APROJECT REPORT ON

DAILY CART

The complete online shopping experience

SUBMITTED IN PARTIAL
FULFILLMENT OF

DIPLOMA IN ADVANCED COMPUTING (PG-DAC)

UNDER THE GUIDANCE OF
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AT

CENTER FOR DEVELOPMENT OF ADVANCED COMPUTING

C-DAC, PUNE

ACKNOWLEDGEMENT

The project “DAILY CART” was a great learning experience for us and we are submitting this work to the Advanced Computing Training School (C-DAC ACTS, Pune).

We are very glad to mention the name of Mr. Vinu Josy for his valuable guidance to work on this project.

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From:

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TABLE OF CONTENTS

ABSTRACT

In the rapidly evolving digital landscape, the proliferation of e-commerce has transformed the way consumers and businesses engage in buying and selling activities. This project introduces an innovative online platform, "Daily Cart," designed to facilitate seamless and efficient online buying and selling experiences. The platform serves as a virtual marketplace where users can explore an extensive range of products, interact with sellers, and make secure transactions from the comfort of their own devices.

The "Daily Cart" project is driven by the objective of creating a user-centric environment that redefines the shopping experience. Through intuitive navigation and comprehensive product listings, users are empowered to discover a diverse assortment of items spanning various categories. Sellers, in turn, are provided with an avenue to showcase their products, connect with potential buyers, and expand their customer base beyond geographical limitations.

The platform incorporates robust security measures to ensure the confidentiality of user information and the integrity of transactions. Payment gateways are integrated to facilitate secure and hassle-free monetary transactions, further enhancing the convenience and reliability of the shopping process.

In conclusion, the "Daily Cart" project presents a novel approach to online buying and selling by combining user-centric design, advanced technology, and a secure transaction environment. The platform's features and functionalities collectively serve as a testament to the project's significance in fostering a convenient, efficient, and secure virtual marketplace.

1. INTRODUCTION

The "DAILY CART" project addresses the evolving needs of modern consumers who seek efficient and seamless ways to explore, evaluate, and purchase products from the comfort of their homes. The platform is designed to provide a user-friendly interface that promotes easy navigation, a wide variety of products, secure transactions, and personalized interactions. By leveraging the power of technology, this project bridges the gap between buyers and sellers, fostering a virtual ecosystem that transcends geographical boundaries and time constraints.

This report details the design and development process of the DAILY CART web application, including the requirements gathering, design, implementation, and testing phases. We utilized HTML, CSS, Bootstrap, React.js for the front end, Spring Boot Data JPA for the backend, and MySQL as the database. The report also discusses the challenges we faced during the development process, such as ensuring the security and scalability of the application, and how we overcame these challenges.

In order to implement a scalable and modular architecture for the DAILY CART, we decided to use a microservices architecture. This involved breaking down the application into smaller, independent services that could be developed and deployed separately. We developed a total of three microservices :

Event Microservice: This microservice is responsible for managing all event-related activities. It includes functionalities to create events, join and leave events, and get the participants of an event. Additionally, the microservice provides functionality to get the past events of a user and the upcoming events of a city.

User Microservice: The user microservice is responsible for handling all user-related activities like signing up, logging in, and editing profiles. This microservice is responsible for managing user authentication and authorization.

Information Microservice: The information microservice is responsible for adding and managing information related to venues, cities, and sports. It allows the admin to add new information about the various sports, cities, and venues. .

2. PROJECT OVERVIEW AND SUMMARY

2.1 PURPOSE

The primary purpose of the "Online Shopping Mart" project is to create a comprehensive and user-centric online platform that facilitates efficient and secure buying and selling activities in the realm of e-commerce. This purpose is driven by a range of specific goals and objectives, each contributing to the overall mission of redefining the online shopping

2.2 SCOPE

The scope of the DAILY CART application is to provide ascalable, secure, and user-friendly platform that connects individuals with local sporting events. This includes arange of features and functionalities that allow users to easily create, join, and manage events, view their past and upcoming event participation, and submit reports for complaints and queries. Users can edit their profile information, such as their name, email, and profile picture. Additionally, the admin dashboard provides a way for event organizers and venue owners to promote their events and facilities, while also providing away to manage user reports and address any issues that arise. Overall, the scope of the DAILY CART application is to provide acomprehensive solution for event management in any city.

2.3 OVERVIEW

A.TECHNOLOGIES USED

i. FRONT END

- React Js
- HTML 5
- CSS
- Bootstrap
- JavaScript

ii. BACK END

- Spring Boot
- Spring Data JPA
- Spring REST

iii. DATABASE MANAGEMENT SYSTEM

- MySQL

B. FEATURES PROVIDED

i. FOR USER

- Register - Users can register themself.
- Login/logout - Users can log in and log out to access features.
- Add category - A seller can create a category for products.
- Add product - A seller can add products for sale.
- Remove product - A seller can remove a product from the list
- Add a product to the cart - A customer can add a product to the cart
- Remove the product from the cart - A Customer can remove the product from the cart.
- Place order and payment - A customer can place an order by adding order details and completing the payment through the payment gateway.
- Submit feedback - A customer can share feedback regarding a product.

ii. FOR ADMINS

- Delete a user - An admin can delete a user i.e. a customer or a seller.
- View all orders - An admin can view all the order details.
- View feedback - An admin can view all the feedback.

2.4. FEASIBILITY STUDY

Feasibility is the determination of whether a project is worth undertaking or not. Before actually recommending the new system, it is important to investigate if it is feasible to develop it.

Before developing and implementing a system, we have to make sure that the system is feasible in the following ways:

A. TECHNICAL FEASIBILITY

In this type of feasibility study, the system analyst has to check whether it is possible or not to develop the requested system with the available manpower, software, hardware, etc.

This project makes use of cross-platform software and solutions like Java and hence can run on any operating system. React, used in the front end, is a swift and lightweight framework when it comes to delivering the requested page as it doesn’t reload the entire page for every HTTP request. It only re-renders the components that need to fetch new data. Also, as React is modular in nature, it is easy to develop new components and scale up existing components in order to add new features to the system. The combination of Spring Boot, Spring Data JPA and Spring Security for the backend makes for a fast, easy to set up and reliable system to interact with the database, as they are secure and transactional in nature. Since the sensitive data of users and admin needs to be stored in a robust and secure database, MySQL database management system was chosen as it is an industry-standard.

B. OPERATIONAL FEASIBILITY

In this type of feasibility study, the operations of the system are considered. An analysis is performed on whether it is feasible for the users to use the application. Thus, the proposed system is said to be operationally feasible only if clients can understand the system clearly and correctly, and can use it with ease.

In the design of this project, we always kept user experience in mind. We made an effort to have a good user interface with a consistent theme and an alluring design to keep the users interested and engaged. In our project, the use of universally known icons and instructions that are easy to understand makes sure that the user will not need any special technical know-how to use the application. We made sure that the information available throughout the application is arranged in a logically coherent and consistent manner, guaranteeing that the users will have a smooth and effortless experience and even enjoy using the application.

C. ECONOMIC FEASIBILITY

In this type of feasibility study, the benefits of the system to the organization are considered by taking into consideration the cost-benefit analysis. All the software and technologies used in our project are free, open-source, and widely available, with each of the technologies having extensive community support. This makes “DAILY CART” an economically feasible solution for the organizations that wish to implement it.

3. REQUIREMENTS FULFILLED

3.1. FUNCTIONAL REQUIREMENTS

The following are the functional requirements fulfilled by our project :

- Users can sign up and browse through various categories and products.
- Sellers can add a category and products.
- Customers can add a product to the cart and place an order.
- Customers can give feedback.

3.2. NON-FUNCTIONAL REQUIREMENTS

The following are the non-functional requirements fulfilled by our project:

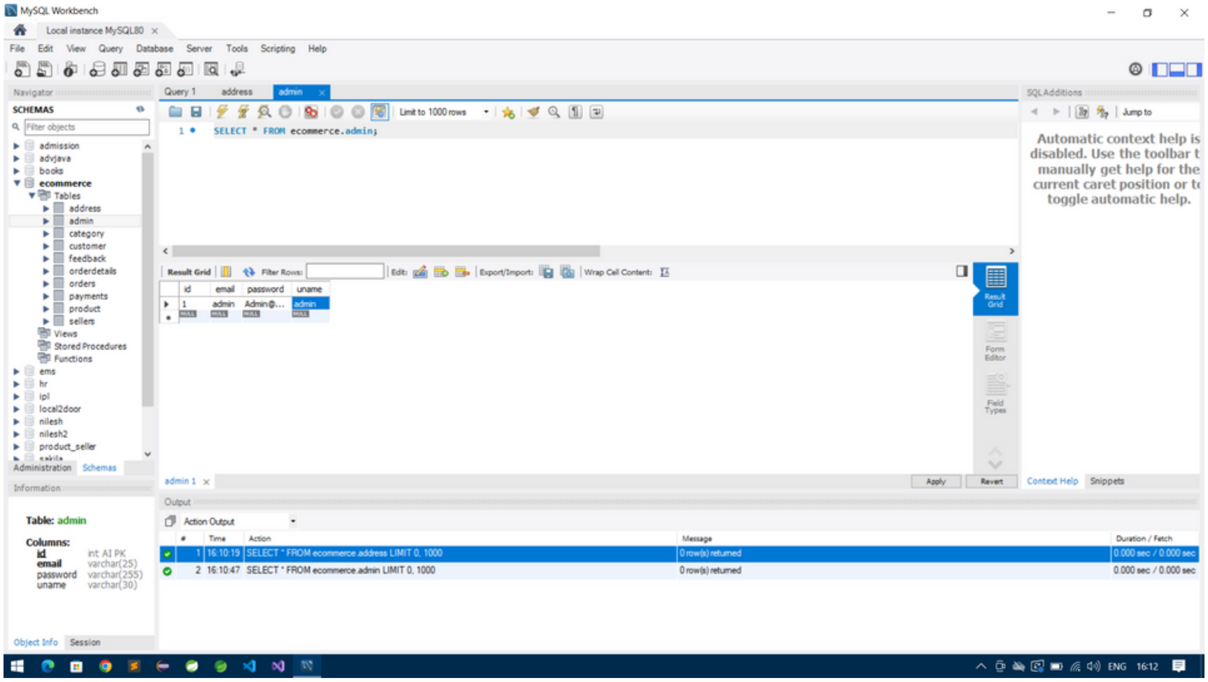
- Since the application uses lightweight and established software components that are also cross-platform, it is remarkably performant and has good support for every operating system.
- The use of JavaScript with React JS for frontend and Spring Boot, Spring Data JPA and Spring Security for back end delivers quick response times.
- Card-style UI and well-known icons and symbols used throughout the application provide a consistent theme and user-friendly interface that anyone can grasp easily, even without a technical background.

4. PROJECT DESIGN

4.1. DATA MODEL

The following tables depict the database design used for the "DAILY CART" application.

A. Admin table



```
SELECT * FROM ecommerce.admin;
```

id	email	password	uname
1	admin	Admin@...	admin
NULL	NULL	NULL	NULL

Automatic context help is disabled. Use the toolbar t manually get help for the current caret position or t toggle automatic help.

Table: admin

Columns:

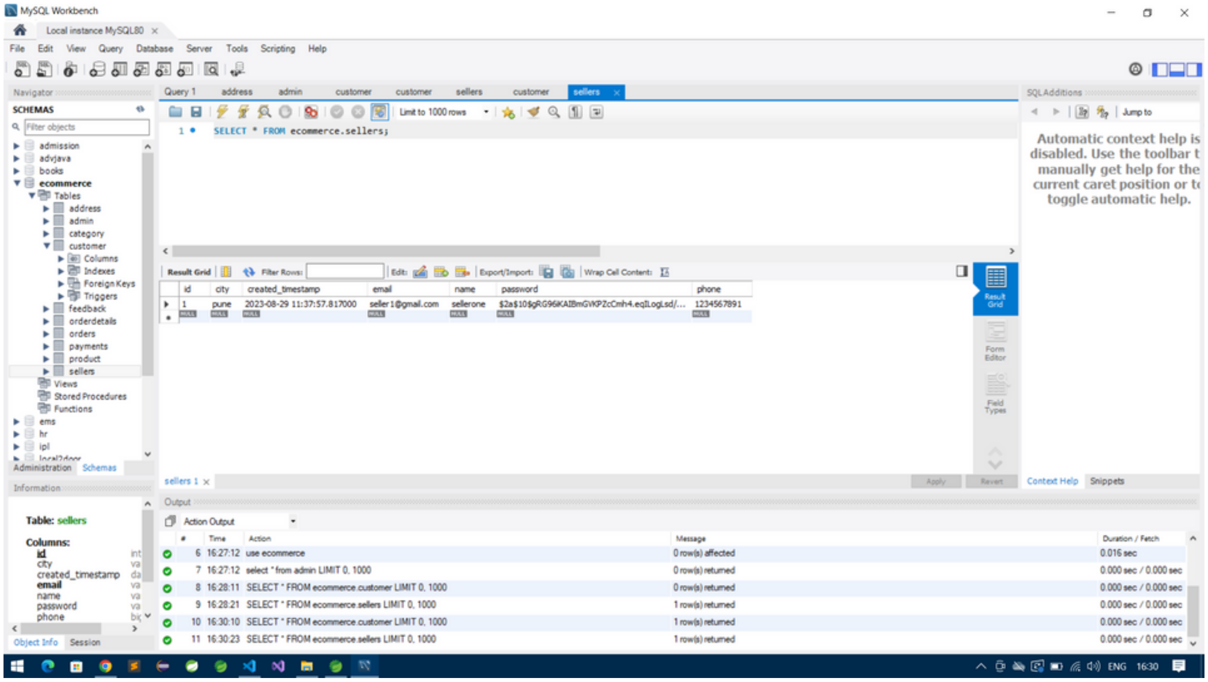
id	int AI PK
email	varchar(25)
password	varchar(255)
uname	varchar(30)

Output

Action Output

```
#  Time      Action                                       Message           Duration / Fetch
1  16:10:19  SELECT * FROM ecommerce.address LIMIT 0, 1000  0 row(s) returned  0.000 sec / 0.000 sec
2  16:10:47  SELECT * FROM ecommerce.admin LIMIT 0, 1000    0 row(s) returned  0.000 sec / 0.000 sec
```

B. Seller table



```
SELECT * FROM ecommerce.sellers;
```

id	city	created_timestamp	email	name	password	phone
1	pune	2023-08-29 11:37:57.817000	seller1@gmail.com	sellerone	$2a$10$gRG96KAIBmGVKPZcCmh4.eqILogLsd/...	1234567891
NULL	NULL	NULL	NULL	NULL	NULL	NULL

Automatic context help is disabled. Use the toolbar t manually get help for the current caret position or t toggle automatic help.

Table: sellers

Columns:

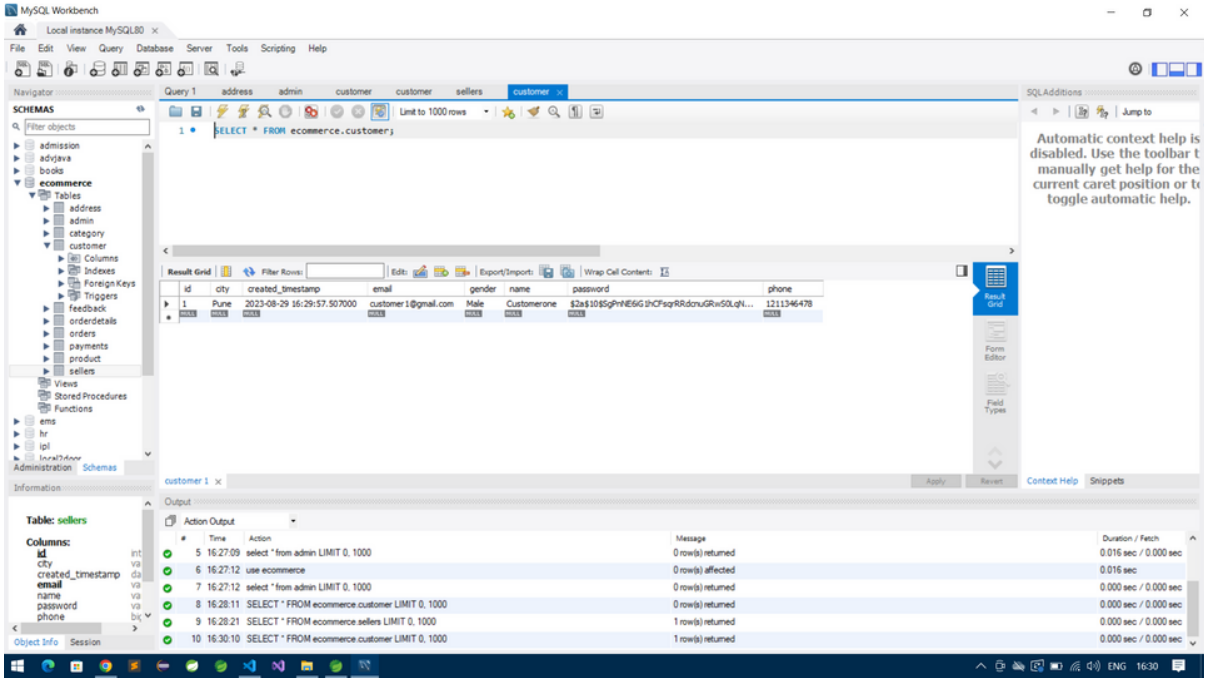
id	int
city	va
created_timestamp	da
email	va
name	va
password	va
phone	big

Output

Action Output

```
#   Time      Action                                         Message            Duration / Fetch
6   16:27:12  use ecommerce                                  0 row(s) affected  0.016 sec
7   16:27:12  select * from admin LIMIT 0, 1000              0 row(s) returned  0.000 sec / 0.000 sec
8   16:28:11  SELECT * FROM ecommerce.customer LIMIT 0, 1000  0 row(s) returned  0.000 sec / 0.000 sec
9   16:28:21  SELECT * FROM ecommerce.sellers LIMIT 0, 1000   1 row(s) returned  0.000 sec / 0.000 sec
10  16:30:10  SELECT * FROM ecommerce.customer LIMIT 0, 1000  1 row(s) returned  0.000 sec / 0.000 sec
11  16:30:23  SELECT * FROM ecommerce.sellers LIMIT 0, 1000   1 row(s) returned  0.000 sec / 0.000 sec
```

C. Customer table



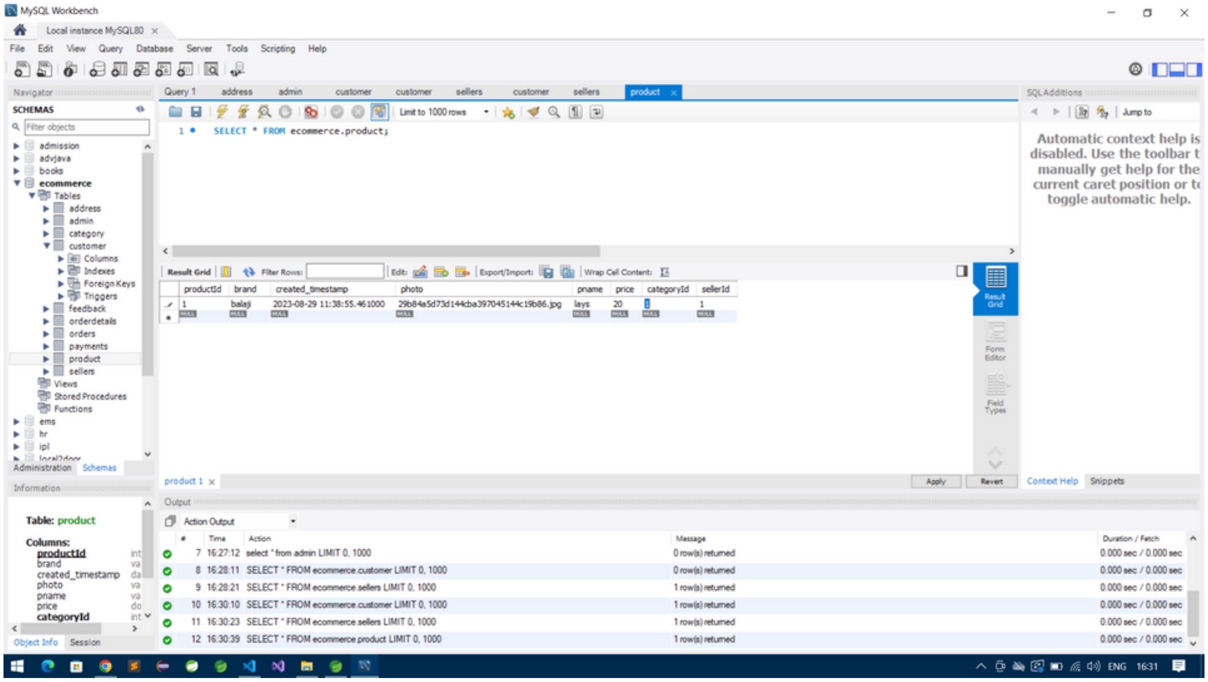
MySQL Workbench
Local instance MySQL80
File Edit View Query Database Server Tools Scripting Help
Query 1 address admin customer customer sellers customer
Limit to 1000 rows
Table: sellers
Columns: id city created_timestamp email gender name password phone
Automatic context help is disabled. Use the toolbar t manually get help for the current caret position or t toggle automatic help.
Context Help Snippets

```
SELECT * FROM ecommerce.customer;
```

id	city	created_timestamp	email	gender	name	password	phone
1	Pune	2023-08-29 16:29:57.507000	customer1@gmail.com	Male	Customerone	$2a$10$SgPnNE6iG1hCFsqrRRdcnuGRwS0LqN...	1211346478
NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL

```
#   Time      Action                                            Message            Duration / Fetch
5   16:27:09  select * from admin LIMIT 0, 1000                 0 row(s) returned  0.016 sec / 0.000 sec
6   16:27:12  use ecommerce                                     0 row(s) affected  0.016 sec
7   16:27:12  select * from admin LIMIT 0, 1000                 0 row(s) returned  0.000 sec / 0.000 sec
8   16:28:11  SELECT * FROM ecommerce.customer LIMIT 0, 1000    0 row(s) returned  0.000 sec / 0.000 sec
9   16:28:21  SELECT * FROM ecommerce.sellers LIMIT 0, 1000     1 row(s) returned  0.000 sec / 0.000 sec
10  16:30:10  SELECT * FROM ecommerce.customer LIMIT 0, 1000    1 row(s) returned  0.000 sec / 0.000 sec
```

D. Product table



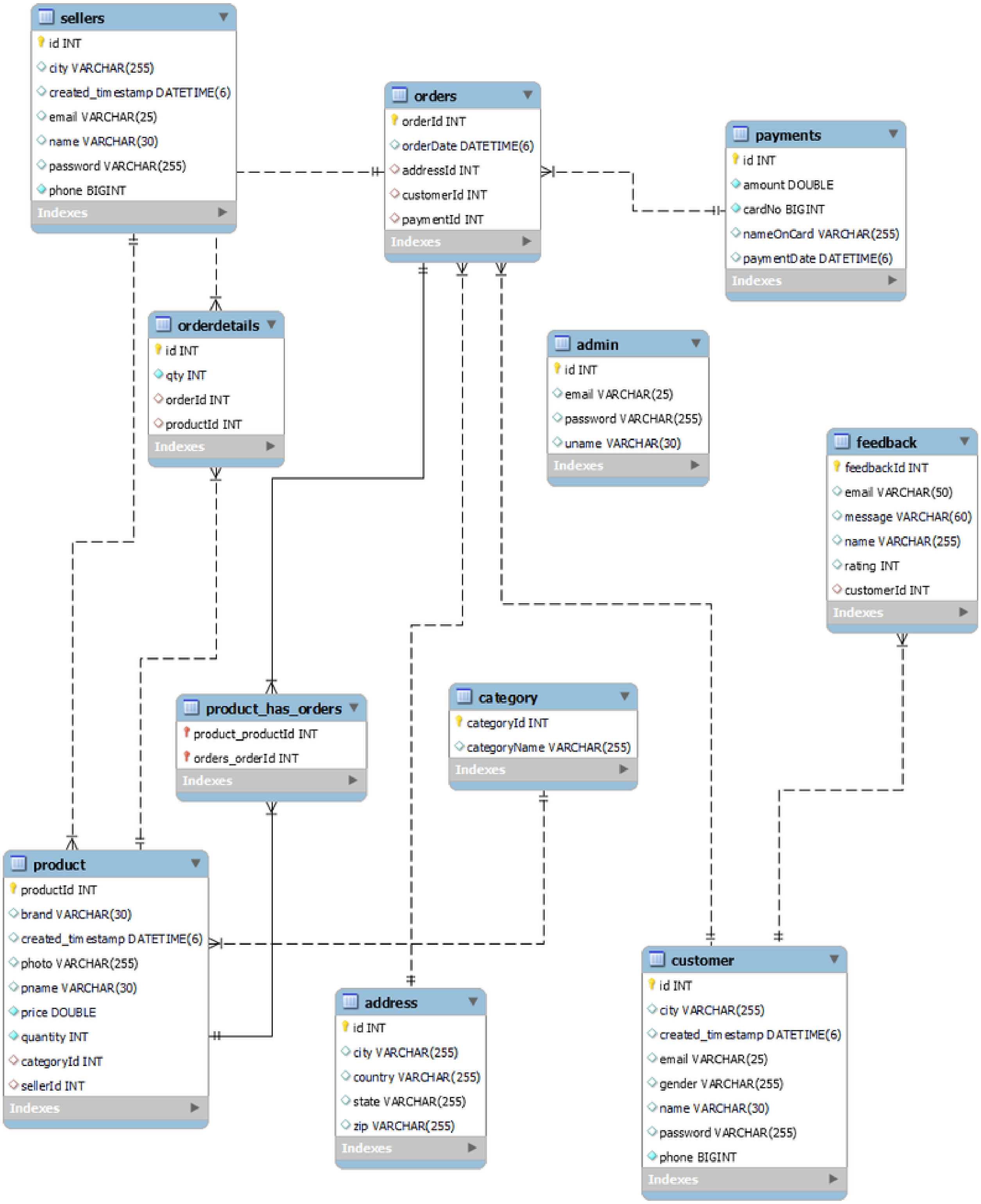
MySQL Workbench
Local instance MySQL80
File Edit View Query Database Server Tools Scripting Help
Query 1 address admin customer customer sellers customer sellers product
Limit to 1000 rows
Table: product
Columns: productId brand created_timestamp photo pname price categoryId
Automatic context help is disabled. Use the toolbar t manually get help for the current caret position or t toggle automatic help.
Apply Revert Context Help Snippets

```
SELECT * FROM ecommerce.product;
```

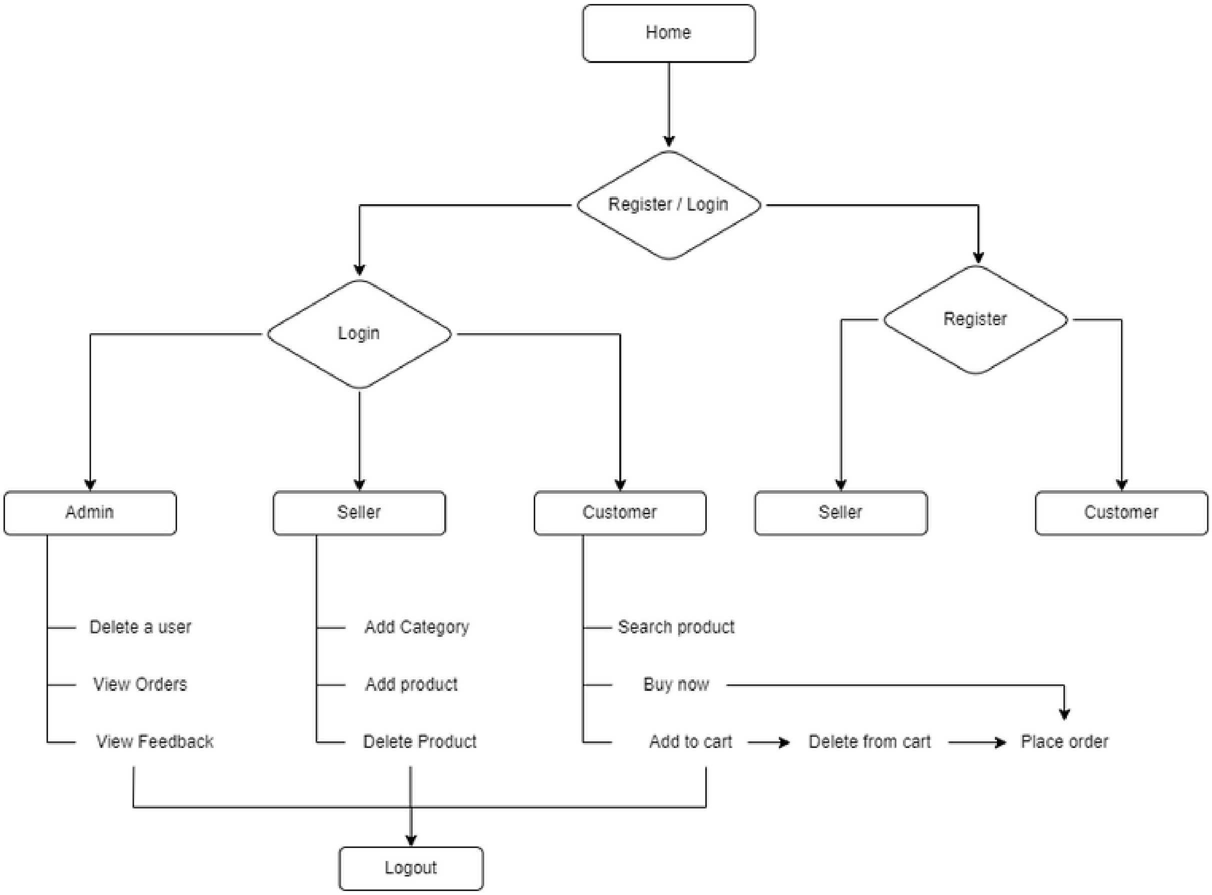
productId	brand	created_timestamp	photo	pname	price	categoryId	sellerId
1	balaji	2023-08-29 11:38:55.461000	29b84a5d73d144cba397045144c19b86.jpg	lays	20	1	1
NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL

```
#   Time      Action                                            Message            Duration / Fetch
7   16:27:12  select * from admin LIMIT 0, 1000                 0 row(s) returned  0.000 sec / 0.000 sec
8   16:28:11  SELECT * FROM ecommerce.customer LIMIT 0, 1000    0 row(s) returned  0.000 sec / 0.000 sec
9   16:28:21  SELECT * FROM ecommerce.sellers LIMIT 0, 1000     1 row(s) returned  0.000 sec / 0.000 sec
10  16:30:10  SELECT * FROM ecommerce.customer LIMIT 0, 1000    1 row(s) returned  0.000 sec / 0.000 sec
11  16:30:23  SELECT * FROM ecommerce.sellers LIMIT 0, 1000     1 row(s) returned  0.000 sec / 0.000 sec
12  16:30:39  SELECT * FROM ecommerce.product LIMIT 0, 1000     1 row(s) returned  0.000 sec / 0.000 sec
```

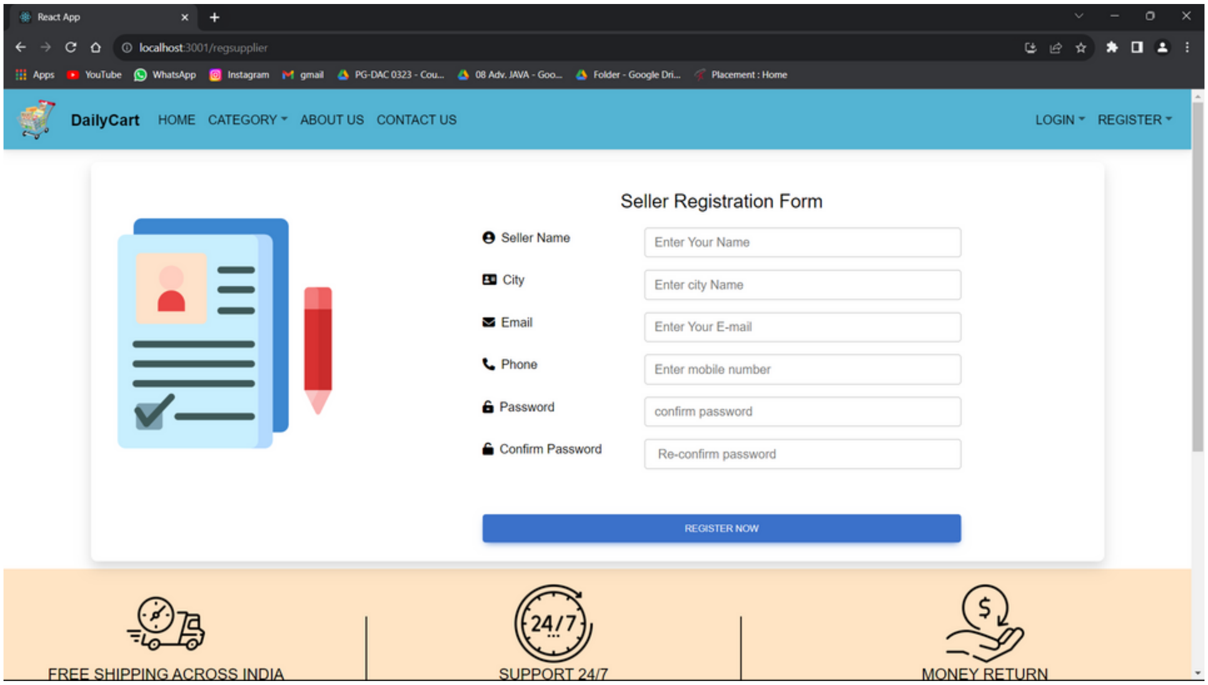
4.2. ER Diagram



4.4. Activity Diagram



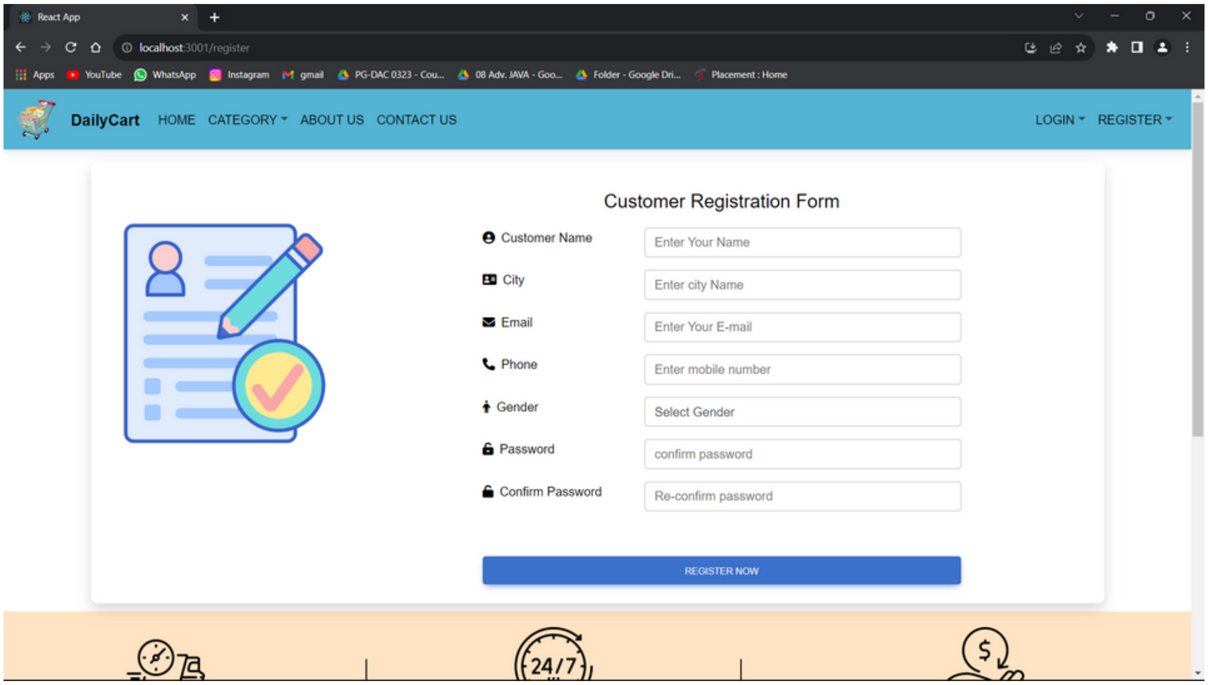
5. PROJECT SCREENSHOTS



Seller Registration Form

Seller Name	Enter Your Name
City	Enter city Name
Email	Enter Your E-mail
Phone	Enter mobile number
Password	confirm password
Confirm Password	Re-confirm password

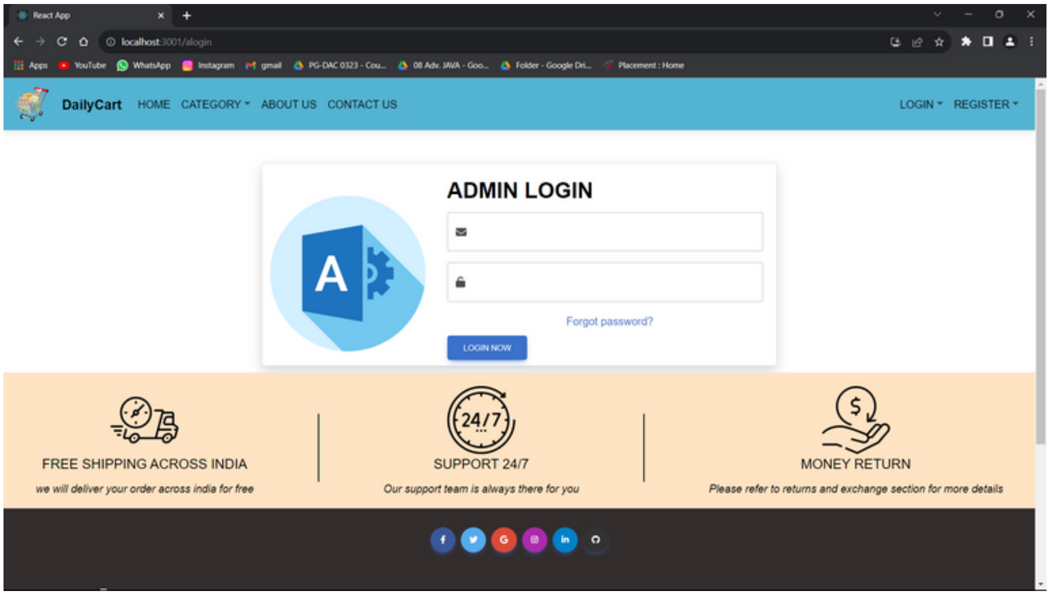
REGISTER NOW



Customer Registration Form

Customer Name	Enter Your Name
City	Enter city Name
Email	Enter Your E-mail
Phone	Enter mobile number
Gender	Select Gender
Password	confirm password
Confirm Password	Re-confirm password

REGISTER NOW



ADMIN LOGIN

FREE SHIPPING ACROSS INDIA

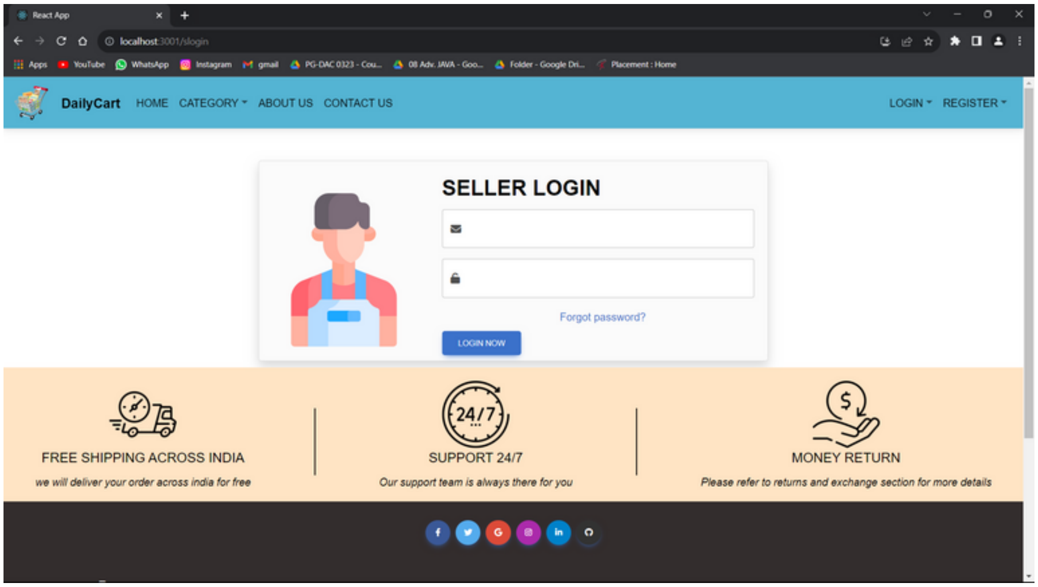
we will deliver your order across india for free

SUPPORT 24/7

Our support team is always there for you

MONEY RETURN

Please refer to returns and exchange section for more details



SELLER LOGIN

FREE SHIPPING ACROSS INDIA

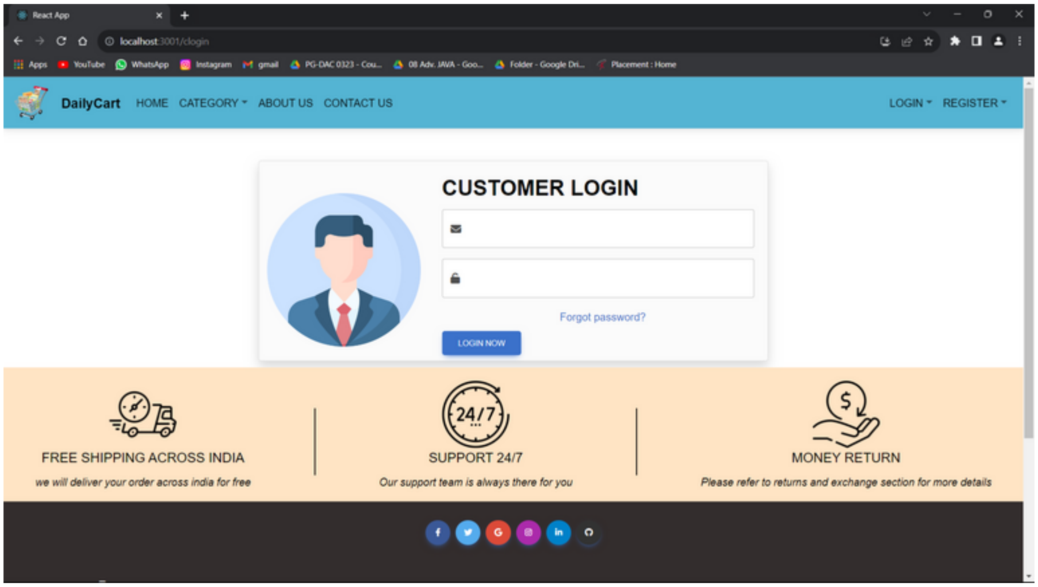
we will deliver your order across india for free

SUPPORT 24/7

Our support team is always there for you

MONEY RETURN

Please refer to returns and exchange section for more details



CUSTOMER LOGIN

FREE SHIPPING ACROSS INDIA

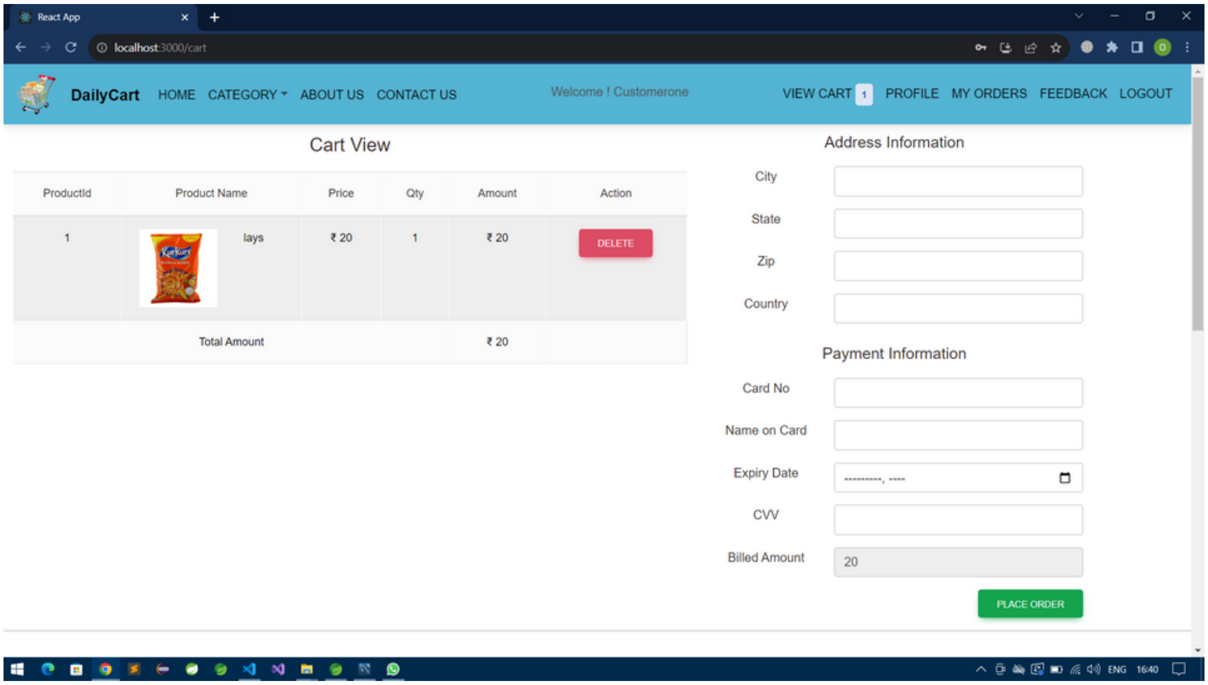
we will deliver your order across india for free

SUPPORT 24/7

Our support team is always there for you

MONEY RETURN

Please refer to returns and exchange section for more details


React App
localhost:3000/cart
DailyCart HOME CATEGORY ABOUT US CONTACT US
Welcome ! Customerone
VIEW CART 1 PROFILE MY ORDERS FEEDBACK LOGOUT
ENG 16:40

Cart View

ProductId	Product Name		Price	Qty	Amount	Action
1		lays	₹ 20	1	₹ 20	DELETE
	Total Amount				₹ 20	

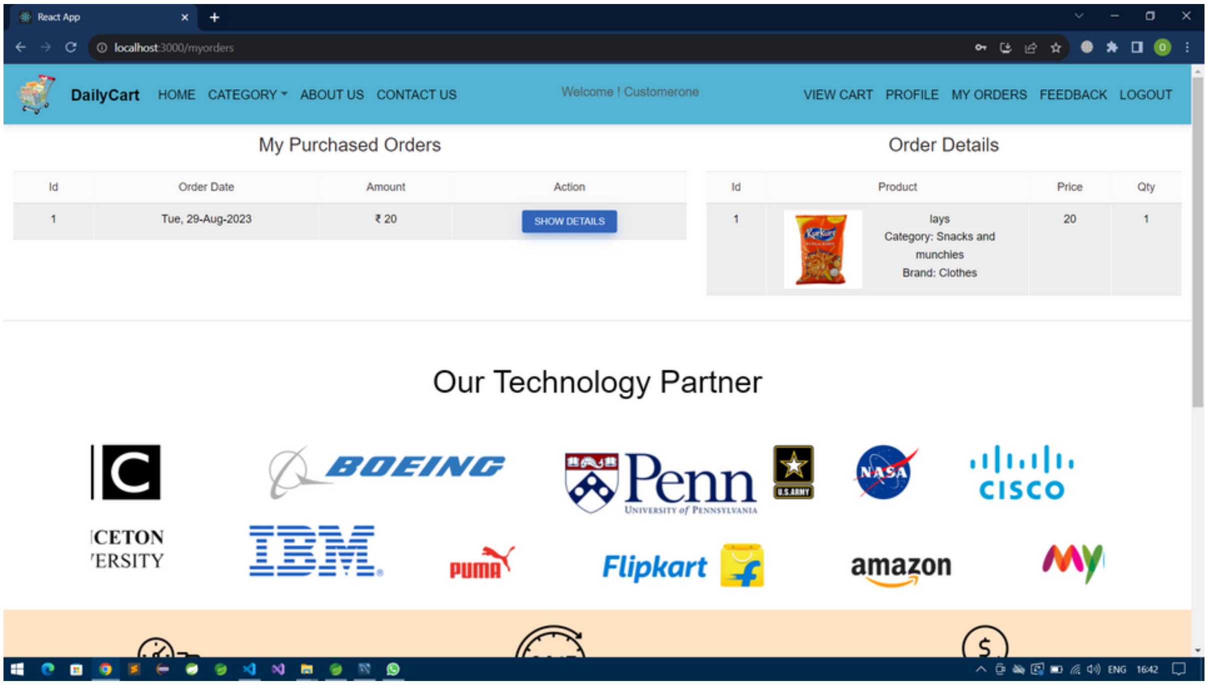
Address Information

City	
State	
Zip	
Country	

Payment Information

Card No	
Name on Card	
Expiry Date	---------, ----
CVV	
Billed Amount	20

PLACE ORDER


React App
localhost:3000/myorders
DailyCart HOME CATEGORY ABOUT US CONTACT US
Welcome ! Customerone
VIEW CART PROFILE MY ORDERS FEEDBACK LOGOUT
ENG 16:42

My Purchased Orders

Id	Order Date	Amount	Action
1	Tue, 29-Aug-2023	₹ 20	SHOW DETAILS

Order Details

Id	Product		Price	Qty
1		lays Category: Snacks and munchies Brand: Clothes	20	1

Our Technology Partner

6. TESTING

One of the main purposes of testing is to validate and verify that the system works as intended. No program or system design is perfect. However, if we implement the system without proper testing, then it may cause problems and lead to a bad user experience.

Testing and checking the outcomes of each test gives us the best chance to detect and correct errors before the system is implemented in a production environment.

In the course of our project, we made an effort to manually test each component. In all cases, we obtained the desired results as demonstrated below.

A. USER FEATURES TEST

#	Description	Outcome	Result
1.	Register Seller	Seller having valid email id and password only are allowed to register.	Passed
2.	Register customer	Seller having valid email id and password only are allowed to register.	Passed
3.	Login Admin	User id and password fetched from database otherwise failure.	Passed
4.	Login seller	User id and password fetched from database otherwise failure.	Passed
5.	Login customer	User id and password fetched from database otherwise failure.	Passed
6.	Add category	Seller was able to add categories to the database.	Passed
7.	Add product	Seller was able to add products to the database.	Passed
8.	Add product to the cart	Products fetched from database and added to cart table.	Passed
9.	Remove product from the cart	Products were removed from cart table in database.	Passed
10.	Place order	Data from user added to orders table	Passed
11.	Remove user	The user removed from database	Passed
12.	Logout	The session was cleared.	Passed

7. CONCLUSION

“DAILY CART”, is an e-commerce platform, developed by our project team to provide a platform for users to be able to buy and sell products online. We tried using the latest technologies that are cross-platform and robust. Each and every software we used was open-source in nature, which keeps the cost of production at a minimum.

We were also meticulous about the user experience aspect of our application so that navigating our website is an easy and seamless experience.

In the end, Daily Cart was a great learning experience. We faced many challenges and worked on them as a team. We learnt how to do things but more importantly how to not do things. That in our opinion is a precious experience.

8. FUTURE SCOPE

The scope of the project is limited to the development of the "Online Shopping Mart" platform and its immediate functionalities. It does not encompass logistical aspects such as physical product storage and shipping. The project's focus is on creating a virtual marketplace that fosters connections between buyers and sellers, with an emphasis on user experience, security, and innovation.

- We can implement a feature that deduces how popular a product is based on the data on how many customers have browsed a product and how many times that product has been purchased.

9. REFERENCES

Following is the list of websites we referred during the course of our project:

1. https://developer.mozilla.org/
2. https://reactjs.org/docs/getting-started.html
3. https://getbootstrap.com/