CAPSTONE_A PROJECT – Batch-C7_GROUP-3

Project Title: Shop For Home

Team Members :-

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CHAPTER 1

Problem Statement:

Shop For Home is a popular Store in the market for shopping the home décor staff. Due to Covid 19 all the offline shopping stopped. So, the store wants to move to the online platforms and wants their own web application.

There are 2 users on the application: -

1. User
2. Admin

User Stories –

1. As a user I should be able to login, Logout and Register into the application.
2. As a user I should be able to see the products in different categories.
3. As a user I should be able to sort the products.
4. As a user I should be able to add the products into the shopping cart.
5. As a user I should be able to increase or decrease the quantity added in the cart.
6. As a user I should be able to add “n” number of products in the cart.
7. As a user I should be able to get the Wishlist option where I can add those products which I want but don’t want to order now .
8. As a user I should get different discount coupons.

Admin Stories –

1. As an Admin I should be able to login, Logout and Register into the application.
2. As an Admin I should be able to perform CRUD on Users.
3. As an Admin I should be able to Perform CRUD on the products.
4. As an Admin I should be able to get bulk upload option to upload a csv for products details
5. As an Admin I should be able to get the stocks.
6. As an Admin I should be able to mail if any stock is less than 10.
7. As an Admin I should be able to get the sales report of a specific duration.
8. As an Admin I should be able to set the discount coupons for the specific set of users

Instructions –

1. Please use a folder on server to upload the images
2. Please share the database structure in the .sql file.
3. Please create a separate microservice for reports and discount coupons.
4. Please use separate port to deploy the Angular UI and Spring Boot Microservice
5. Please use the UI designing tool like(Bootstrap or Material) to make your UI better.
6. Please use Material UI to create the UI.

1.2 Objective:

The Main objective of Shop for Home is easy to use and make the shopping experience pleasant for the users.

The primary goals are

- Users should be able to search for product and get complete product description.
- Add an item to wish list and to the cart and can delete them according to there wish.
- Admin can see the stock details.
- If stock is less than 10 the application automatically sends email to admin.
- Admin can view their sales.
- Admin can add discount coupon to particular user.

1.3 Scope of the Project :

Our project Shop For Home provides a 24×7 service, where all the customers can surf the website, place orders to get the items and customers can enjoy the easy shopping from anywhere . This computerized internet socializing can enjoy massive savings and time , and also offer great safety in shopping from home, especially in pandemic.Sellers make websites where they display images of their products with price and description. Shoppers who buy the products have multiple payment options like COD, e-wallet, net banking, credit card, and so on. Online sellers have the responsibility of shipping the product to the buyer and ensuring safe and timely delivery.

CHAPTER 2

Technologies Used

2.1 Angular : Angular is an open source, JavaScript framework which is completely written in the TypeScript primarily aimed to develop single page applications which uses the HTML's syntax to express your application components clearly and is maintained by google.

It has a framework that provides a few advantages where it designed a standard structure for developers and it is designed for web , desktop and mobile platforms.

Features of Angular :

Document Object Model (DOM) : DOM (Document Object Model) treats an XML or HTML document as a tree structure in which each node is an object representing a part of the document.Angular uses regular DOM. This will update the entire tree structure of HTML tags until it reaches the data to be updated.

TypeScript : Angular is written in Typescript. It is a superset of JavaScript and offers excellent Consistency.TypeScript is installed as an NPM package,and thus can be installed with the following command.

"npm install -g typescript"

Data binding : Data binding allows an internet user to manipulate web page elements using a Web browser. It is used for web pages that contain interactive components such as forms,calculators,tutorials and games.Angular uses two-way binding.

Angular is a full-fledged MVC frameworkMVC is an architectural pattern that separates the application layer into Model,View and Controller.

View <-------> Controller<--------->Model

BUSINESS BENEFITS OF ANGULAR FEATURES:

It’s one of those frameworks that can work productively with various back-end languages as well as combine business logic and UI.

1. Effective Cross-Platform Development

2. High Quality of the Application

3. Improved Speed and Performance

TECHNICAL BENEFITS OF ANGULAR:

1. Faster Development Process

- Detailed Documentation**.**
- The Angular command-line (Angular CLI)
- Two-Way Data Binding**.**
- Differential Loading**.**
- Google Support**.**
- Large Developer Community.

2.Readable and Testable Code

3. More Lightweight Web Applications

4. Efficient Problem-Solving Patterns

5. Excellent Material Design Library

2.2 Spring Boot:

Spring is a framework that was created to help developers build systems and run applications on the JVM conveniently, simply and quickly. Spring Framework is open source developed and used widely in developing websites. Spring framework is a collection of many different small projects, such as Spring MVC (used to build web-based applications), Spring Data and Spring Boot. Spring Boot is the fastest way to create a standalone REST service. Spring Boot simplifies configuration, in particular, Spring Boot configures all by itself by providing specific behaviors . Spring Boot simplifies deploying, packing application into a jar package and it can be easily integrated into web containers. Earlier the initialization of a Spring project was hard when dependencies needed to be declared in pom.xml file using XML or other complex annotations. With Spring Boot Spring application creation is quick and the configuration is also simpler.Spring Boot is an automated version of the traditional spring framework, simplifying and automating the process. Spring Boot is built on top of the Spring framework and is a layered structure in which every layer communicates with each other layer(from top to bottom in hierarchical order). The Spring Boot framework documentation provides the following definition.Spring Boot makes it possible to create high-quality, production-grade Spring applications that are simple to deploy and run.Spring boot is designed to remove XML and annotations-based configuration settings from the application. Spring boot provides the following advantages, including opinionated(options to later change the configuration), convention over configuration, stand-alone, and production-ready: It provides stand-alone, production-ready, and convention over configuration options.

The benefits of Spring Boot are:

1)Easy to create Spring-based applications with Java or Groovy.

2)Spring Boot does not write a huge of standard Code, Annotations, and XML configuration.

3)With Spring Boot it is simple to communicate applications with Spring ecosystems, for example, Spring JDBC, Spring ORM, Spring Data, Spring Security and so forth

4)Spring Boot gives Embedded HTTP like Tomcat to create and test web applications rapidly and without any problem.

5)Spring Boot gives a CLI (Command Line Interface) device to create and test Spring Boot (Java or Groovy) applications from order brief effectively and rapidly.

6)Spring Boot gives a great deal of modules to create and test Spring Boot applications rapidly utilizing build instruments like Maven.

7)Based on Annotations to make beans rather than XML.

8)Tomcat can be installed in the JAR fabricate record and can be run anyplace java environment.

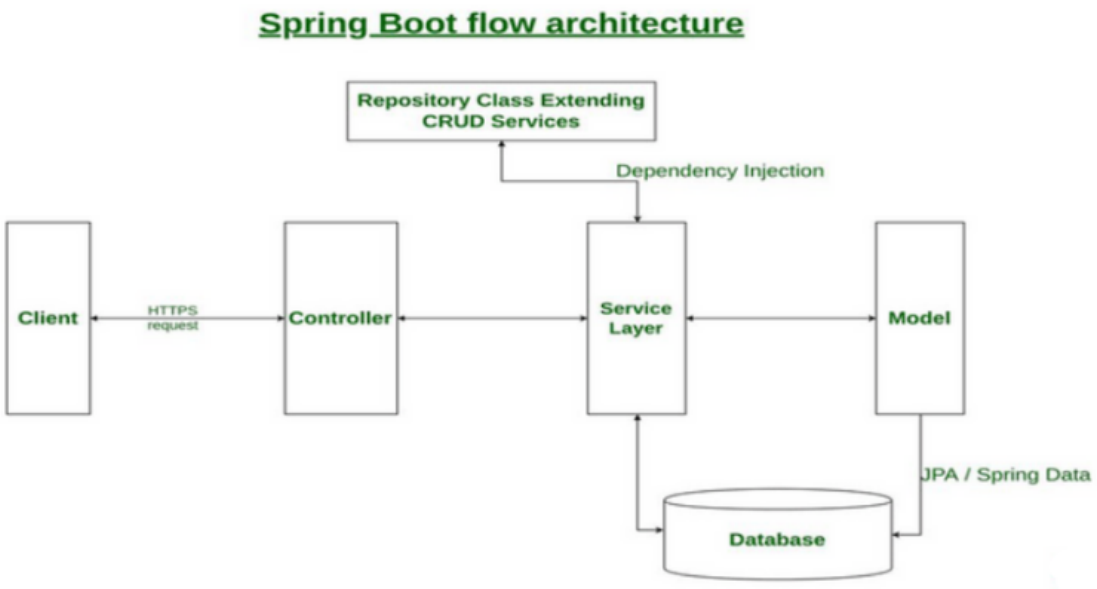


Fig: Architecture Diagram of Spring Boot

2.3 MySQL Database:

The shop for home is a online shopping system with both admin and user layouts. The website provides users lots of home décor items . This system is web based which is written in Node.js and MYSQL. Firstly , the user needs to login to the system by registering their details and later he can login to the page ang explore all the products in the website.

Database: A database is a separate application that stores a collection of data. Each database has one or more distinct APIs for creating, accessing , managing, searching, and replicating the data it holds.Other kinds of data stores can be used , such as files on the file system or large hash tables in memory but data fetching and writing would not be so fast and easy with those types of systems.
So nowadays, we use relational database management to store and manage huge volume of data. This is relational database because all the data is stored into different tables and relations are established using primary keys or another keys as foreign keys.

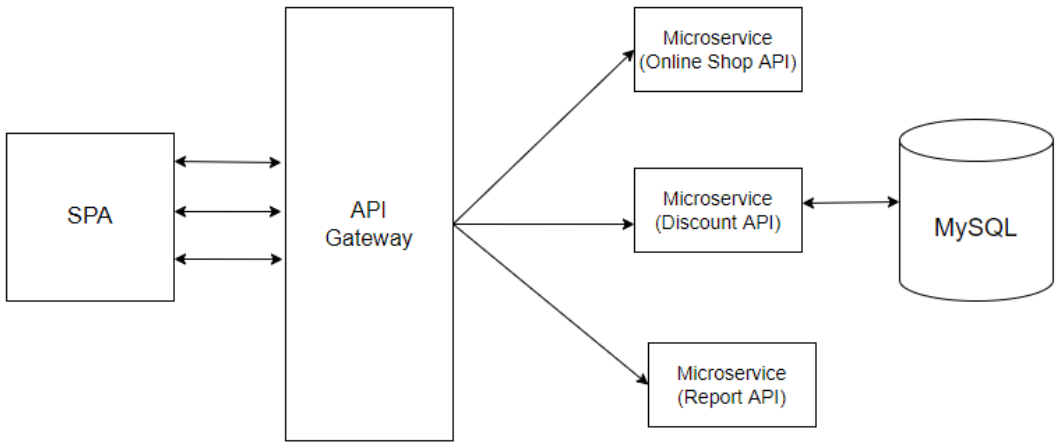
MySQL Database: MySQL is a fast, easy to use. RDBMS being used for many small and big businesses . MYSQL is developed ,marketed and supported by MYSQL AB. MYSQL is popular of many reasons like it is released under open source license. So you have nothing to pay to use it. It is very powerful program in its own right. Handles a large subset of the functionality of the most expensive and powerful database packages.

CHAPTER 3

IMPLEMENTATION

3.1 Backend:

Architecture of backend project:



- In this Project, we implemented three microservices.First microservice is responsible for handing user(login,register,wishlist,cart),products(adding new product),Orders.
- Second MicroService(Discount MIcroService) is responsible for assiging discount coupons to users.
- Third Micro service (Report MicroSerive) is reponsible for Showing the sales report.

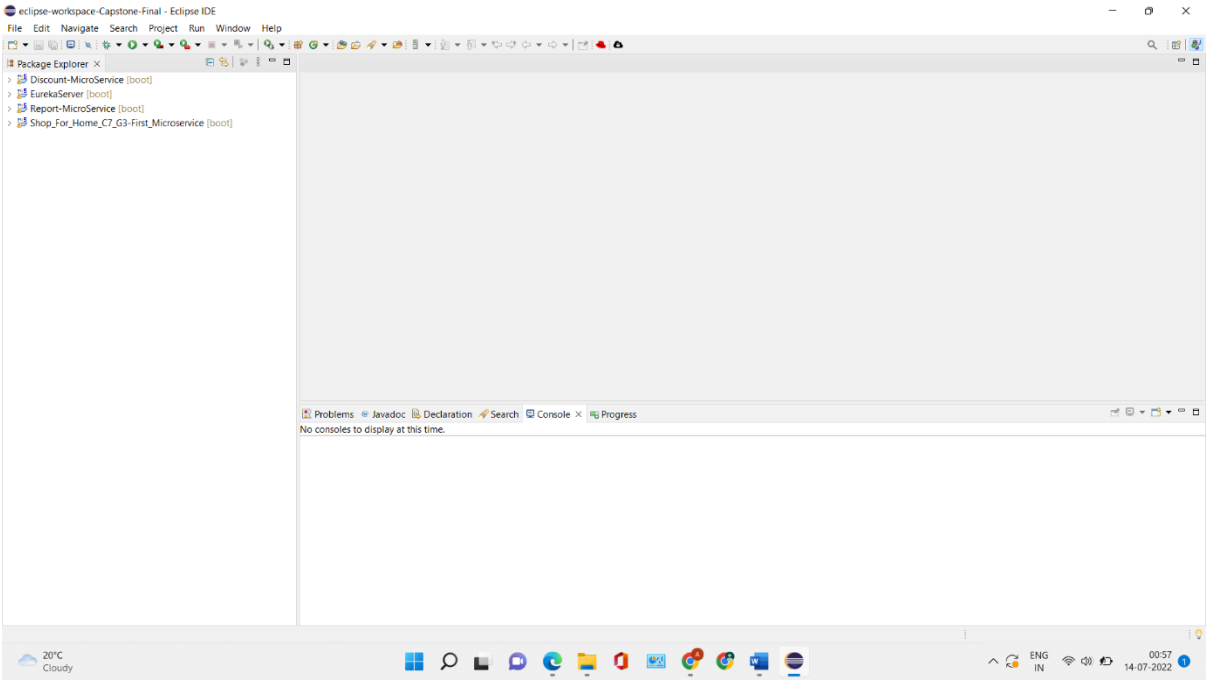


Fig: Three Microservices

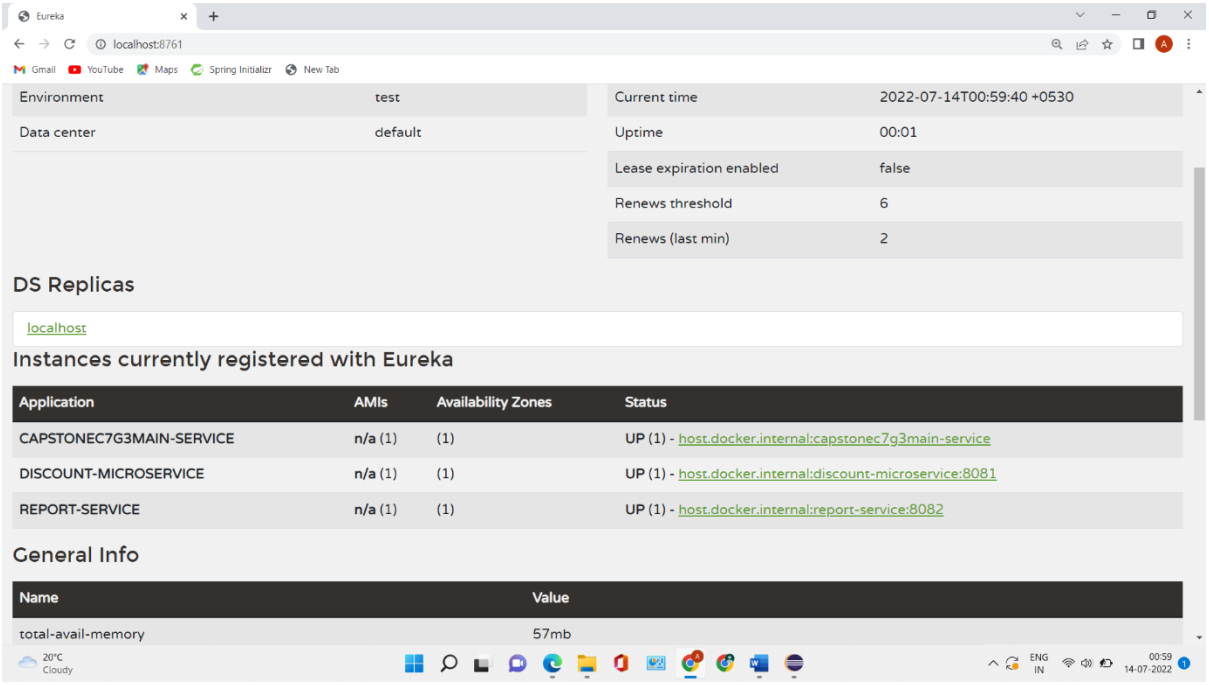


Fig: Three Microservices

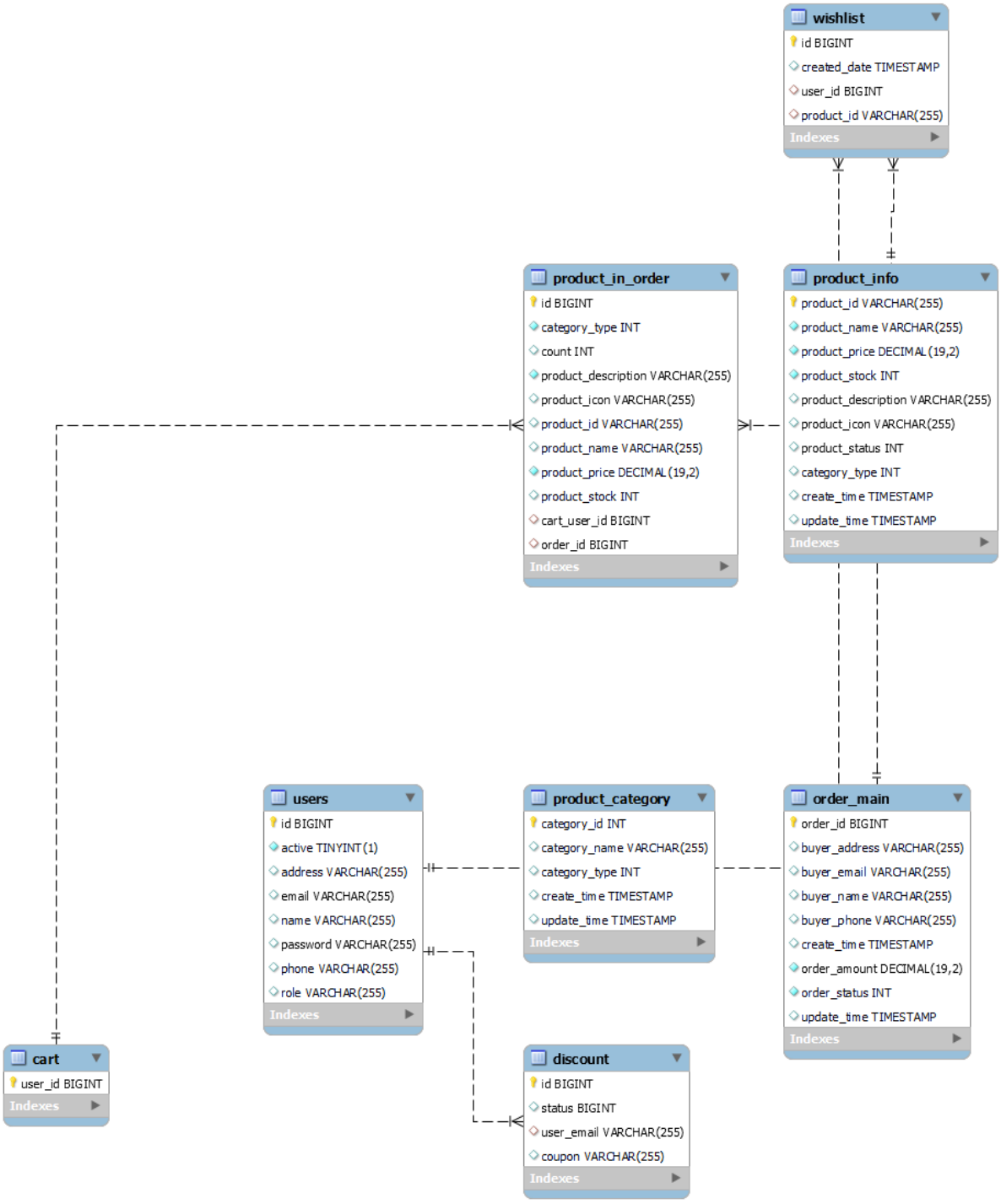
3.2 Frontend:

In this project, we used angular as frontend technology. We used 21 components and they are:

1. Adduserbyadmin -admin can add user
2. Adminsignup -admin registering
3. Adminuser -admin editing user details
4. Card - home page showing products
5. Product-detail :-individual product details
6. Cardinasc - showing products in price ascending order
7. Cardindesc - showing products in price descending order
8. Cart - showing products in cart
9. Discount - discount page, where admin adds discount coupon
10. Email - email page allowing to send email to particular email id
11. Login - login page
12. Product-list :- admin main page
13. Order -show the sales report
14. Orderdetail :-individual order details
15. Product-edit :- admin edits the product details
16. Signup - Registration
17. Useredit - user edits or updates there information
18. Wishlist – Showing Products in wishlist
19. Navigation – Navbar
20. Sortcomponent – product sorting option
21. Sales – Showing Sales Report graphs

3.3 Database:

DataBase schematic Diagram:

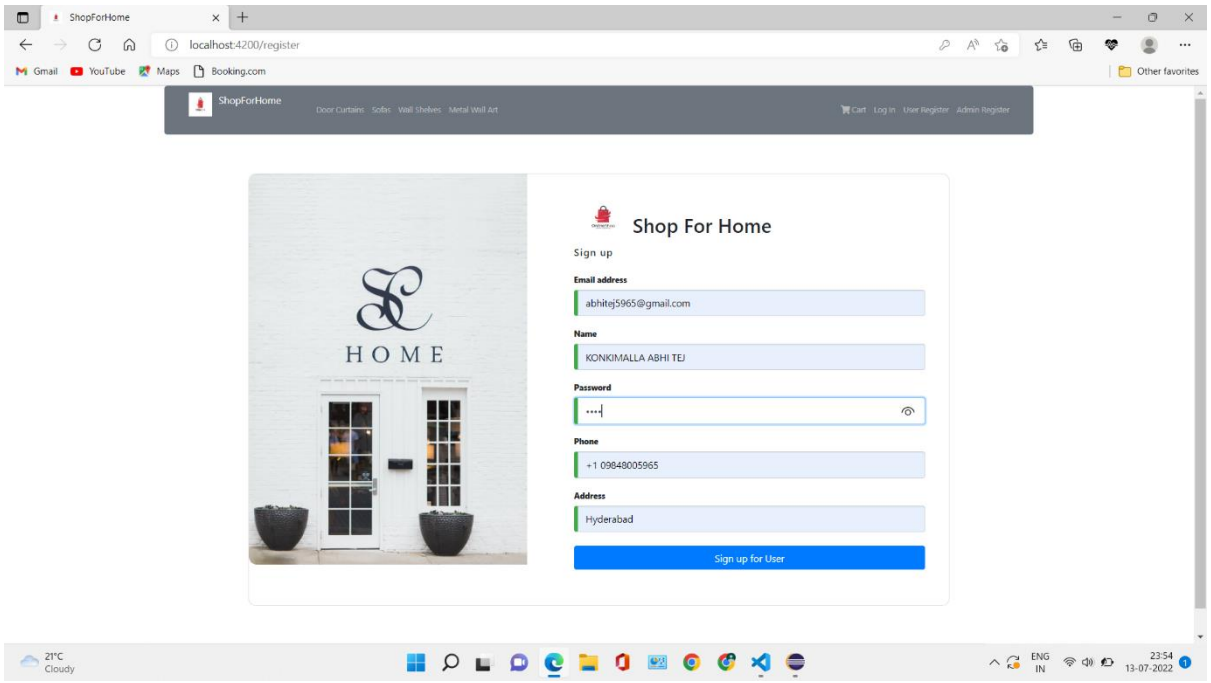


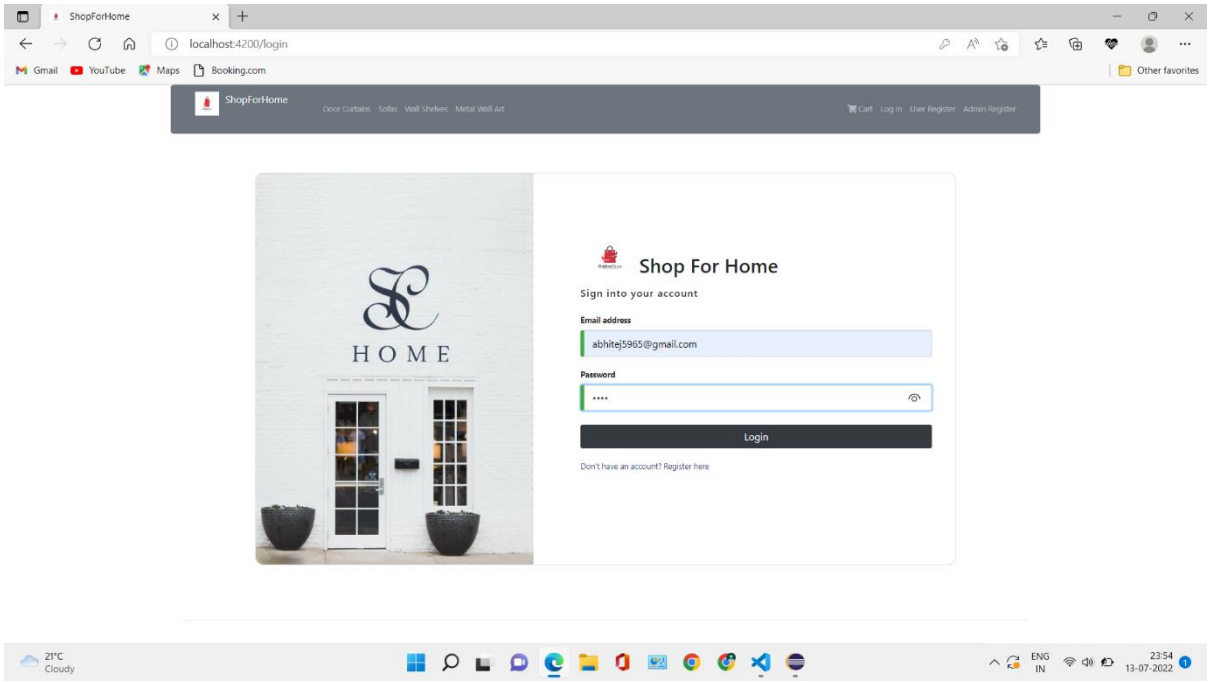
3.4 Project Flow:

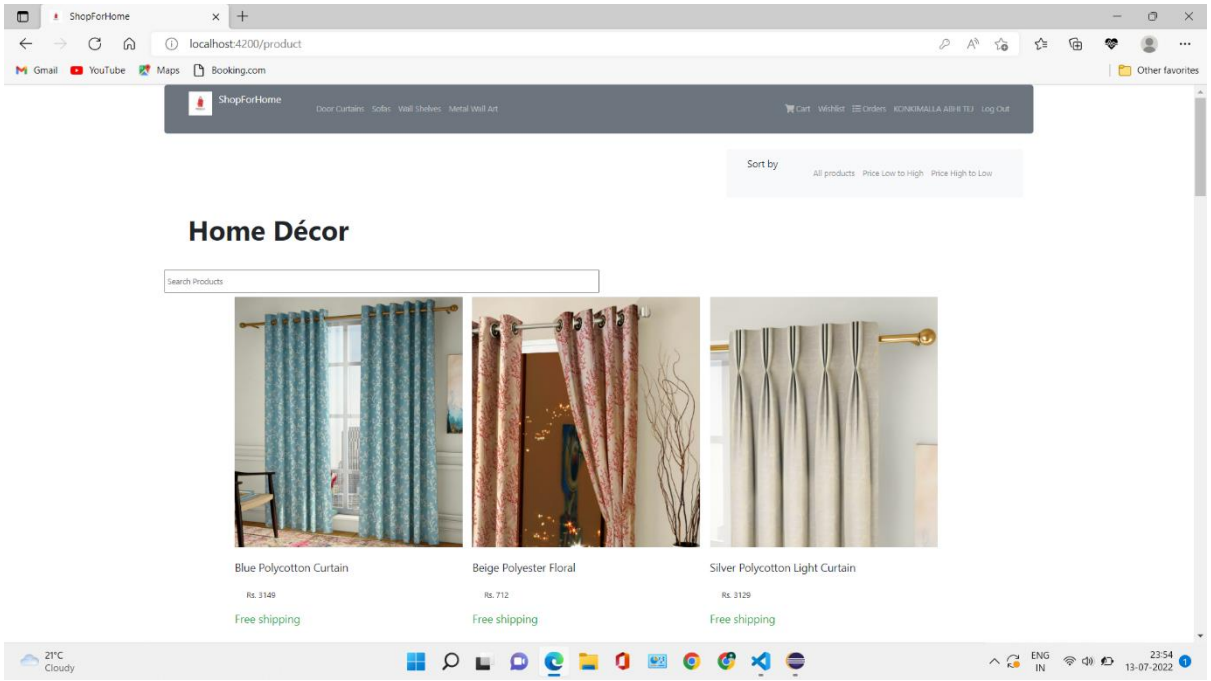
- To explain the flow of the project , lets take one component like take sign up component as instance , now the details entered by the user will be collected in this signup component.html.
- Now these details are property binded to a user class object and these user class object is present in the signup component.ts.
- Now these object which containing the details entered by the user will be passed to backend , here the passing of these objects is taken care by HTTP Client Methods .
- The HTTP client methods are get() ,post(),delete() and patch().
- Along with these methods we specify the Rest API link to where it delivers to backend.
- Now after this object from frontend given to backend (the communication of these object from frontend to backend will be in json format). that API link is searched in the controller classes.
- Now the method which is having that corresponding link will be finally passed to service layer and from service layer to repository layer and at the end from repository layer , it will be stored in backend.
- The above scenario was for communicating frontend to backend, when it comes to backend to frontend. Backend uses ORM to map the database table with the java class.
- And now the database records are stored into the java class objects .These objects from controller are passed to frontend using @PostMapping.The data from backend will be converted to json format and then it is shared to frontend.
- At frontend service classes collects this json using get() http methods.
- And this collected data is displayed in browser using component.html.

CHAPTER 4

Output Screen Shots:



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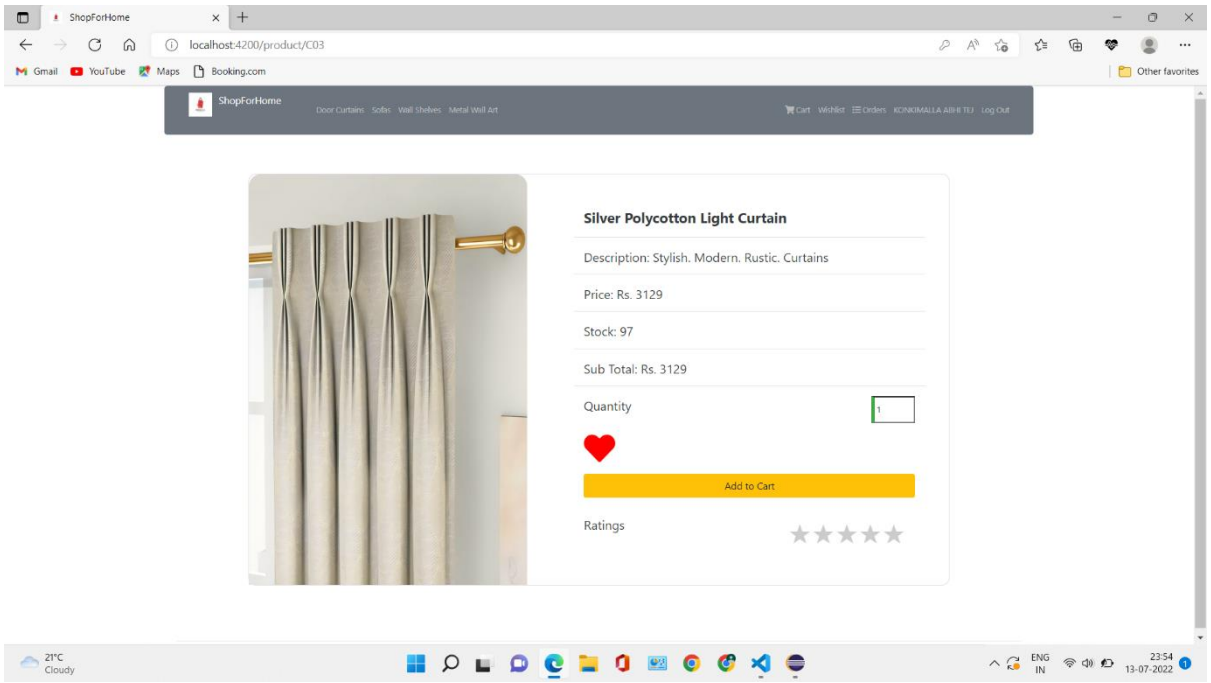
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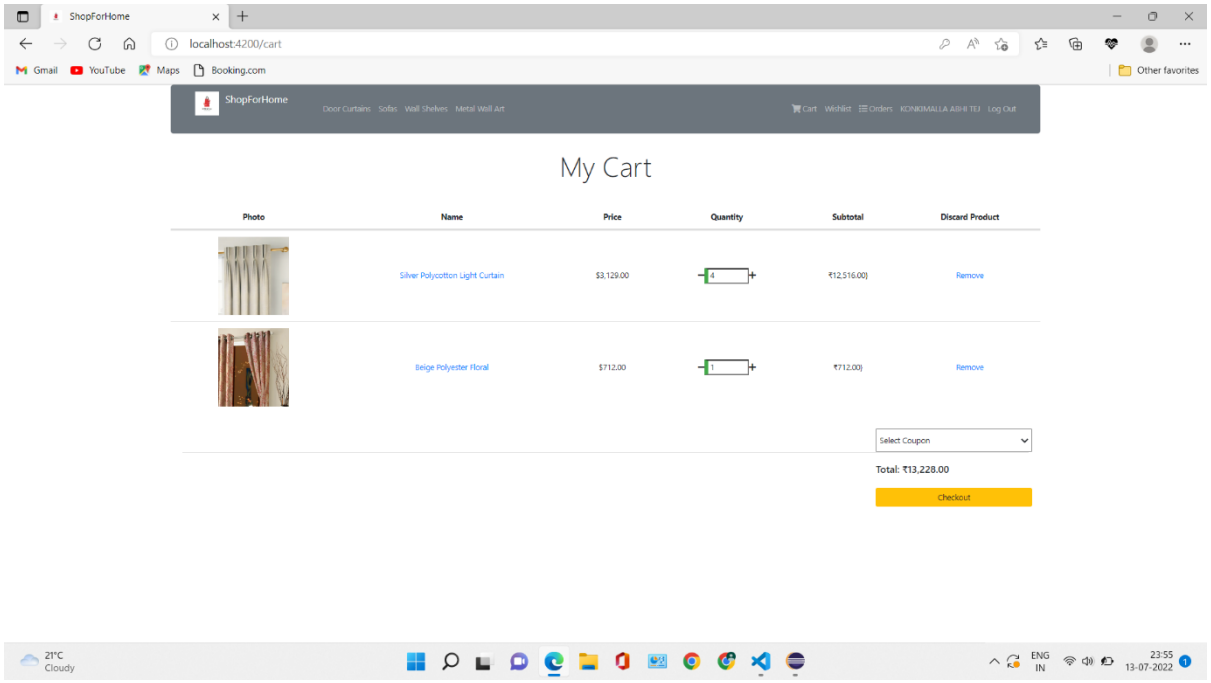
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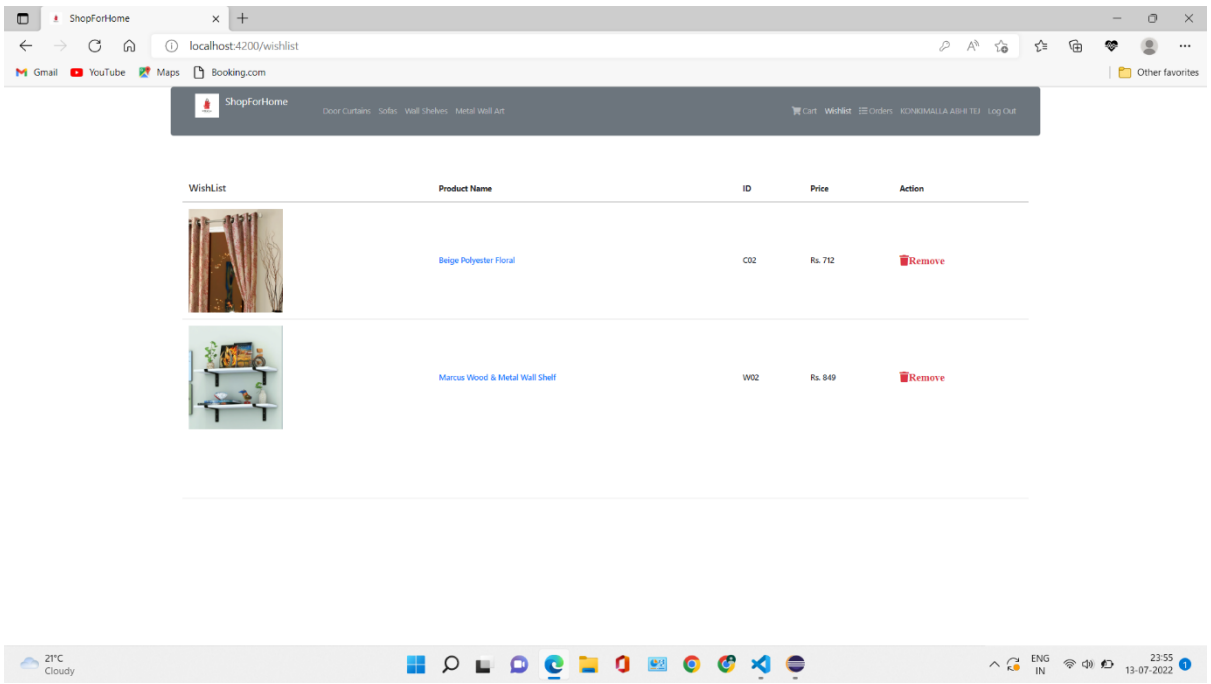
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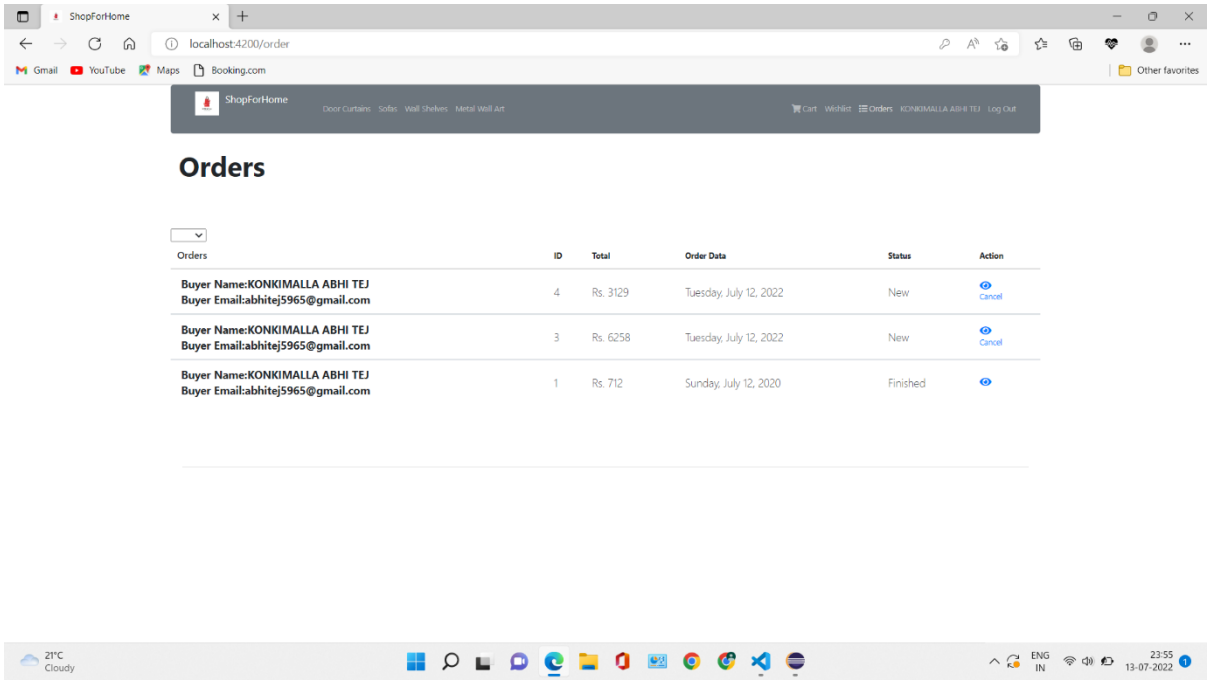
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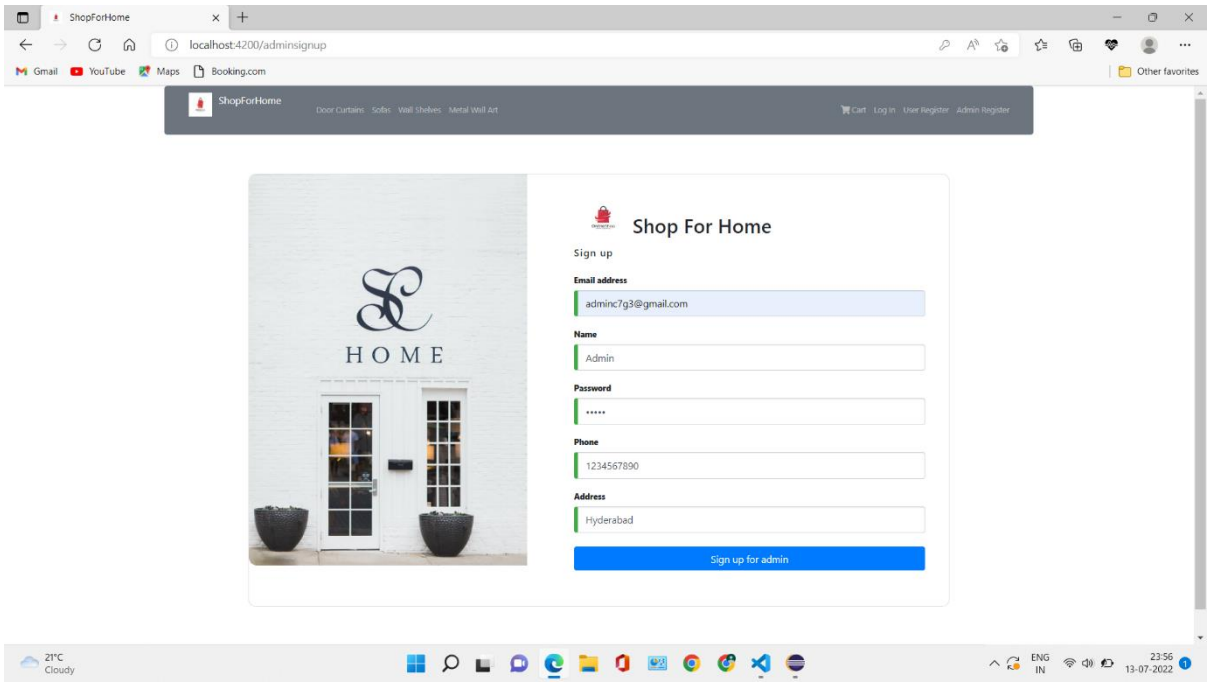
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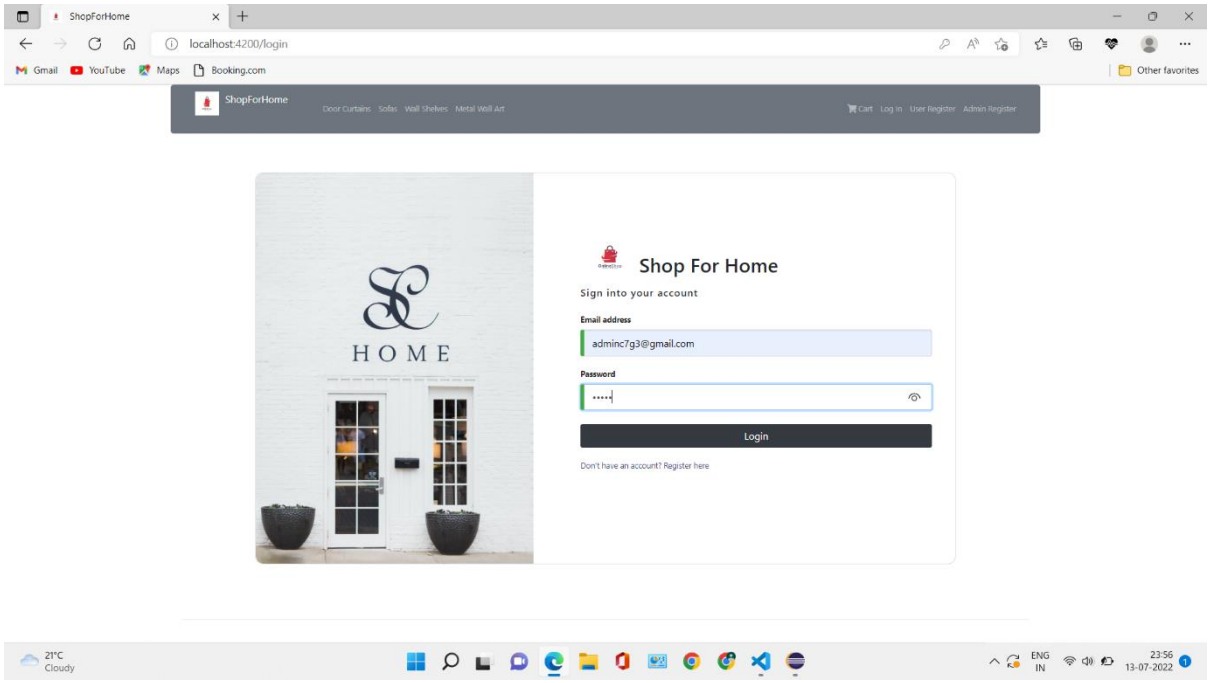
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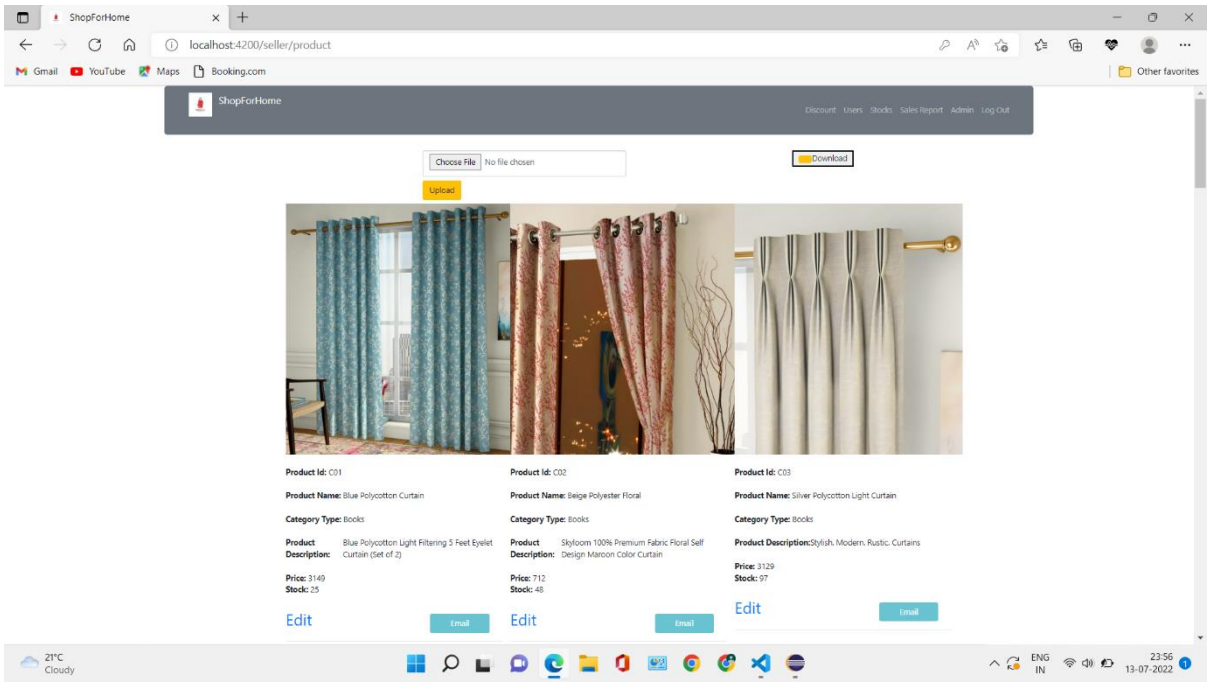
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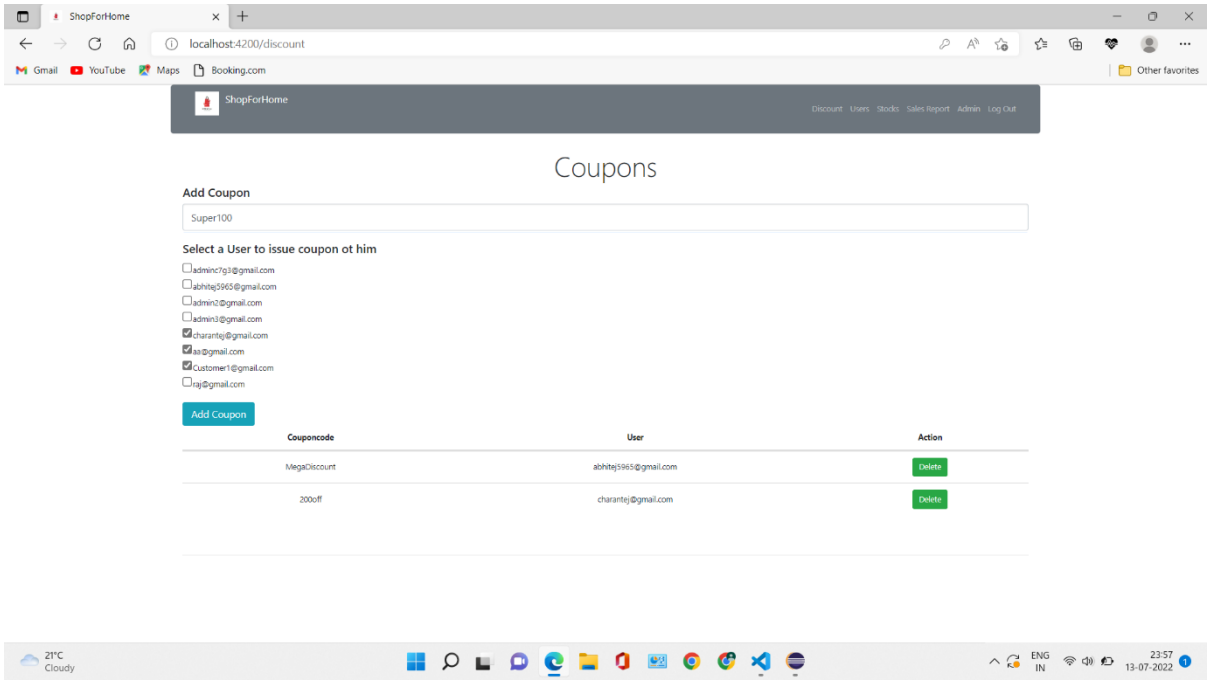
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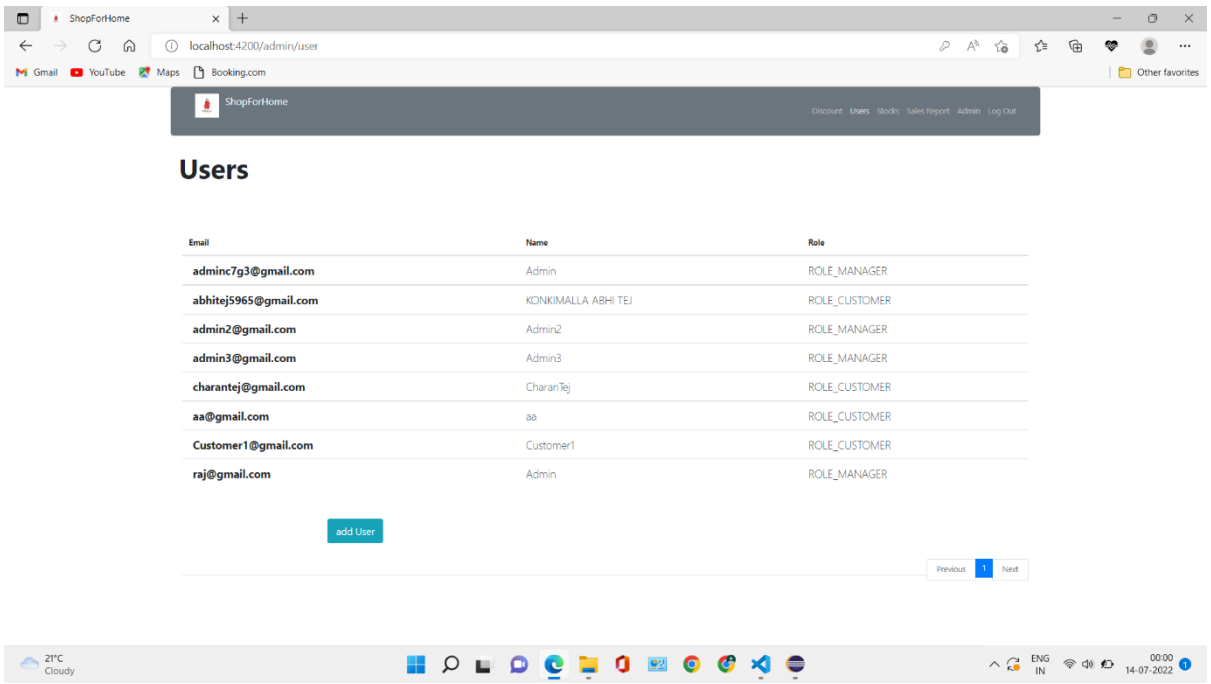
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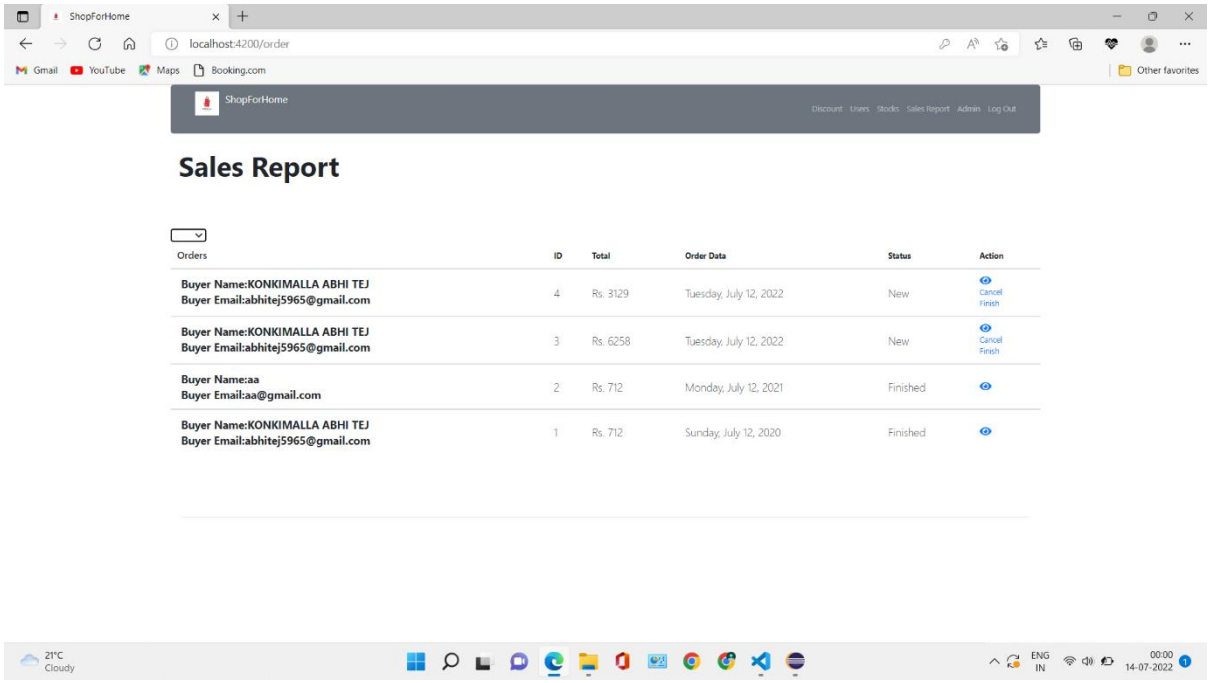
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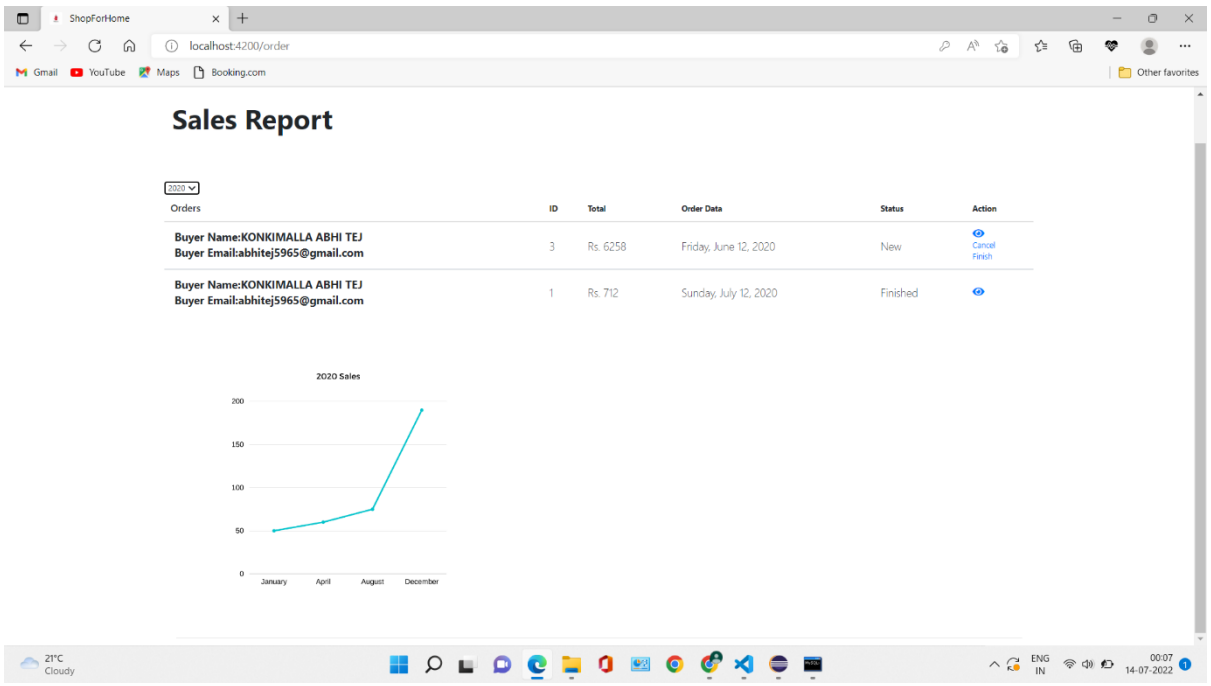
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Gmail
YouTube
Maps
Booking.com
Other favorites
Sales Report
2020
Orders
ID
Total
Order Data
Status
Action
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Buyer Email:abhitej5965@gmail.com
3
Rs. 6258
Friday, June 12, 2020
New
Cancel
Finish
Buyer Name:KONKIMALLA ABHI TEJ
Buyer Email:abhitej5965@gmail.com
1
Rs. 712
Sunday, July 12, 2020
Finished
2020 Sales
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100
50
0
January
April
August
December
21°C
Cloudy
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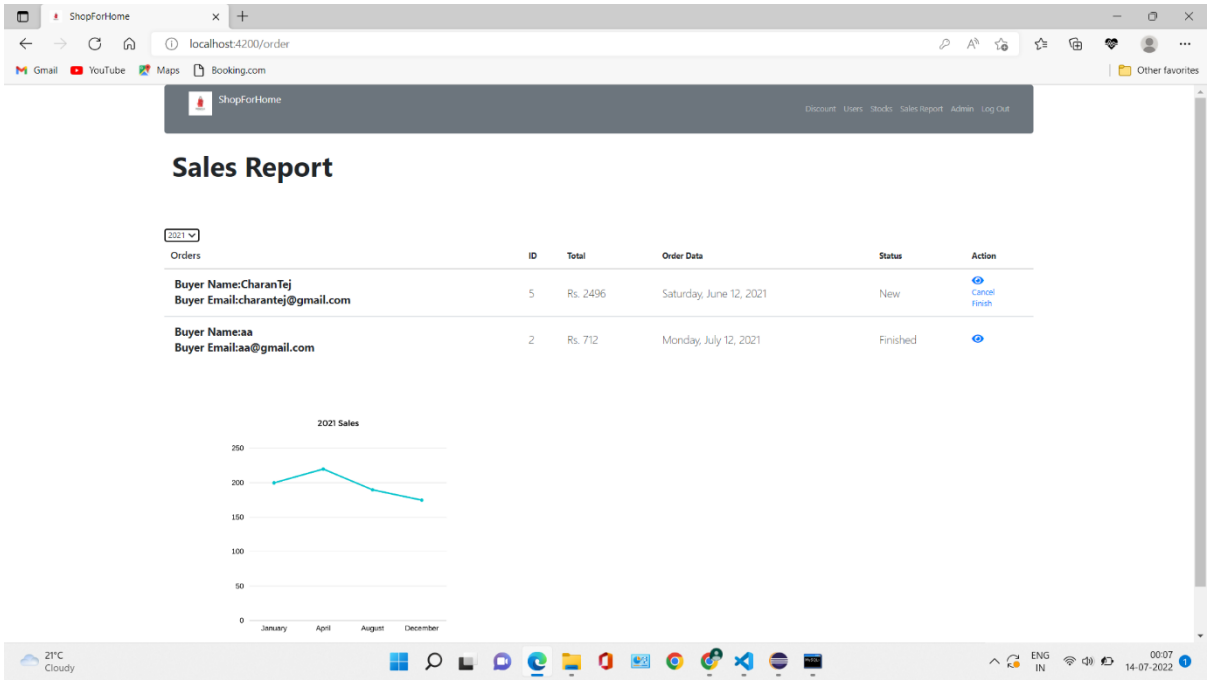
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localhost:4200/order
Gmail
YouTube
Maps
Booking.com
Other favorites
ShopForHome
Discount
Users
Stocks
Sales Report
Admin
Log Out
Sales Report
2021
Orders
ID
Total
Order Data
Status
Action
Buyer Name:CharanTej
Buyer Email:charantej@gmail.com
5
Rs. 2496
Saturday, June 12, 2021
New
Cancel
Finish
Buyer Name:aa
Buyer Email:aa@gmail.com
2
Rs. 712
Monday, July 12, 2021
Finished
2021 Sales
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200
150
100
50
0
January
April
August
December
21°C
Cloudy
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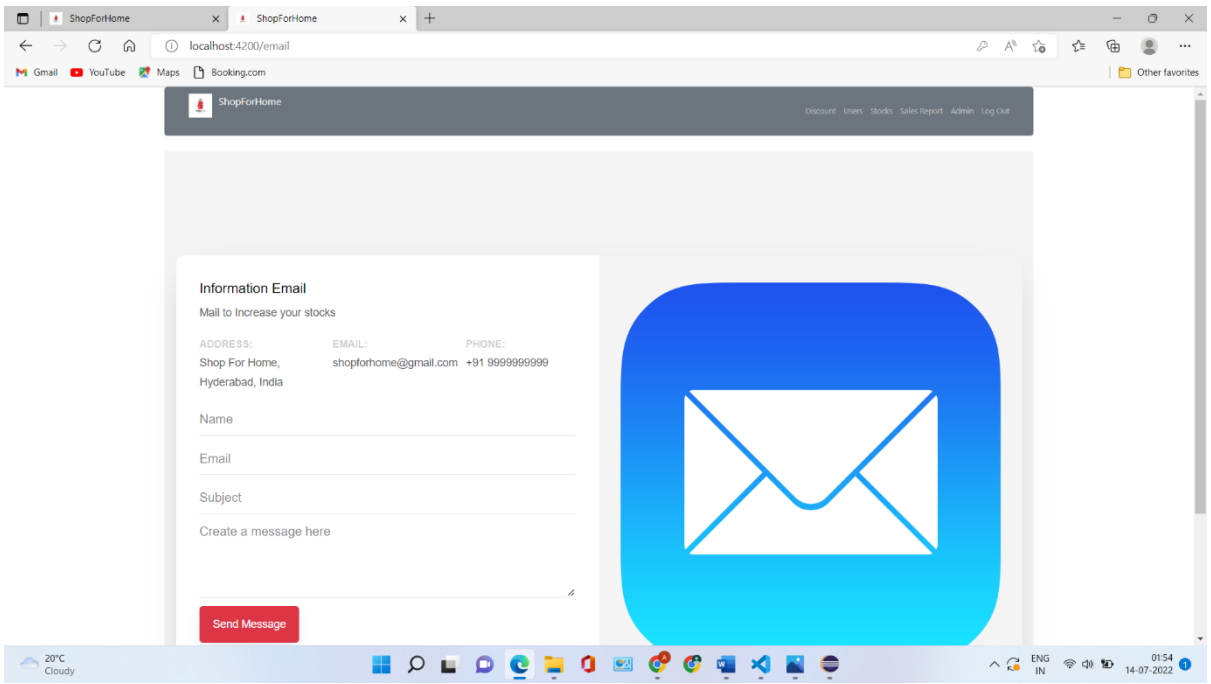
14-07-2022


ShopForHome
ShopForHome
localhost:4200/email
Gmail
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ShopForHome
Discount
Users
Stocks
Sales Report
Admin
Log Out
Information Email
Mail to Increase your stocks
ADDRESS:
Shop For Home,
Hyderabad, India
EMAIL:
shopforhome@gmail.com
PHONE:
+91 9999999999
Name
Email
Subject
Create a message here
Send Message
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14-07-2022

CHAPTER 5

Conclusion:

E-Commerce has undeniably become an important part of our society. The successful companies of the future will be those that take E-Commerce seriously, dedicating sufficient resources to its development. E-Commerce is not an IT issue but a whole business undertaking. Companies that use it as a reason for completely re-designing their business processes are likely to reap the greatest benefits. Moreover, E-Commerce is a helpful technology that gives the consumer access to business and companies all over the world.