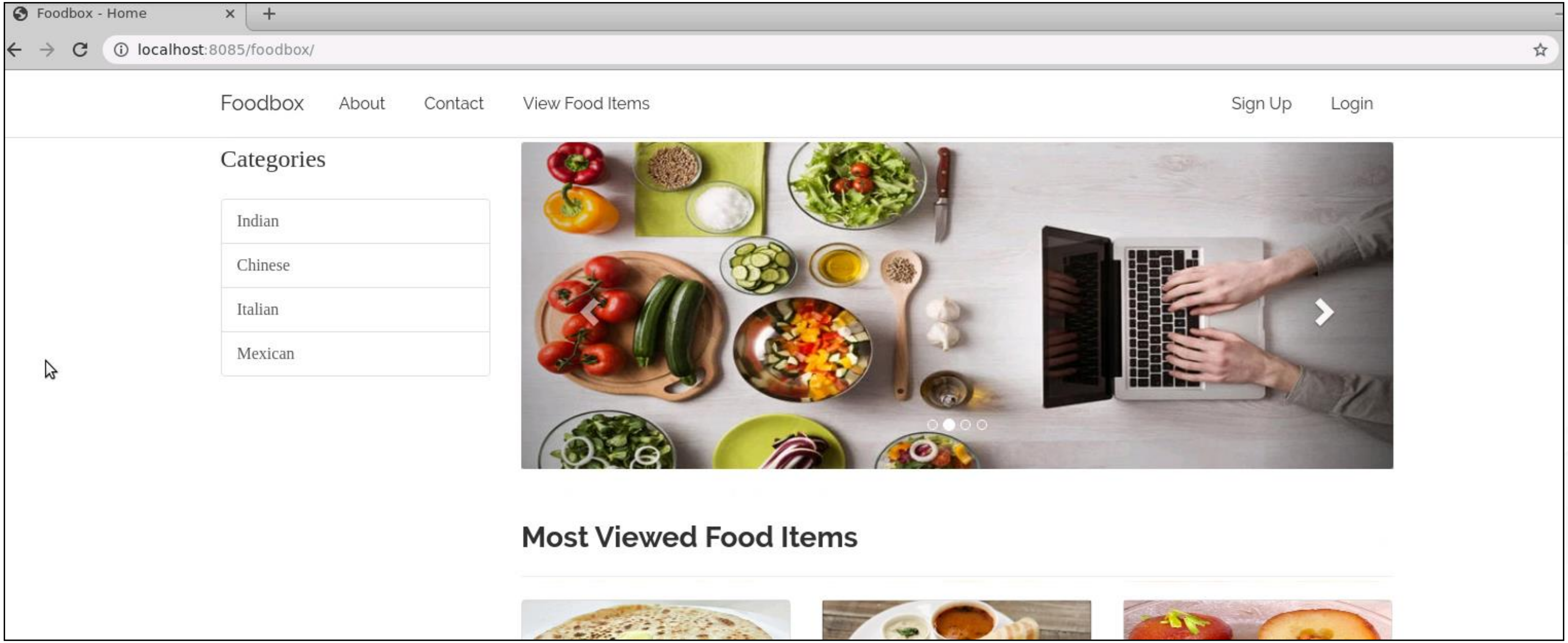
Below are the key responsibilities and functionalities to be implemented in the user portal. The end user must be able to:

User Portal

- Add all the selected food items to a cart and customize the purchase at the end
- Perform a seamless payment process
- Get an order summary details page once the payment is complete



Project Reference Outputs



Foodbox - Home

localhost:8085/foodbox/

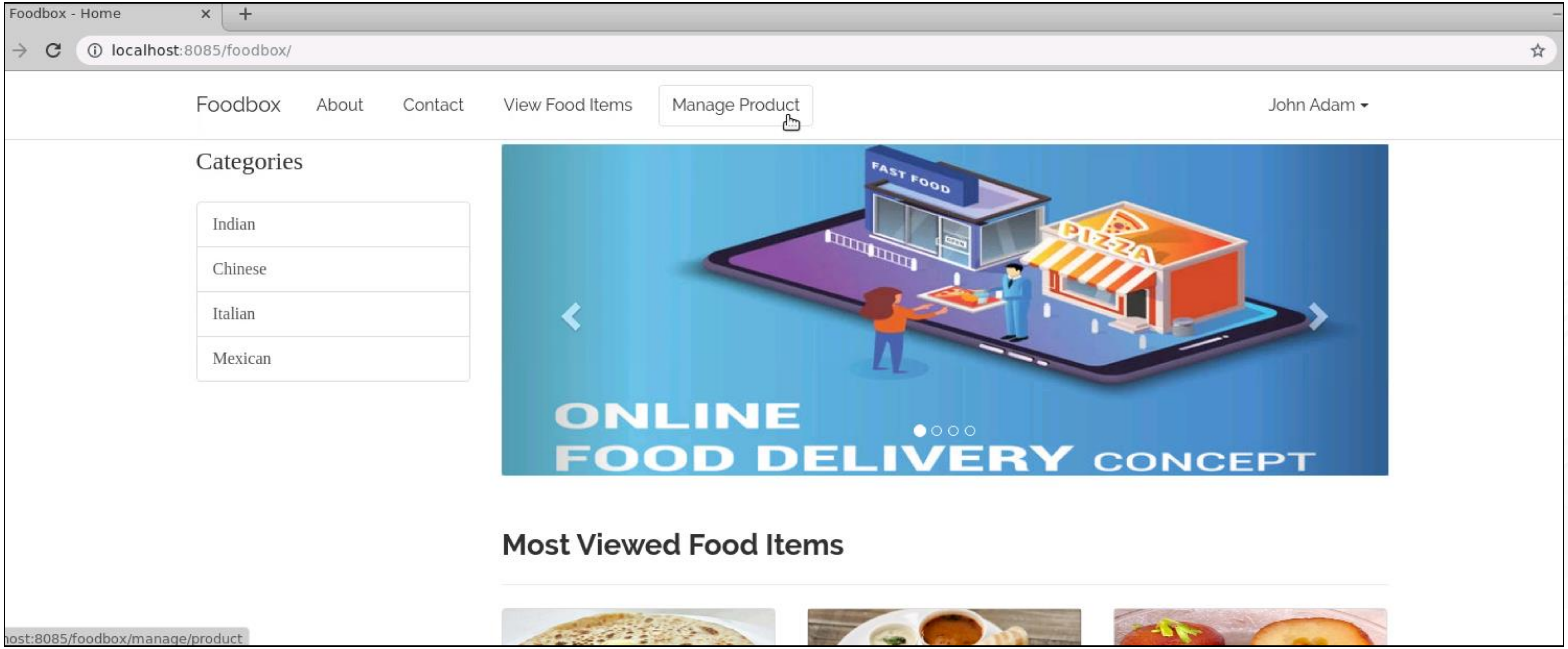
Foodbox About Contact View Food Items Sign Up Login

Categories

- Indian
- Chinese
- Italian
- Mexican

Most Viewed Food Items

Project Reference Outputs


Foodbox - Home
localhost:8085/foodbox/
Foodbox
About
Contact
View Food Items
Manage Product
John Adam
ONLINE
FOOD DELIVERY CONCEPT
FAST FOOD
PIZZA
ost:8085/foodbox/manage/product

Categories

- Indian
- Chinese
- Italian
- Mexican

Most Viewed Food Items

Domain: Entertainment

Domain: Entertainment

Project Objective:

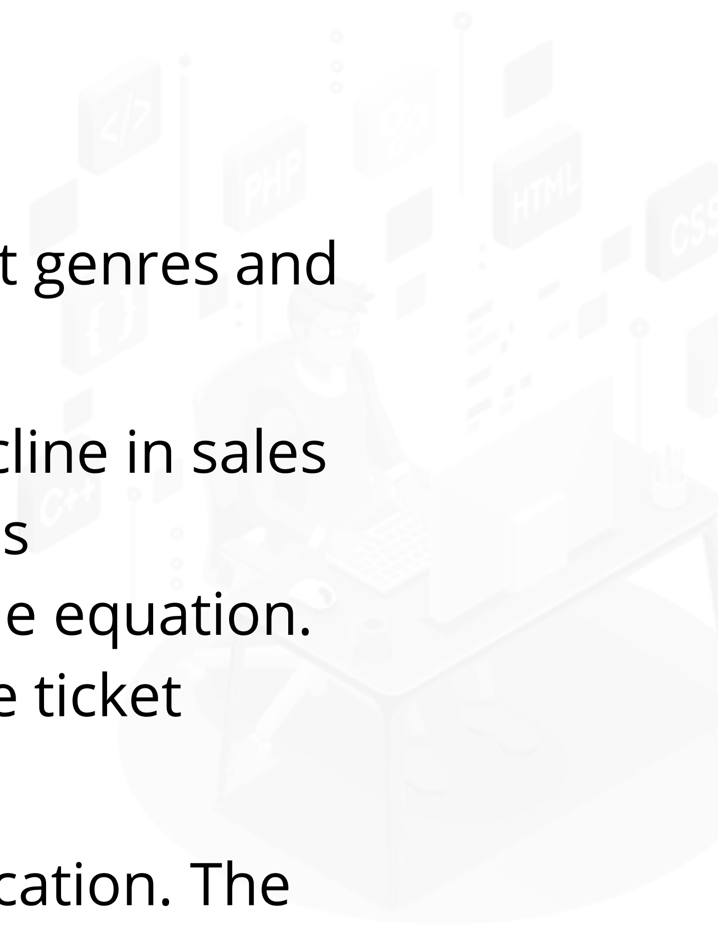
Create a dynamic and responsive web application for booking movie tickets online for different genres and languages.

Background of the project:

NMS Cinemas is a chain of single screen theatres that screen movie shows of different genres and languages at very genuine prices.

It was established in 2004 in Pune, India. Recently, the business analysts noticed a decline in sales since 2010. They found out that the online booking of movie tickets from apps, such as BookMyShow and Paytm were gaining more profit by eliminating middlemen from the equation. As a result, the team decided to hire a Full Stack developer to develop an online movie ticket booking web application with a rich and user-friendly interface.

You are hired as the Full Stack Java developer and are asked to develop the web application. The management team has provided you with the requirements and their business model so that you can easily arrange different components of the application.



Admin Portal Features

Below are the key responsibilities and functionalities to be implemented in the admin portal. The admin user should be able to:

Administrator

- Add or remove different genres to or from the application to build a rich product line
- Edit movie details like name, ticket price, language, description, and show timings to keep it aligned to the current prices
- Enable or disable movie shows from the application

User Portal Features

Below are the key responsibilities and functionalities to be implemented in the user portal. The end user must be able to:

User Portal

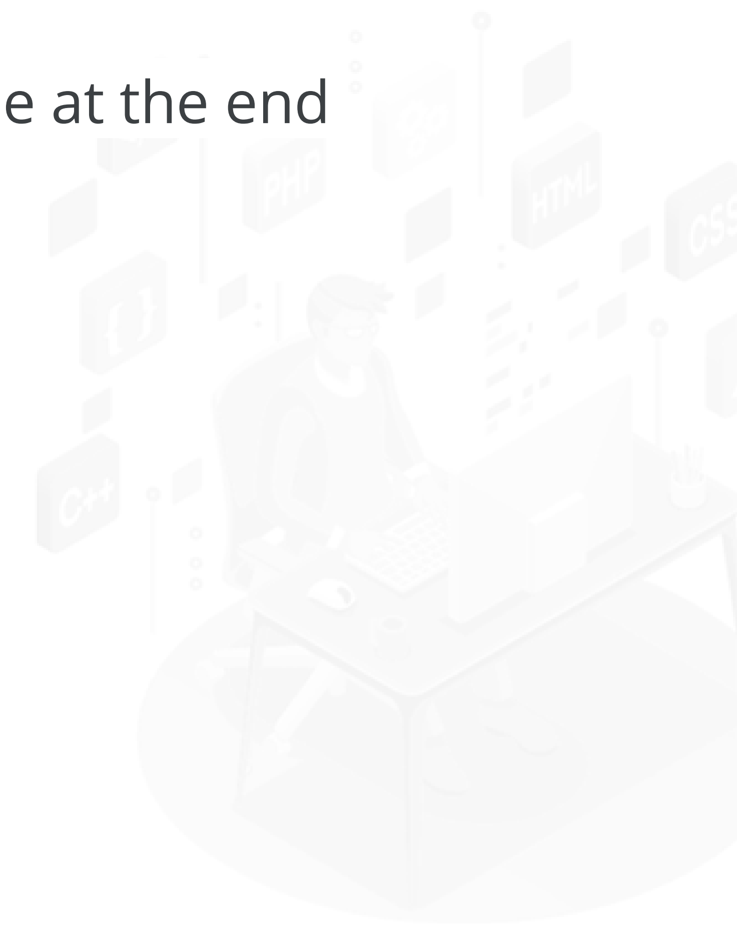
- Sign in to the application to maintain a record of activities
- Search for movie tickets based on the search keyword
- Apply filters and sort results based on different genres

User Portal Features

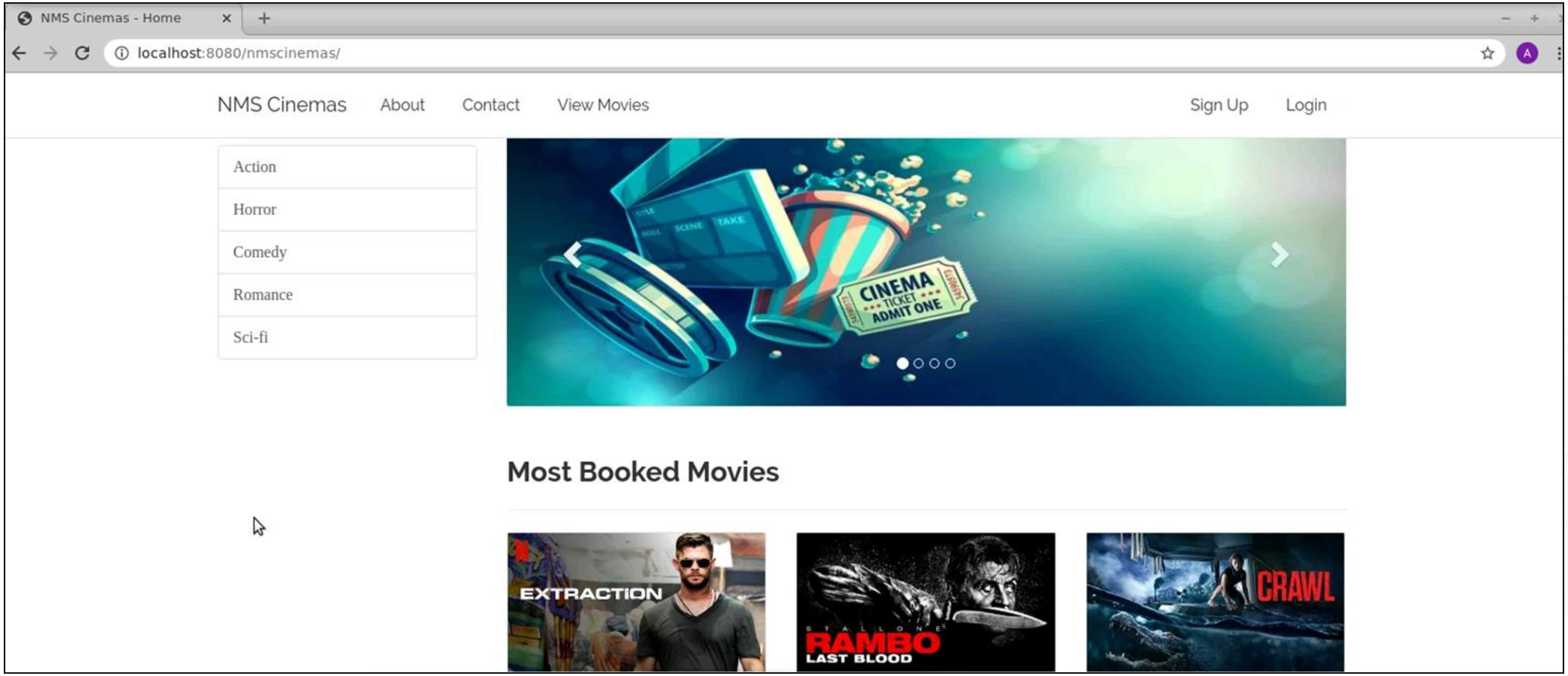
Below are the key responsibilities and functionalities to be implemented in the user portal. The end user must be able to:

User Portal

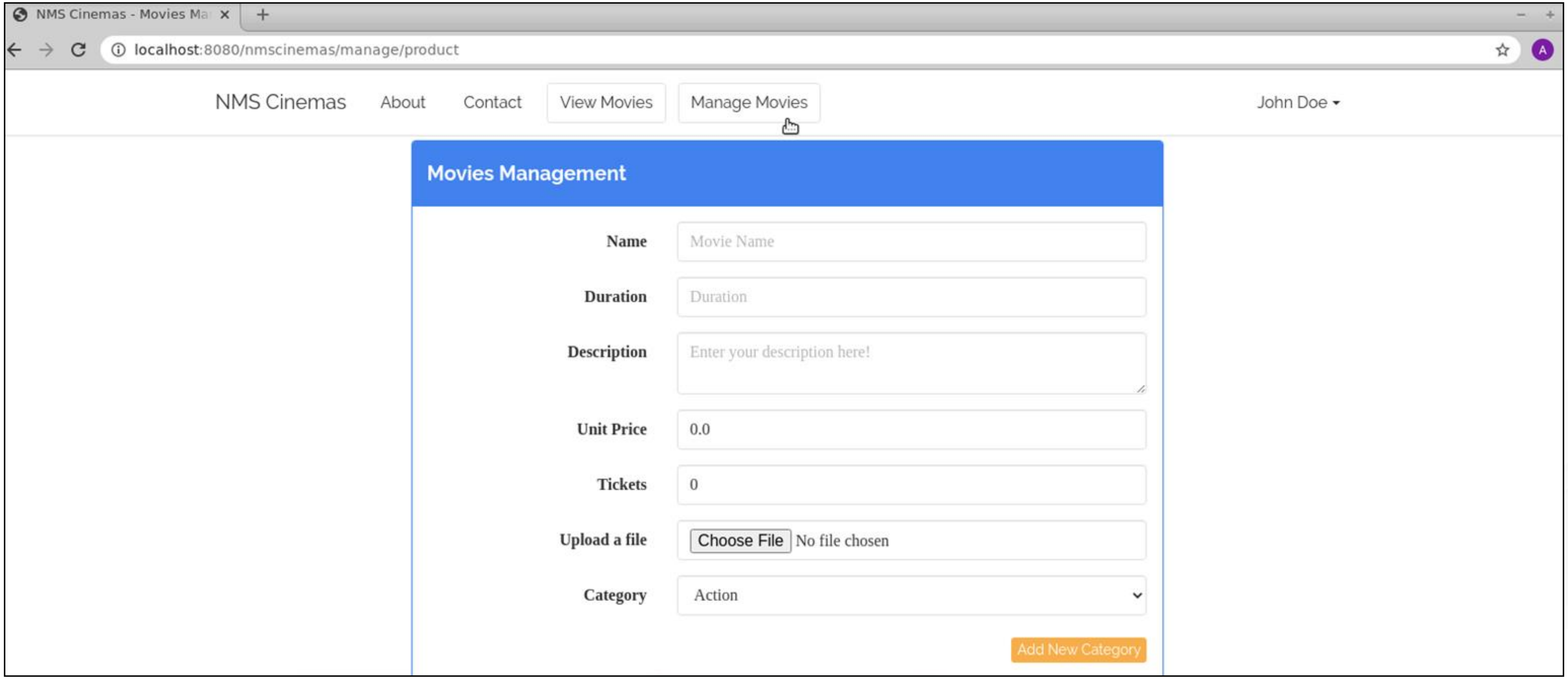
- Add all the selected movie tickets to a cart and customize the purchase at the end
- Experience a seamless payment process
- Receive a booking summary page once the payment is complete



Project Reference Outputs


NMS Cinemas - Home
localhost:8080/nmscinemas/
NMS Cinemas
About
Contact
View Movies
Sign Up
Login
Action
Horror
Comedy
Romance
Sci-fi
CINEMA TICKET ADMIT ONE
Most Booked Movies
EXTRACTION
RAMBO LAST BLOOD
CRAWL

Project Reference Outputs

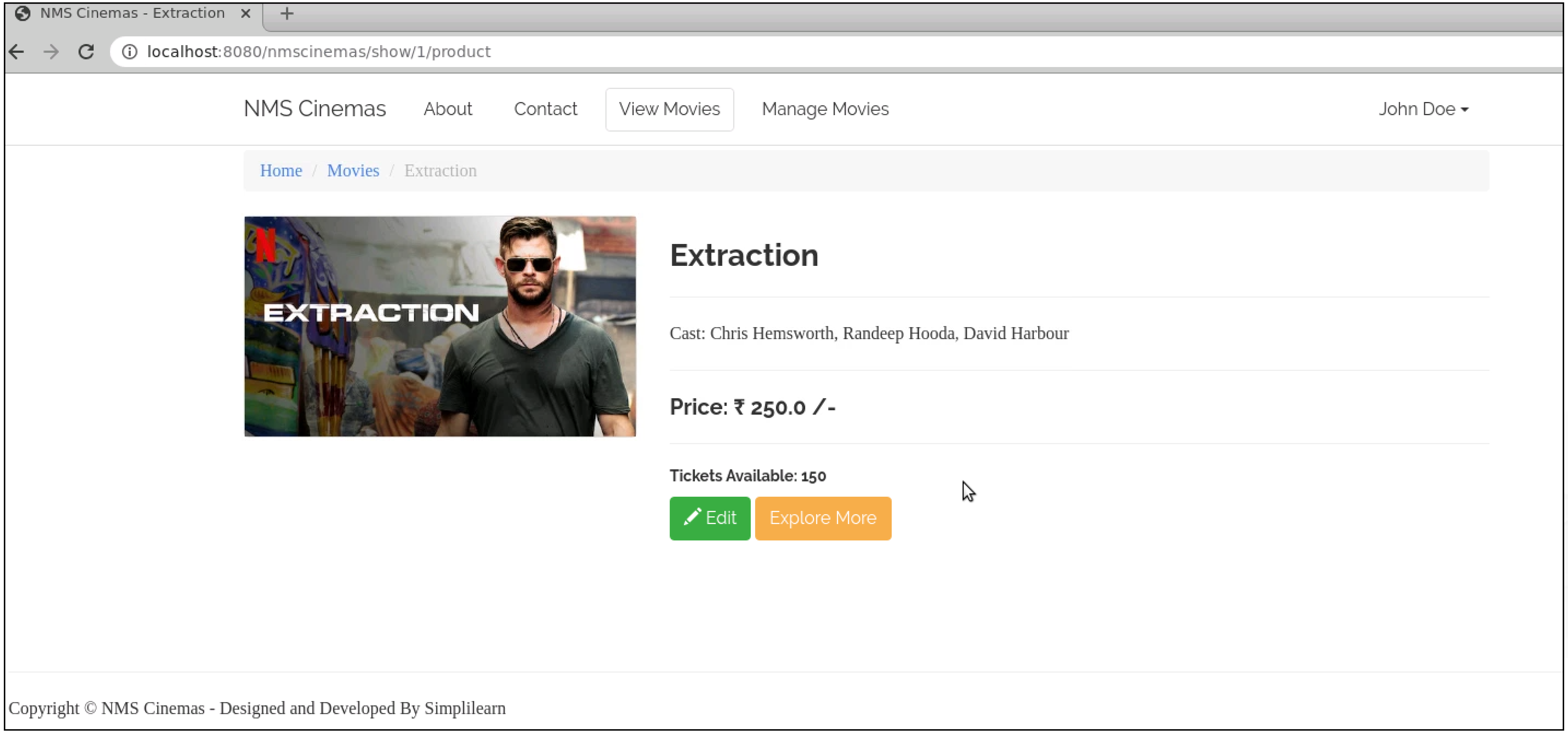


NMS Cinemas - Movies Ma
localhost:8080/nmscinemas/manage/product
NMS Cinemas
About
Contact
View Movies
Manage Movies
John Doe
Choose File
Add New Category

Movies Management

Name	Movie Name
Duration	Duration
Description	Enter your description here!
Unit Price	0.0
Tickets	0
Upload a file	No file chosen
Category	Action

Project Reference Outputs



NMS Cinemas - Extraction
localhost:8080/nmscinemas/show/1/product
NMS Cinemas
About
Contact
View Movies
Manage Movies
John Doe
Home / Movies / Extraction
EXTRACTION
Edit
Explore More

Extraction

Cast: Chris Hemsworth, Randeep Hooda, David Harbour

Price: ₹ 250.0 /-

Tickets Available: 150

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Domain: Online Banking

Domain: Online Banking

Project Objective:

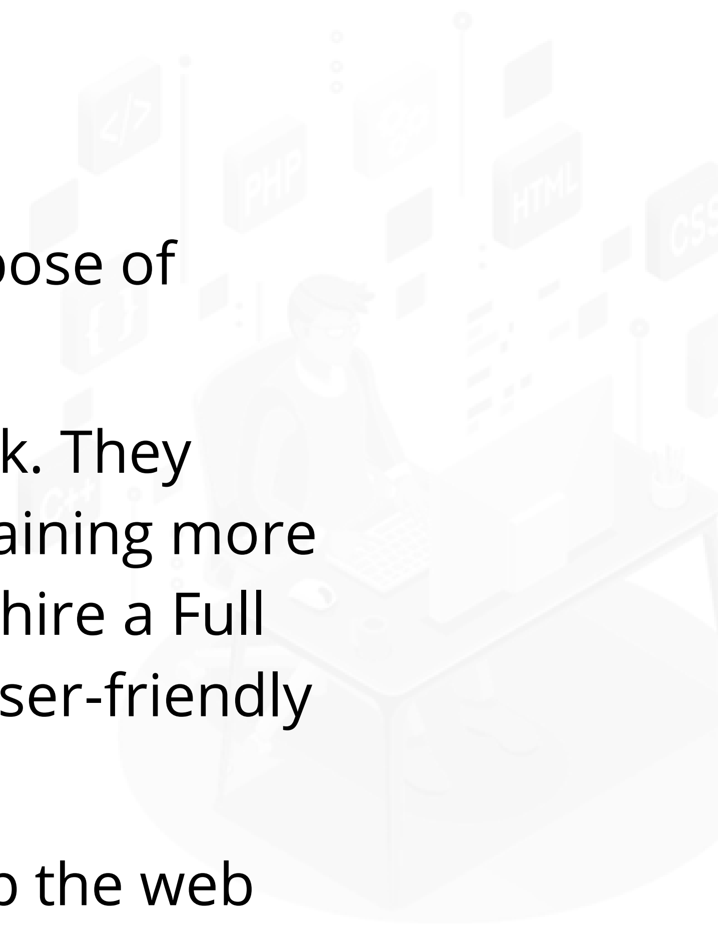
Create a dynamic and responsive Java online banking web application to deposit, withdraw, and transfer money between accounts.

Background of the project:

ICIN is one of the top banking firms that accepts deposits from the public for the purpose of lending loans to the public. It also invests an amount in securities.

Recently, the business analysts noticed a drop in the number of customers of the bank. They found out that online banking systems of banks like AXIS and American Express are gaining more profits by eliminating middlemen from the equation. As a result, the team decided to hire a Full Stack developer who can develop an online banking web application with a rich and user-friendly interface.

You are hired as one of the Full Stack Java developers and have been asked to develop the web application. The management team has provided you with the requirements and their business model so that you can easily arrange different components of the application.



Admin Portal Features

Below are the key functionalities to be implemented in the admin portal. The admin should be able to:

Authorize the roles and guidelines for the user

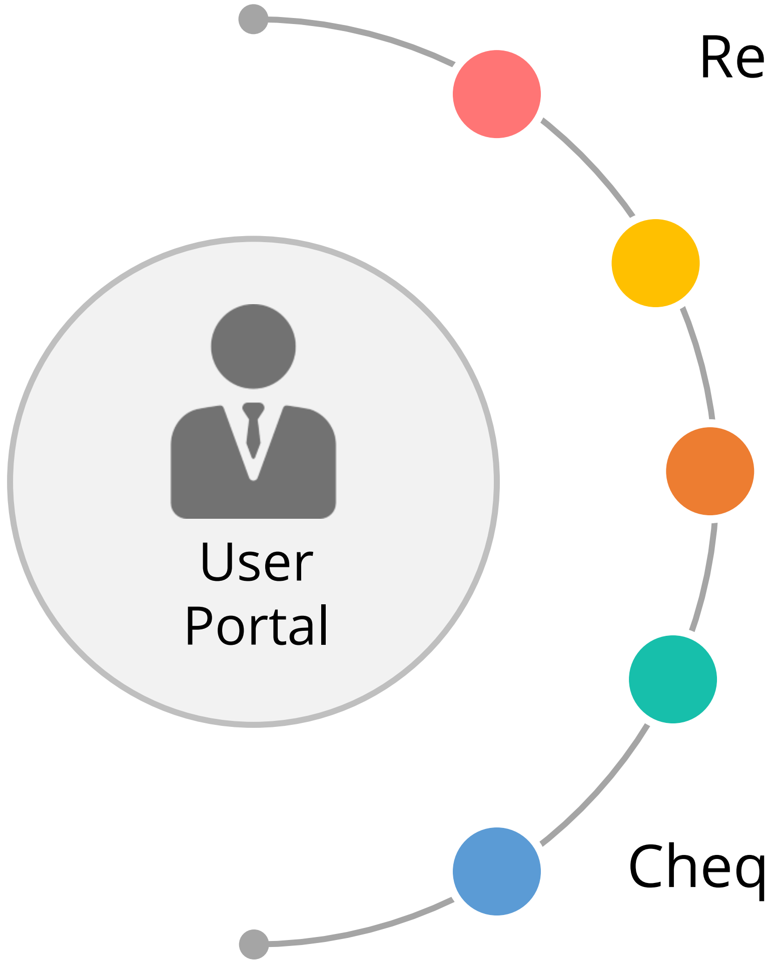
Grant access to the user regarding money transfer, deposits, and withdrawal

Administrator

Block a user account in case of any threat and authorize cheque book requests

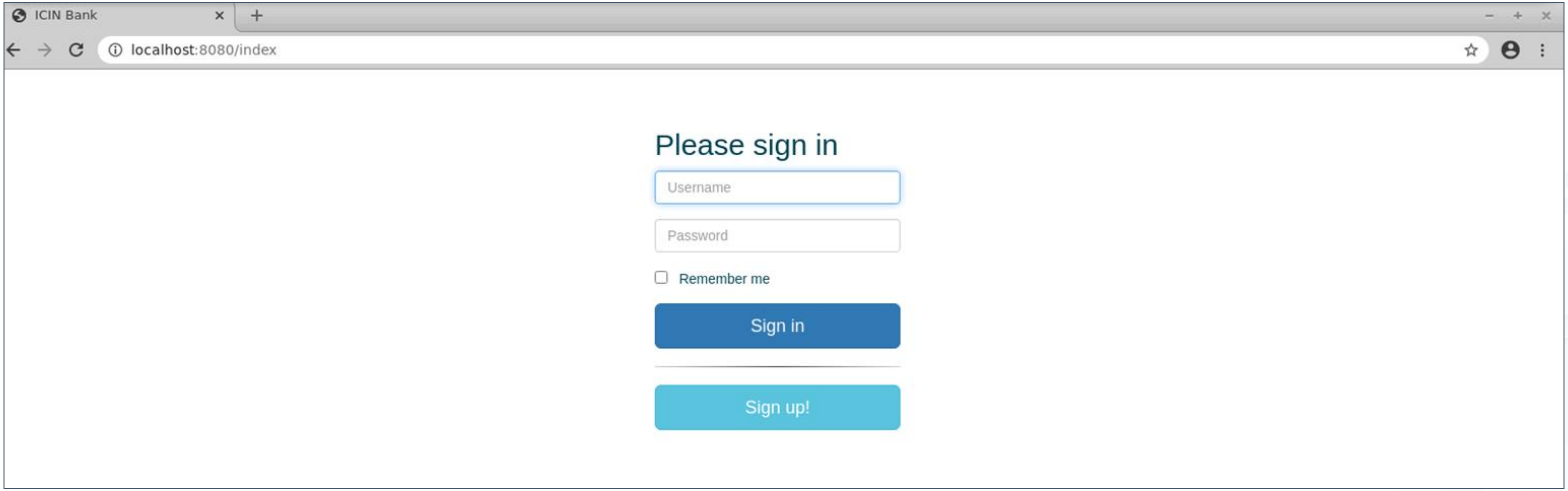
User Portal Features

Below are the key functionalities to be implemented in the user portal. The end user should be able to:

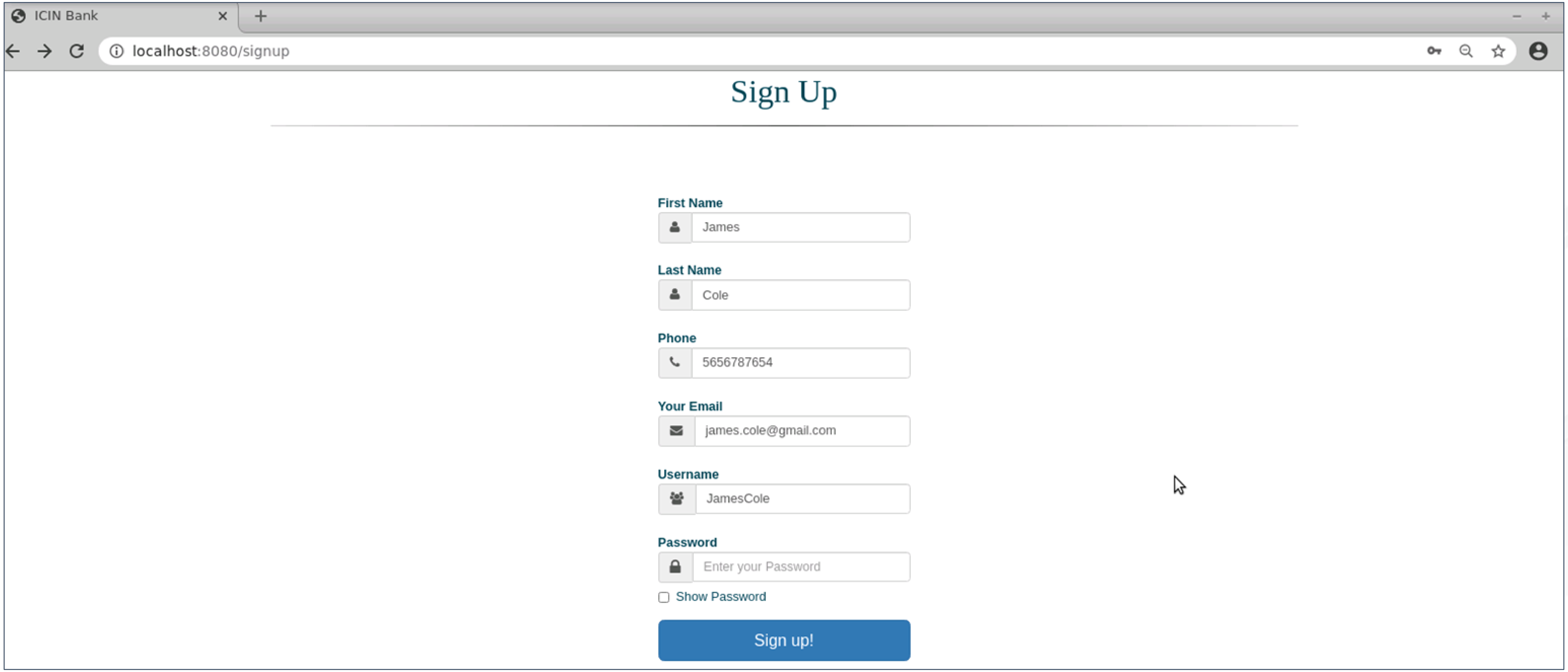


- Register or log in to the application to maintain a record of activities
- Deposit and withdraw money from the account
- View the balance in their primary and savings account
- Transfer funds between different accounts and add recipients
- Cheque book requests for different accounts

Project Reference Outputs


ICIN Bank
localhost:8080/index
Please sign in
Username
Password
☐ Remember me
Sign in
Sign up!

Project Reference Outputs



ICIN Bank
localhost:8080/signup

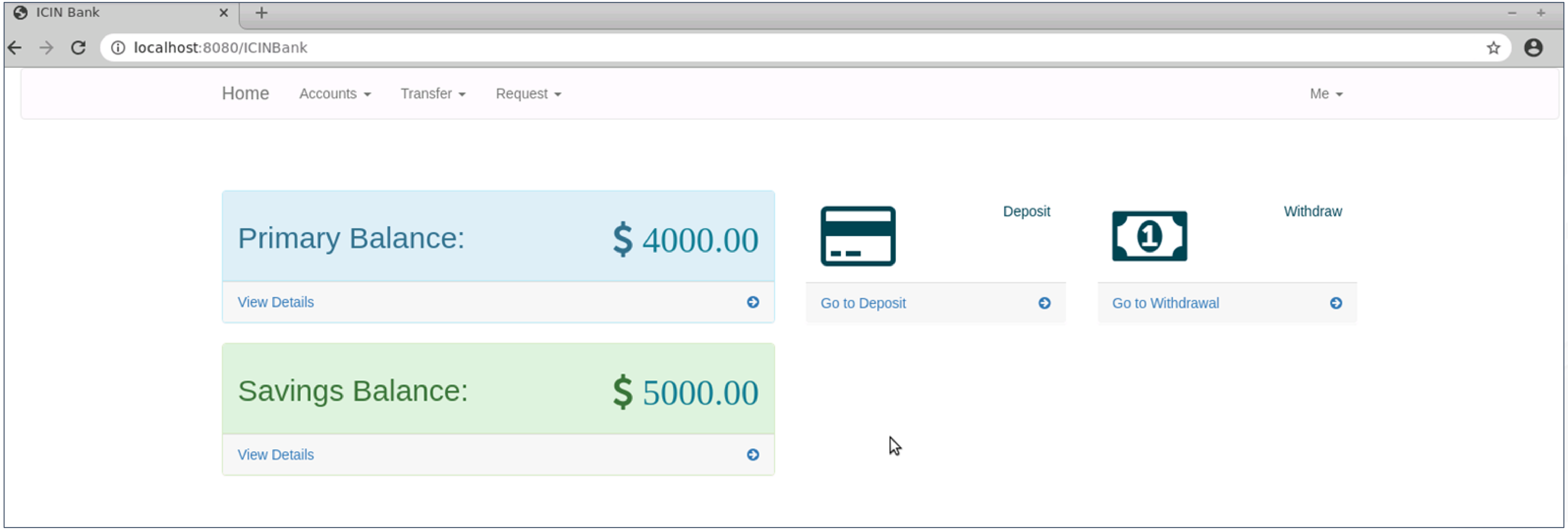
Sign Up

First Name	James
Last Name	Cole
Phone	5656787654
Your Email	james.cole@gmail.com
Username	JamesCole
Password	Enter your Password

☐ Show Password

Sign up!

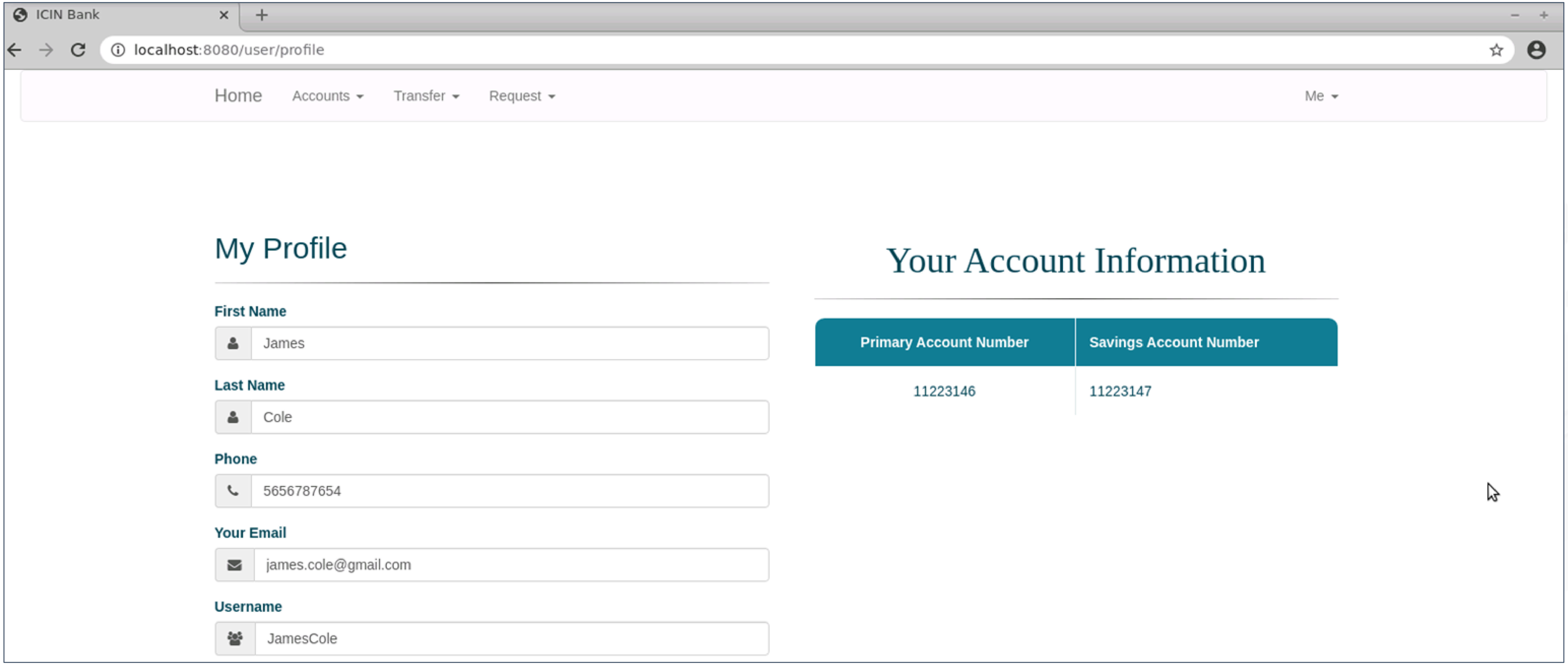
Project Reference Outputs


ICIN Bank
localhost:8080/ICINBank
Home
Accounts
Transfer
Request
Me
Deposit
Withdraw
View Details
Go to Deposit
Go to Withdrawal
View Details

Primary Balance: $ 4000.00

Savings Balance: $ 5000.00

Project Reference Outputs


ICIN Bank
localhost:8080/user/profile
Home
Accounts
Transfer
Request
Me

My Profile

First Name

James

Last Name

Cole

Phone

5656787654

Your Email

james.cole@gmail.com

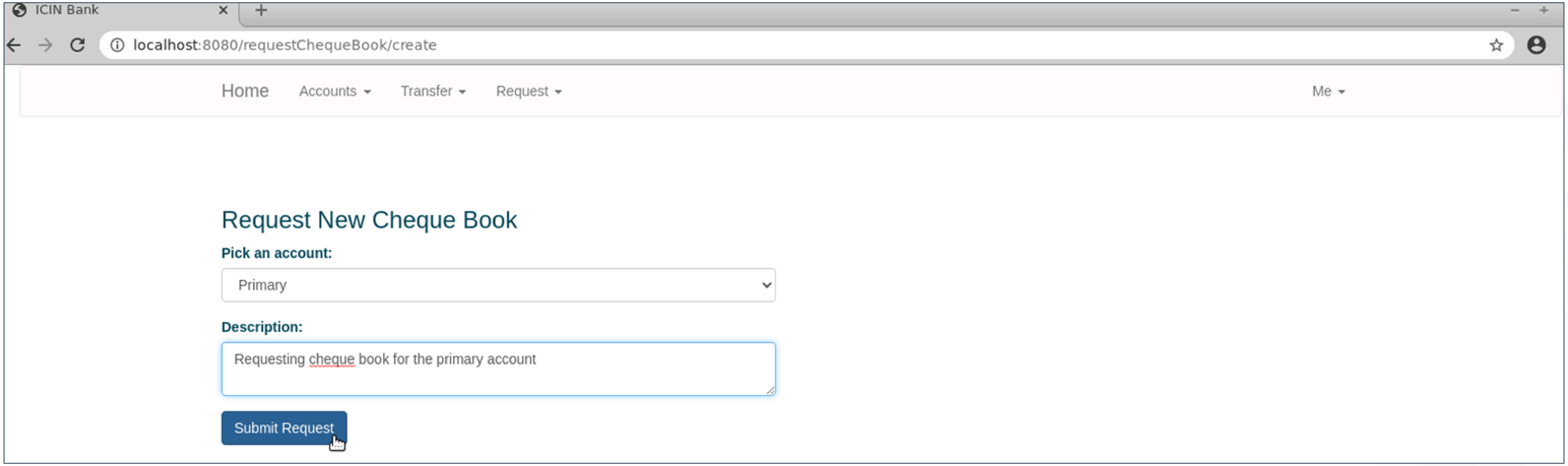
Username

JamesCole

Your Account Information

Primary Account Number	Savings Account Number
11223146	11223147

Project Reference Outputs


ICIN Bank
localhost:8080/requestChequeBook/create
Home
Accounts
Transfer
Request
Me

Request New Cheque Book

Pick an account:

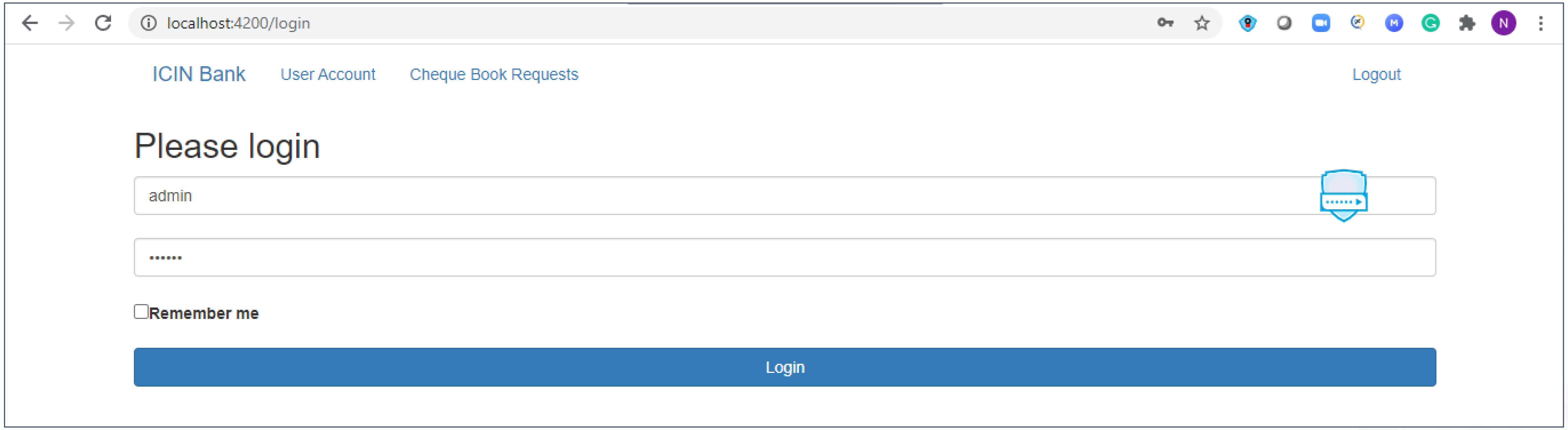
Primary

Description:

Requesting cheque book for the primary account

Submit Request

Project Reference Outputs

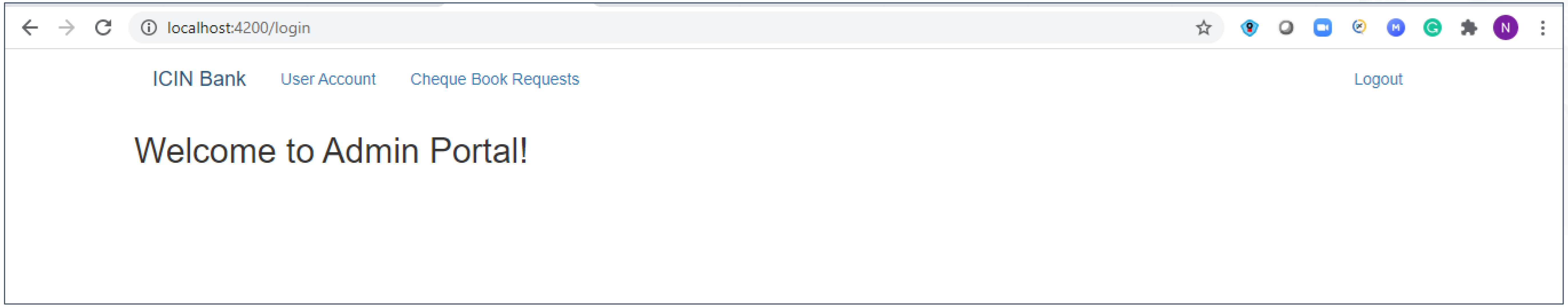

localhost:4200/login
ICIN Bank
User Account
Cheque Book Requests
Logout
Login

Please login

admin

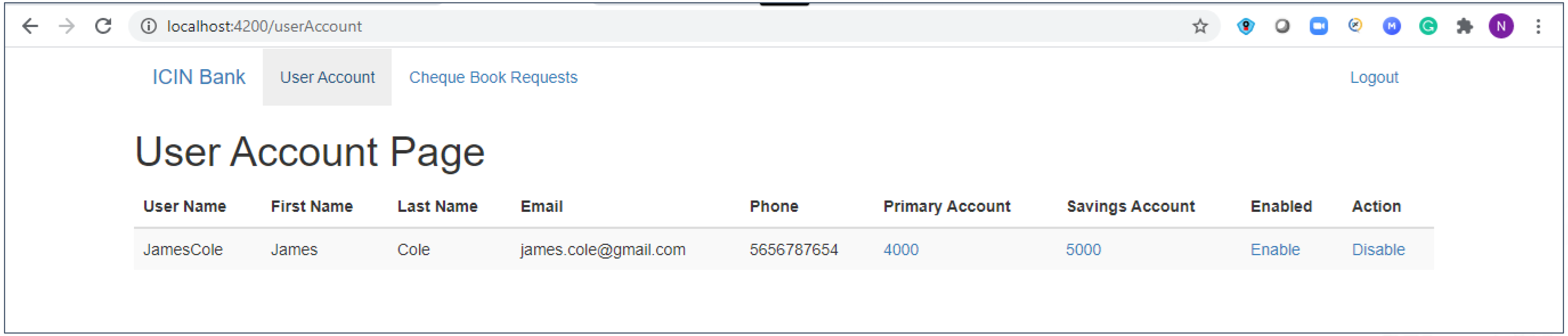
••••••

☐ **Remember me**


localhost:4200/login
ICIN Bank
User Account
Cheque Book Requests
Logout

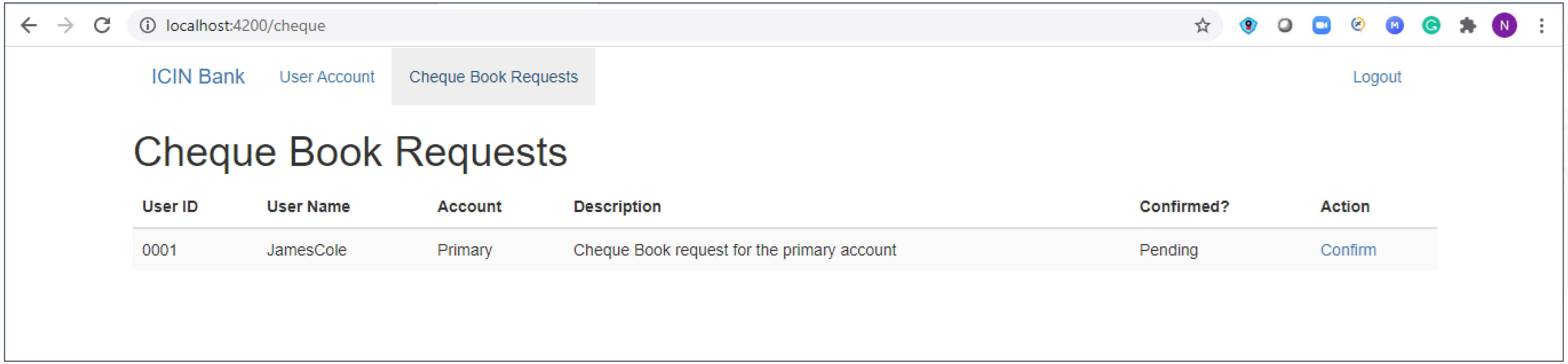
Welcome to Admin Portal!

Project Reference Outputs


localhost:4200/userAccount
ICIN Bank
User Account
Cheque Book Requests
Logout

User Account Page

User Name	First Name	Last Name	Email	Phone	Primary Account	Savings Account	Enabled	Action
JamesCole	James	Cole	james.cole@gmail.com	5656787654	4000	5000	Enable	Disable


localhost:4200/cheque
ICIN Bank
User Account
Cheque Book Requests
Logout

Cheque Book Requests

User ID	User Name	Account	Description	Confirmed?	Action
0001	JamesCole	Primary	Cheque Book request for the primary account	Pending	Confirm

Thank You