

A
PROJECT REPORT ON

Farmers Marketplace

An Online Food Merchandise Store

SUBMITTED IN PARTIAL
FULFILLMENT OF
DIPLOMA IN ADVANCED COMPUTING (PG-DAC)



UNDER THE GUIDANCE OF
Ms. Kishori Khadilkar.

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AT

CENTER FOR DEVELOPMENT OF ADVANCED COMPUTING-C-DAC, PUNE

ACKNOWLEDGEMENT

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

We are very glad to mention the name of Ms. Kishori Khadilkar for her valuable guidance to work on this project.

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:FROM:

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ABSTRACT

The Business to Consumer Model has come a long way ever since its time of inception. While it has expanded into multiple types of goods, there is still a section of market that remains untapped: Fresh goods. As the current generation of consumers is becoming more and more health conscious, and with current trends of organic food, Fresh foods can become the next big thing in e-commerce.

This project deals with developing an e-commerce website for online fresh foods product sale. It provides list of farmers that offer fresh fruits and vegetables, and products page for each farmer's offerings. It also provides a cart for ease of remembering the choices selected by user. The user can also view their order history to go back to the farmer from whom they purchased the last batch of products.

Two main technologies were used in this project: Java and React. Java was used for backend. React is used for client side rendering of the page, which offloads the load of rendering views to the client, and provides a fluid single page experience. MySQL has been used as database to store list of users, farmers and their products.

This project has been designed and implemented in multilevel architecture so as to have minimum coupling and maximum cohesion.

1 .INTRODUCTION

Fresh produce industries across the world are facing a roller-coaster ride of new developments and trends. Although there might be a few tight turns and steep slopes, the latest trends paint an inspirational picture of what lies ahead in the next five to 10 years.

In the fresh produce sector, technology and retail innovations abound. From futuristic hi-tech grocery stores, the rise of e-commerce opportunities, culinary innovation centers and revolutionary robotics technology to vertical farming and plant-based food innovations like cauliflower pizza and vegetable steaks.

Online Shopping of Fresh Food opens up a new world of options. Users won't have to go from store to store to hunt for fresh food. They won't have to worry about wondering whether their food is organic or inorganic. They will be able to refill their fridges in just one click, all while sitting at home.

Our system offers one stop solution to all fresh food needs. Users can log into their accounts and then they will be taken to produces offered by the farmer.

Customer can pick what foods they want to order and add to the cart. Once they are done selecting what they require, after reviewing cart summary they can simply click on check out button to pay bill and they will get an order details pdf on their registered email for the same. Their cart will be delivered to their houses.

This can be done from any place, at any time all from the internet, thus making it easy to get your daily need of fresh foods.

2. PRODUCT OVERVIEW AND SUMMARY

2.1. PURPOSE

The Farmer's Marketplace, as the name Suggested is about farmers and their showcased merchandise. It is about connecting farmers directly to the customers, thereby cutting the middle man. This ensure that customers get fresh foods at a very cheap price. This also ensure that all the farmers get a fair chance at gaining customers so that they don't have to rely on any middle man.

2.2. SCOPE

"Farmers Market Place" aims to deliver a web-based application that hosts a wide collection of the food-items that users can browse through. Users can place orders and make payment. They can update their profile, add delivery address .They can view their order history as well.

Admins can manage various product details like stock, price, adding new products, and categories etc. Only admin can add farmers. Admins can even delete users and/or farmers, if the need arises.

This project does not support the actual logistics and delivery of food items and actualpayment logic. We are assuming that the organization that implements it will be using third-party payment API which can easily be integrated in our application if needed. Farmers Market Place is only an interface for both customers (for browsing and shopping for food items) and admins (for managing products, farmers, users listing).

2.3. OVERVIEW

A.TECHNOLOGIES USED

i. FRONT END

- HTML
- CSS
- JavaScript
- React
- Axios

ii. BACK END

- Spring Boot
- Spring Data JPA
- Hibernate

iii. DATABASE MANAGEMENT SYSTEM

- MySQL

B. FEATURES PROVIDED

i. FOR ADMINS

- a. Login & Logout – Similar to customers, admins can login & logout to access their account.
- b. Add / Update Farmers –Only admin is responsible for adding and updating the details of farmer.
- c. Delete Farmer –The admins can delete a farmer account if they need to for any purpose.
- d. Add New Category – Admins can add category.
- e. Delete Category – Admins can remove category.
- f. Add New Products – Admin can add new product with details as stock, price, name, quantity, image, category, etc.
- g. Manage Products– Admin can update the product details.
- h. View Users – Admin can view all registered users.
- i. Delete User – Admin can delete a user if need arises.
- j. View order details – Admin can view order details for all users.

ii. FOR CUSTOMERS

- a. Browse – Customers can browse the homepage to explore the entire products available.
- b. Register, Login & Logout – New customers can register on the site. Existing customers can then login to access their account information and logout when the account is not in use.
- c. View & Update Profile – When logged in, customers can view their profile and update their details.
- d. Update Delivery Address – When purchasing listed items, a customer can update delivery addresses which they can associate with their account.
- e. Add to Cart & Place Orders – If customers finds the food item of their choice they can save the item in the cart until they decide to purchase it. If at any point they want to cancel certain item they can simply remove it from the cart on one click. When they wish to purchase it, they can place orders for those items by selecting a delivery address on their account and pay the bill.
- f. View Order History – Every customer can view their order history in order to get an idea about their past spending. Also the customer will get email notification for respective order details.

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 front-end, is swift and light weight 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 Hibernate for backend make 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 customers and admins need 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 operation of the system is considered. An analysis is performed on whether it is feasible for the user department to use the application. Thus, the proposed system is said to be operationally feasible only if clients are able to 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 consistent theme and 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. ECONOMICAL 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 an extensive community support. This makes “Farmers Market Place” an economically feasible solution to the organizations that wish to implement it.

3. REQUIREMENTS FULFILLED

3.1. FUNCTIONAL REQUIREMENTS

Following are the functional requirements fulfilled by our project:

- Similar to customers, admins can login & logout to access their account.
- Only admin is responsible for adding and updating the details of farmer.
- The admins can delete a farmer account if they need to, for any purpose.
- Admins can add and remove category.
- Admin can add new product with details as stock, price, name, quantity, image, category and update and remove them.
- Admin can view all registered users, delete a user if need arises
- Admin can view order details for all users.
- Customers can browse the homepage to explore the entire products available.
- When logged in, customers can view their profile and update their details.
- If customers find the food item of their choice they can save the item in the cart until they decide to purchase it. If at any point they want to cancel certain item they can simply remove it from the cart on one click. When they wish to purchase it, they can place orders for those items by selecting a delivery address on their account and pay the bill.
- Every customer can view their order history in order to get an idea about their past spending. Also the customer will get email notification for respective order details.

3.2. NON-FUNCTIONAL REQUIREMENTS

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 React for front end and Spring Boot, Spring Data JPA and Hibernate for back end delivers quick response times to admins and customers alike.
- Card-style UI and well-known icons and symbols used throughout the application provides 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 “Wordsworth” application:

A. Tables Related to User Details

a. Users Table

```
mysql> desc user;
```

Field	Type	Null	Key	Default	Extra
user_id	int	NO	PRI	NULL	auto_increment
address	varchar(200)	YES		NULL	
email	varchar(50)	YES	UNI	NULL	
firstname	varchar(20)	YES		NULL	
is_admin	bit(1)	YES		NULL	
lastname	varchar(20)	YES		NULL	
password	varchar(30)	YES		NULL	
phone_no	varchar(15)	YES		NULL	

8 rows in set (0.00 sec)

b. Farmers Table

```
mysql> desc farmer;
```

Field	Type	Null	Key	Default	Extra
farmer_id	int	NO	PRI	NULL	auto_increment
address	varchar(200)	YES		NULL	
email	varchar(50)	YES		NULL	
firstname	varchar(20)	YES		NULL	
lastname	varchar(20)	YES		NULL	
phone_no	varchar(15)	YES	UNI	NULL	

6 rows in set (0.00 sec)

B. Tables Related to Orders

a. Stock Details Table

```
mysql> desc stock_details;
```

Field	Type	Null	Key	Default	Extra
product_id	int	NO	PRI	NULL	auto_increment
product_image	varchar(400)	YES		NULL	
price_per_unit	float	YES		NULL	
quantity	int	NO		NULL	
stock_item	varchar(50)	NO	UNI	NULL	
category_id	int	YES	MUL	NULL	
farmer_id	int	YES	MUL	NULL	

7 rows in set (0.01 sec)

b. Orders Table

```
mysql> desc orders;
```

Field	Type	Null	Key	Default	Extra
order_id	int	NO	PRI	NULL	auto_increment
delivery_date	date	YES		NULL	
delivery_status	bit(1)	YES		NULL	
payment_status	bit(1)	YES		NULL	
place_order_date	date	YES		NULL	
user_id	int	NO	MUL	NULL	

6 rows in set (0.00 sec)

a. Order Details Table

```
mysql> desc order_details;
```

Field	Type	Null	Key	Default	Extra
id	int	NO	PRI	NULL	auto_increment
amount	double	NO		NULL	
order_item	varchar(20)	NO		NULL	
quantity	int	NO		NULL	
farmer_id	int	YES	MUL	NULL	
order_id	int	NO	MUL	NULL	

6 rows in set (0.00 sec)

b. Category Table

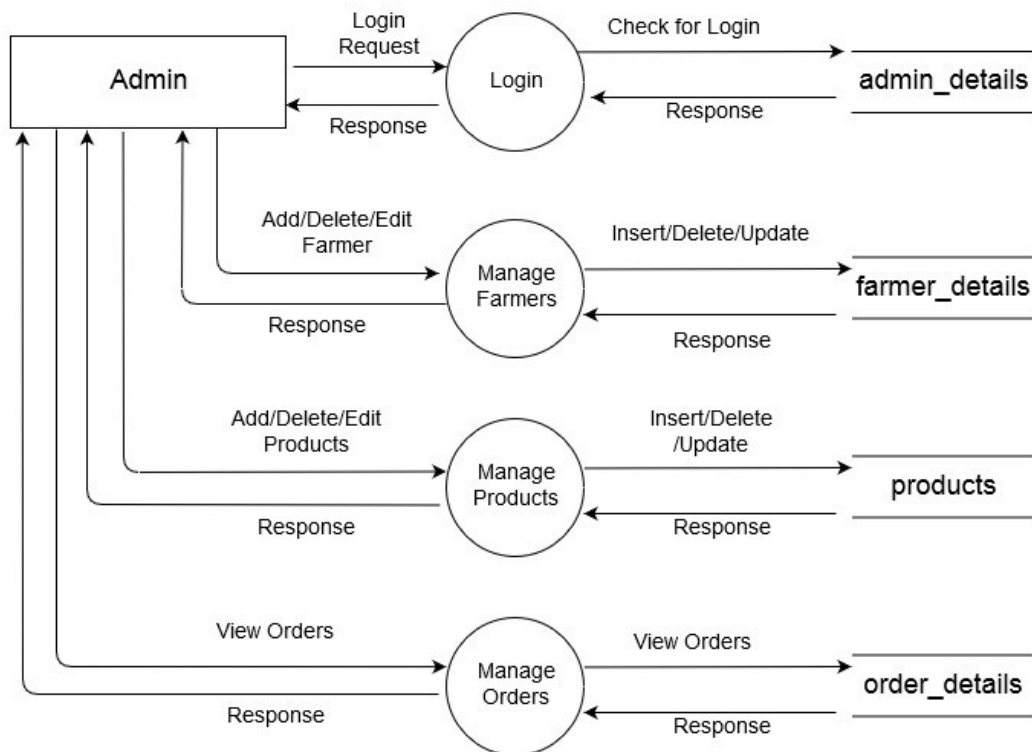
```
mysql> desc category;
```

Field	Type	Null	Key	Default	Extra
category_id	int	NO	PRI	NULL	auto_increment
category_name	varchar(255)	YES	UNI	NULL	

2 rows in set (0.00 sec)

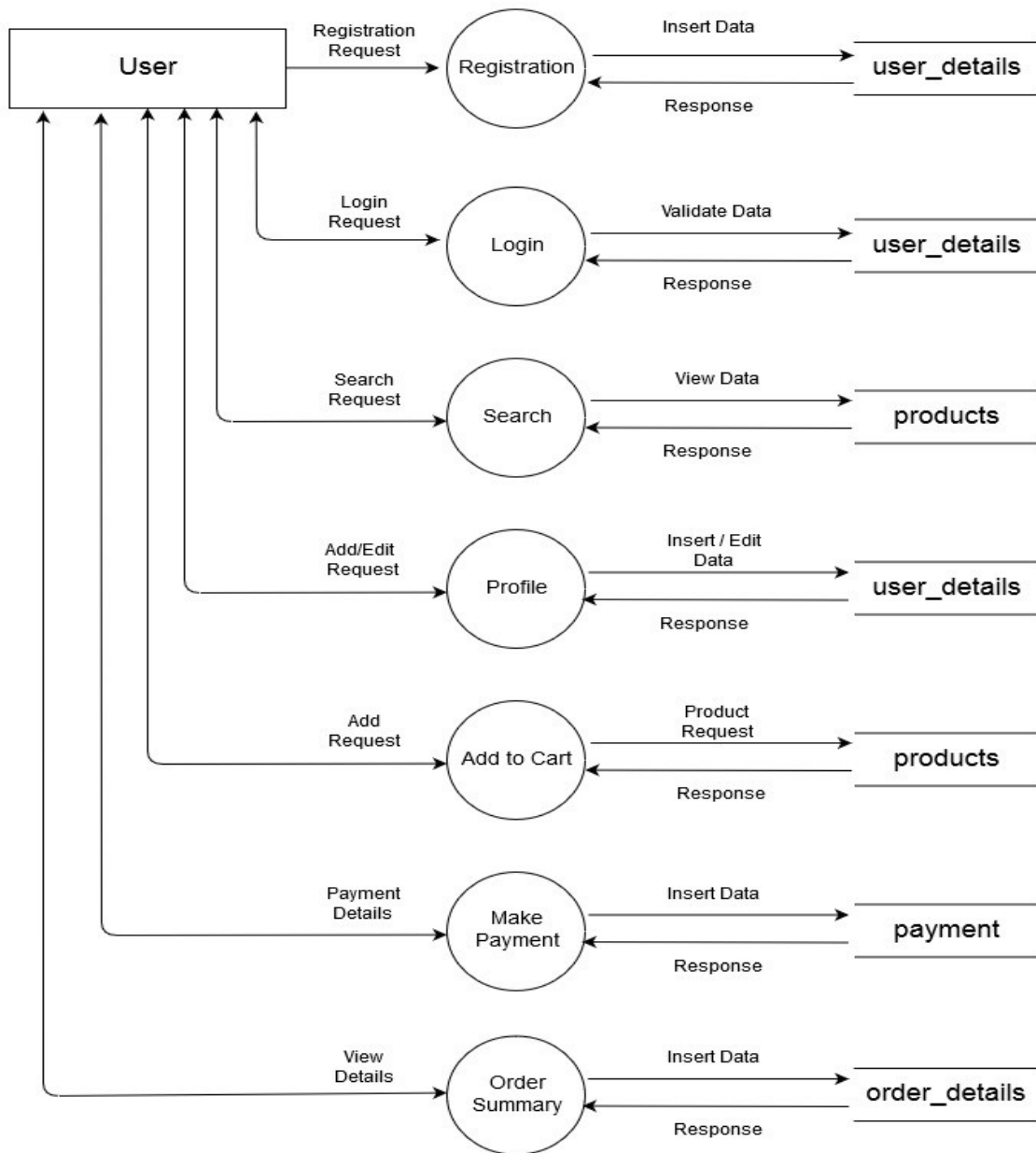
4.2. FUNCTIONAL DECOMPOSITION DIAGRAM

A. Admin Side DFD



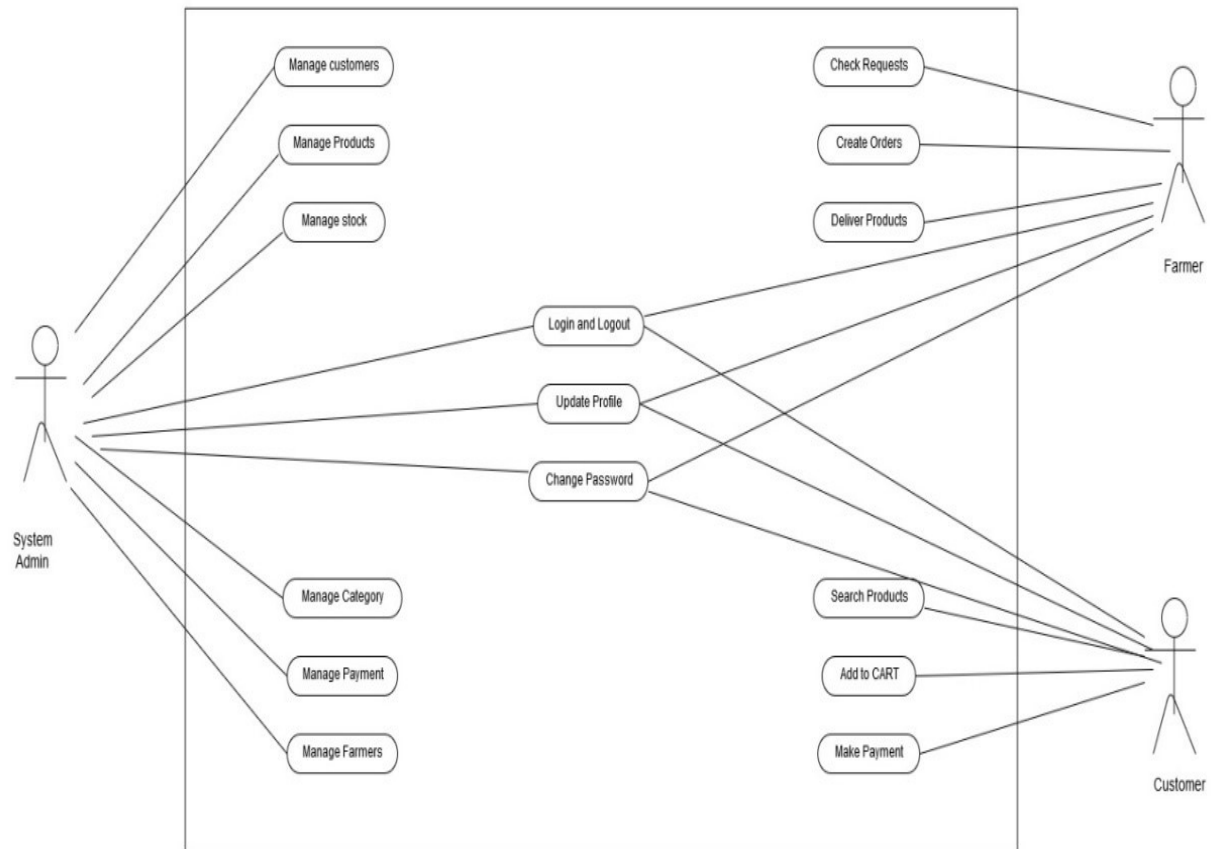
Admin Side DFD

B. User Side DFD



User Side DFD

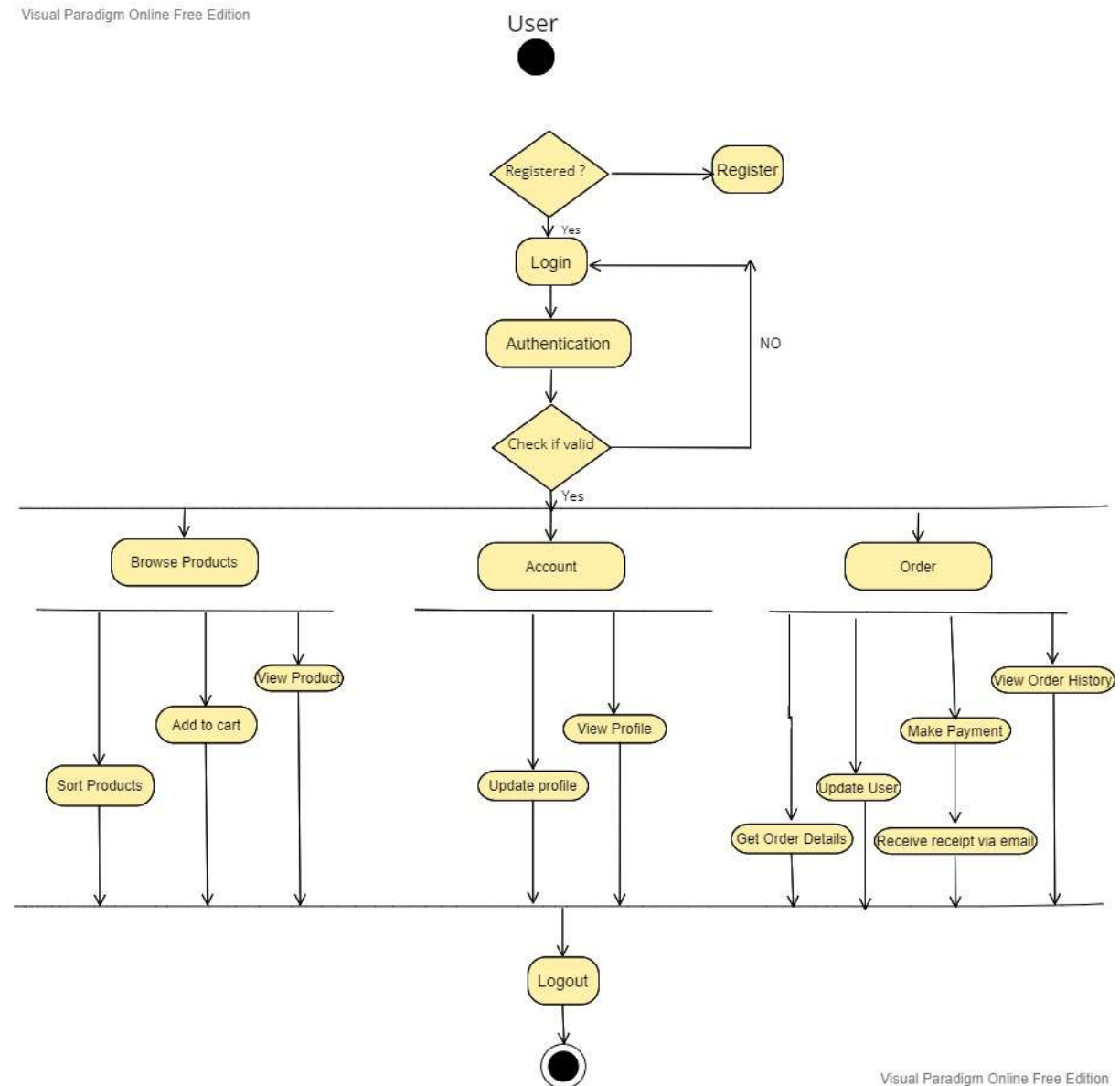
4.3. USE CASE DIAGRAM



Use case Diagram

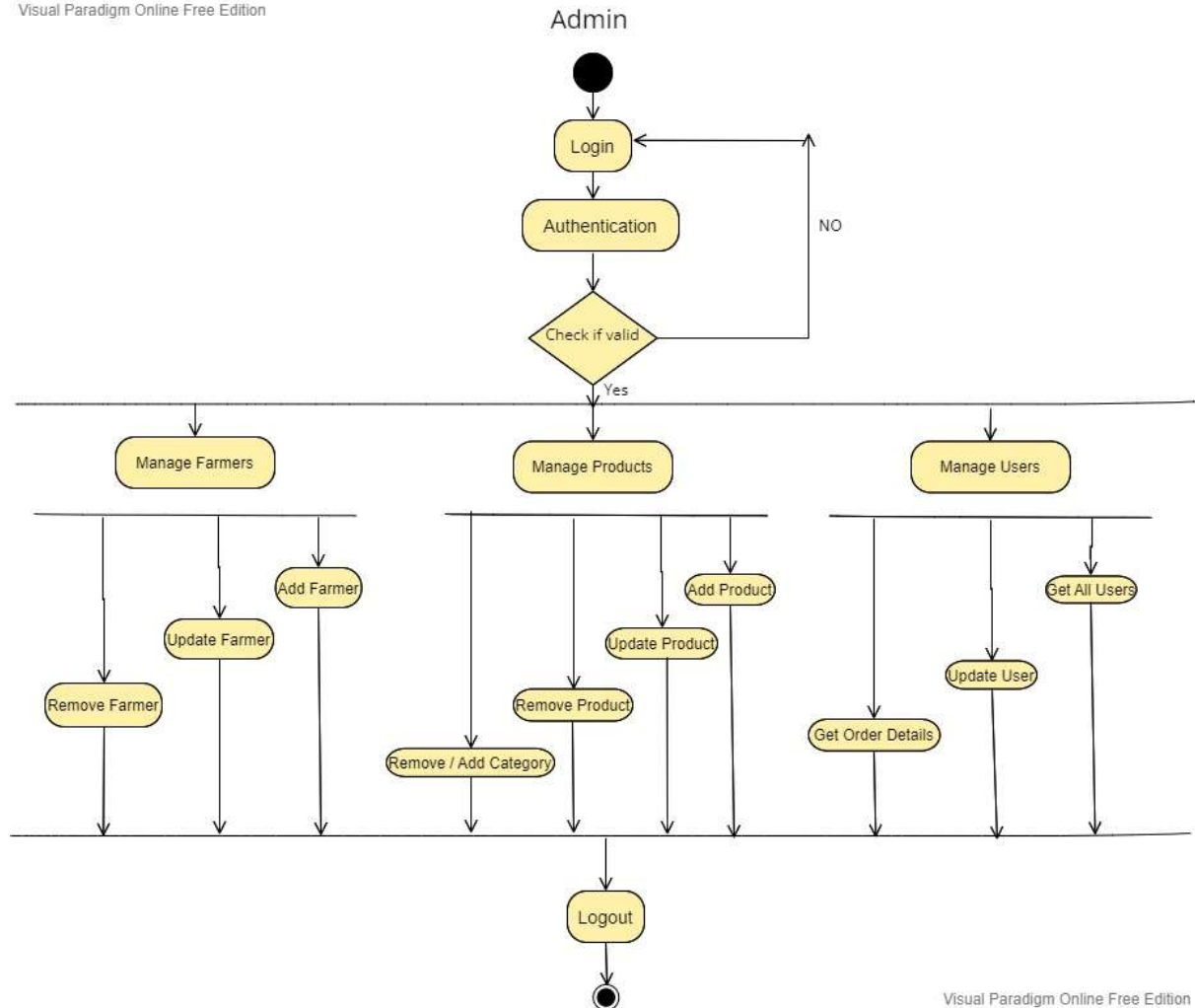
4.4. ACTIVITY DIAGRAM

A. User

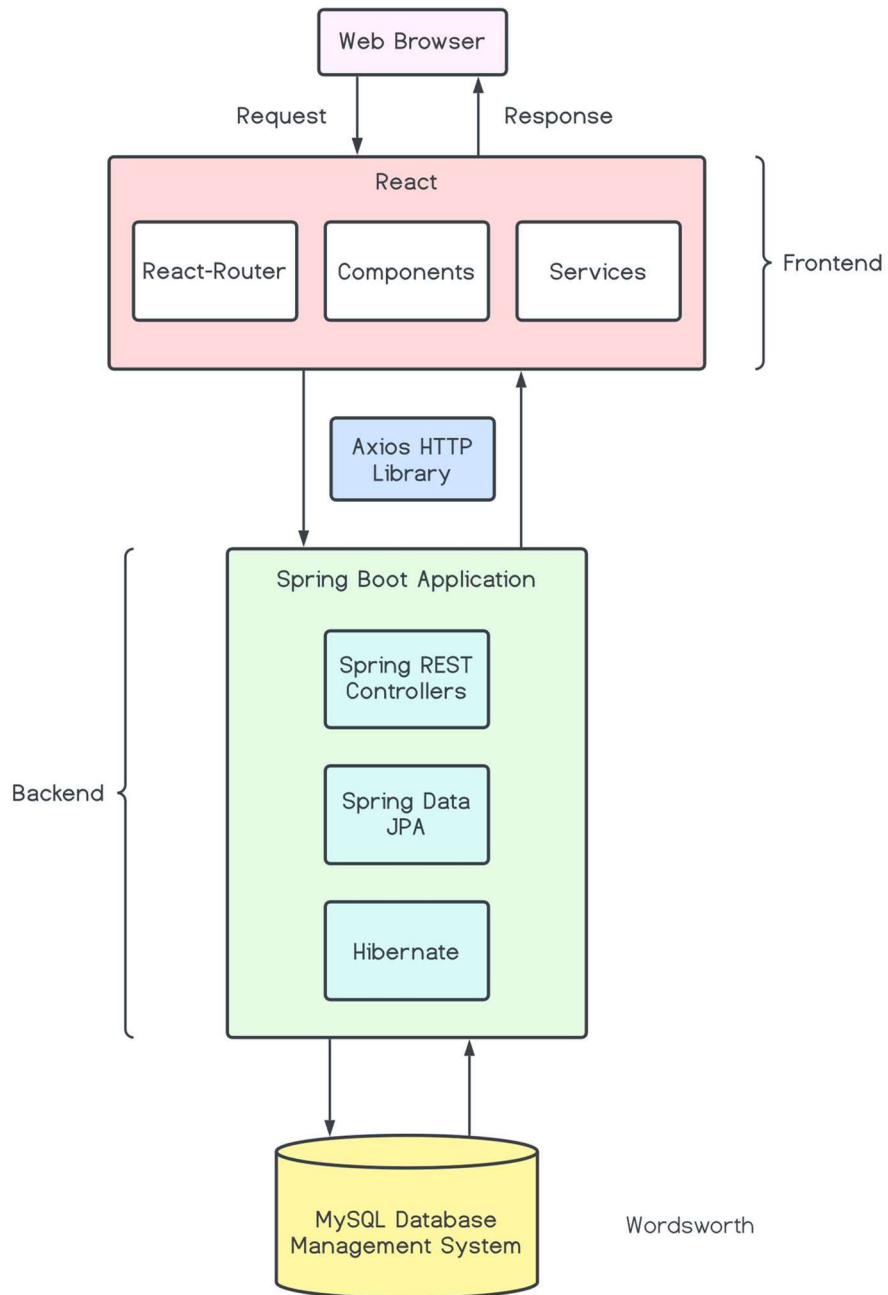


B. Admin

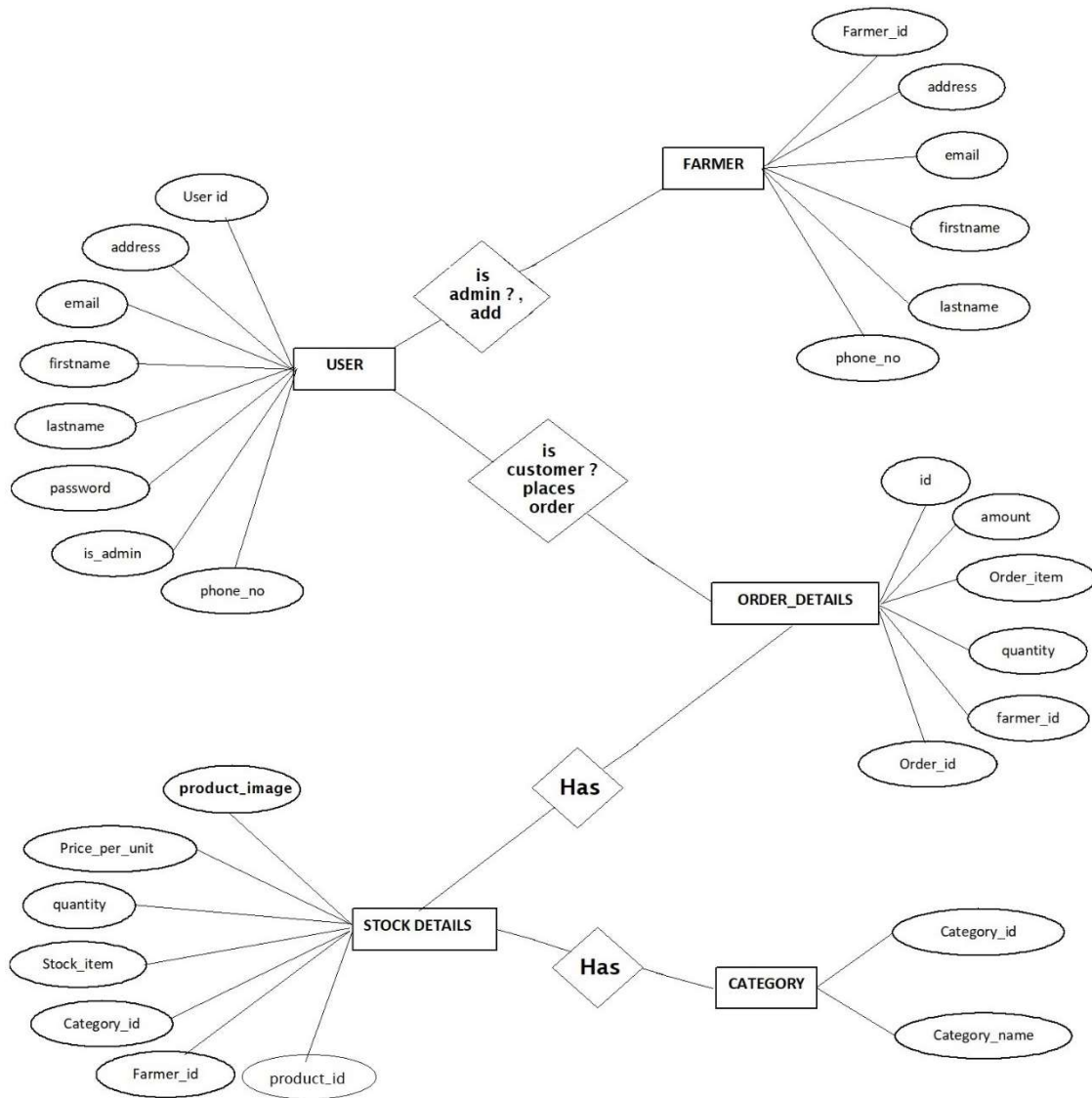
Visual Paradigm Online Free Edition



4.5. PROJECT ARCHITECTURE

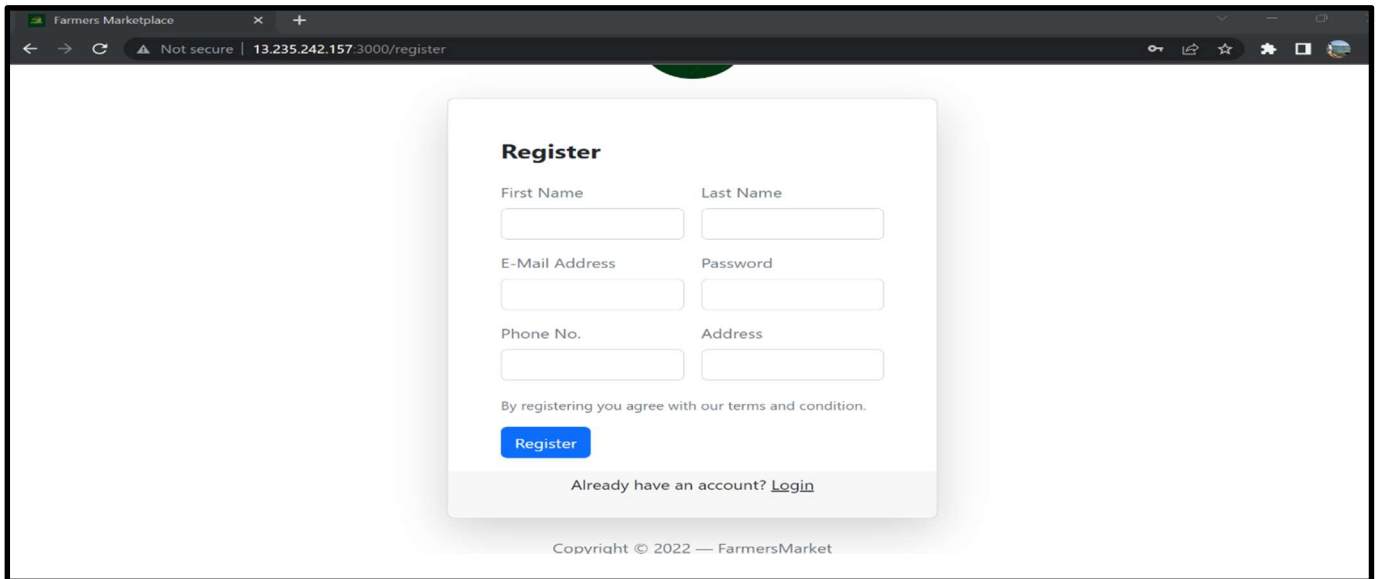


4.6. ER DIAGRAM



5. PROJECT SCREENSHOTS

5.1. USER



The screenshot shows a web browser window with the address bar displaying "Farmers Marketplace" and the URL "13.235.242.157:3000/register". The page features a central "Register" form with the following fields: First Name, Last Name, E-Mail Address, Password, Phone No., and Address. Below the form, there is a checkbox for "By registering you agree with our terms and condition." and a blue "Register" button. At the bottom of the form, there is a link "Already have an account? [Login](#)". The footer of the page reads "Copyright © 2022 — FarmersMarket".

Register

First Name Last Name

E-Mail Address Password

Phone No. Address

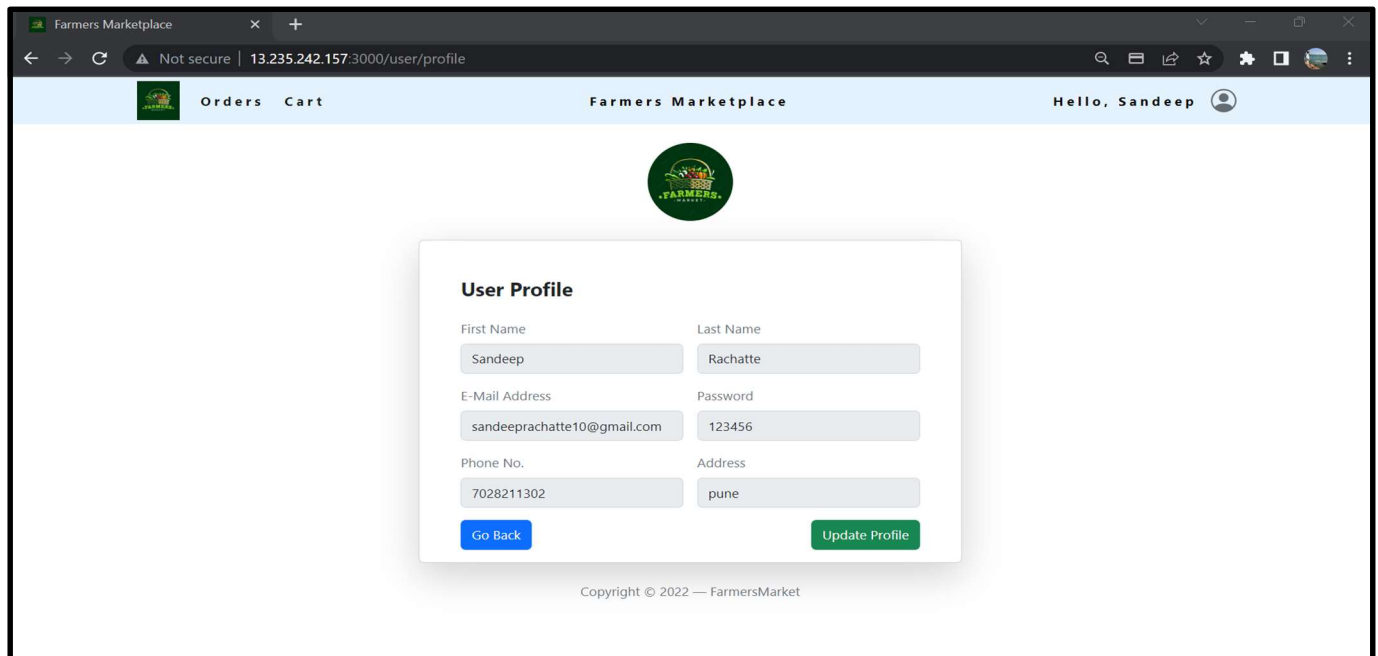
By registering you agree with our terms and condition.

[Register](#)

Already have an account? [Login](#)

Copyright © 2022 — FarmersMarket

Register



The screenshot shows a web browser window with the address bar displaying "Farmers Marketplace" and the URL "13.235.242.157:3000/user/profile". The page features a central "User Profile" form with the following fields: First Name (Sandeep), Last Name (Rachatte), E-Mail Address (sandeepprachatte10@gmail.com), Password (123456), Phone No. (7028211302), and Address (pune). Below the form, there are two buttons: "Go Back" and "Update Profile". The footer of the page reads "Copyright © 2022 — FarmersMarket".

User Profile

First Name Last Name

E-Mail Address Password

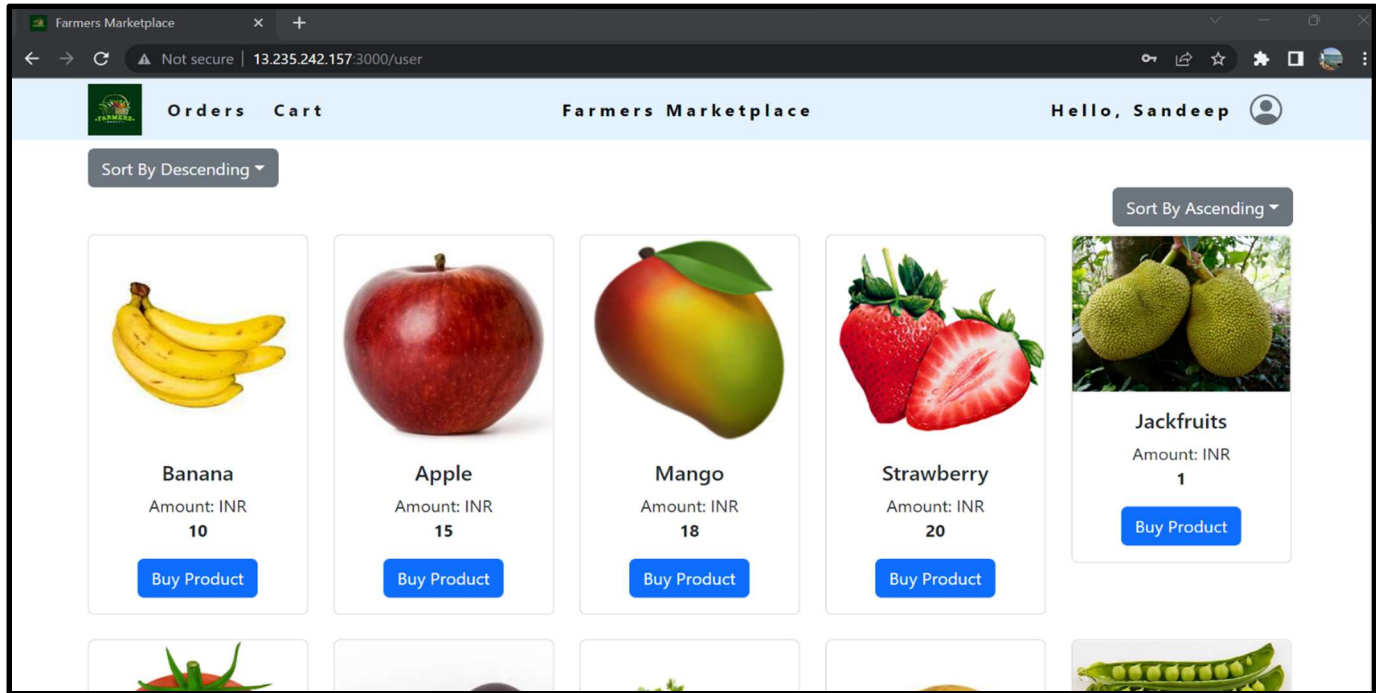
Phone No. Address

[Go Back](#) [Update Profile](#)

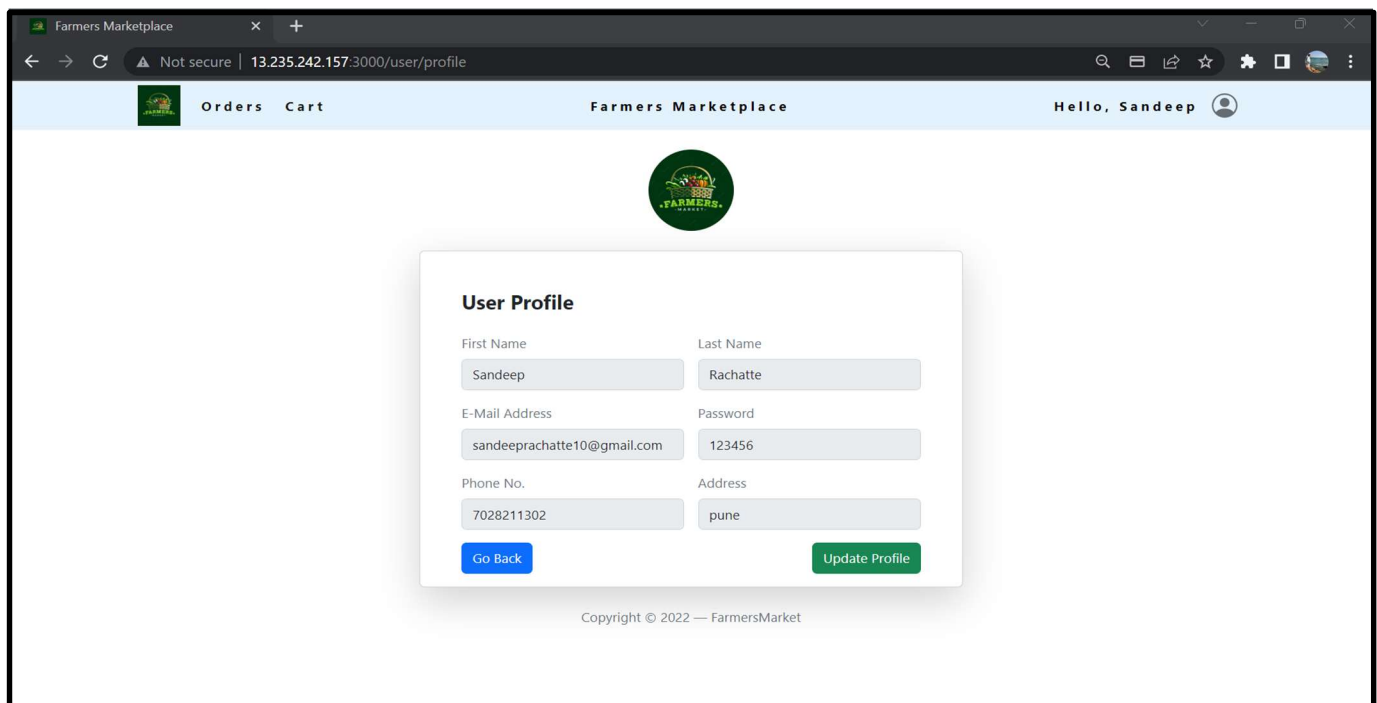
Copyright © 2022 — FarmersMarket

Login

Home Page



User Profile



User Cart




Farmers Marketplace

Orders Cart

Farmers Marketplace

Hello, Sandeep

Cart Details

Product Name	Quantity	Price per Unit	Amount	Image	Function
Banana	1	10	10		Remove Item
Apple	2	15	30		Remove Item
Mango	4	18	72		Remove Item

Total Amount: 112

[Place Order](#)

Order History




Farmers Marketplace

Orders Cart

Farmers Marketplace

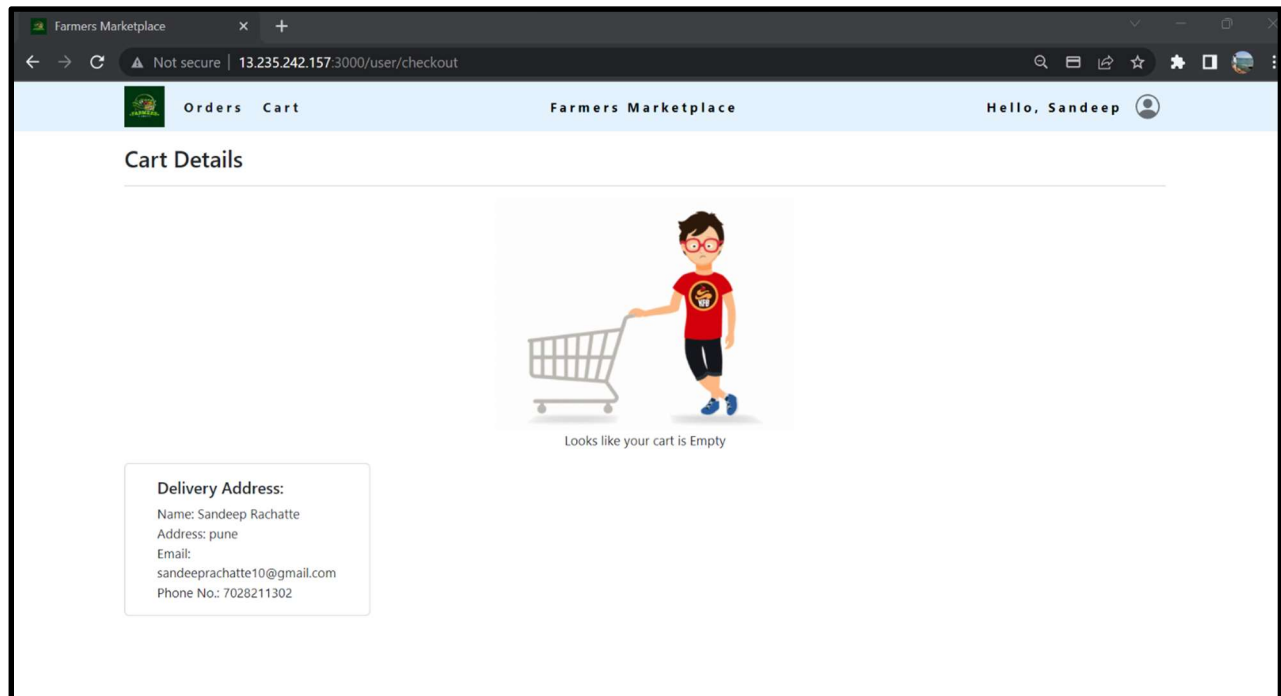
Hello, Sandeep

Order History

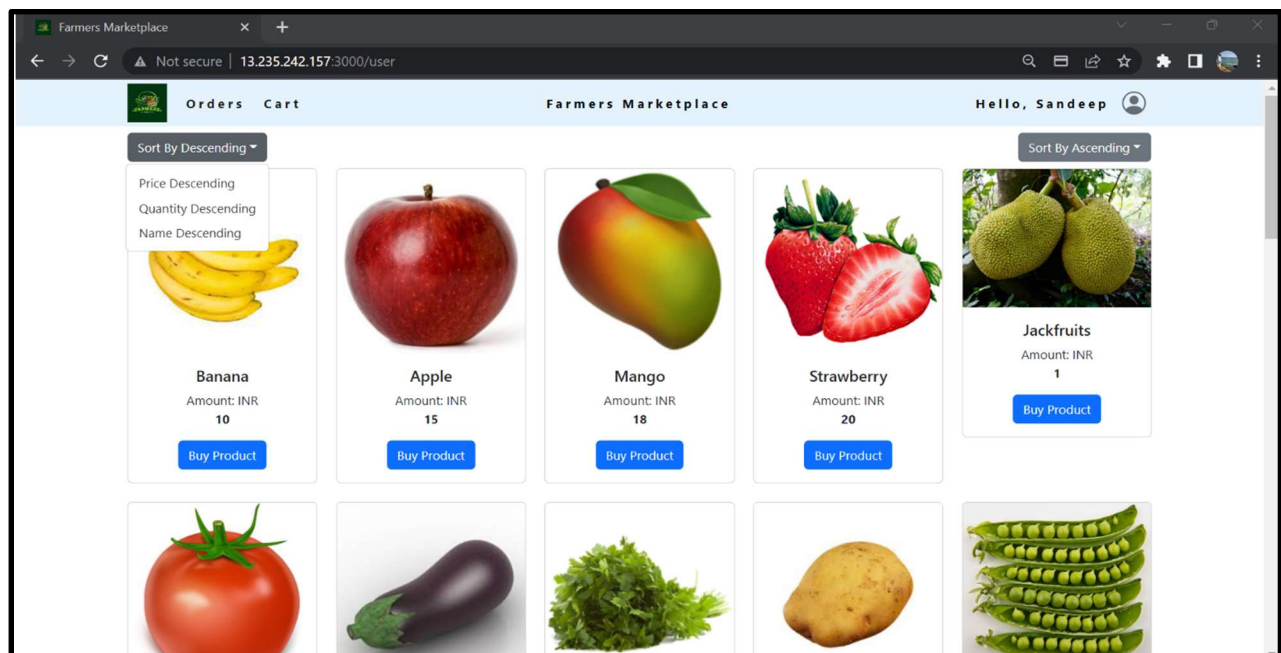
Product Name	Quantity	Amount	Delivery Date	Payment Status	Order Place Date	Image
Banana	1	10	2022-09-28	Done	2022-09-25	
Apple	2	30	2022-09-28	Done	2022-09-25	
Mango	4	72	2022-09-28	Done	2022-09-25	

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Empty Cart



Sort Products



Payment Gateway

Farmers Marketplace

Not secure | 13.235.242.157:3000/user/payment

VISA

4444 4444 4444 3333

SANDEEP

valid thru 12/25

4444444444443333

Dec 2025

654

sandeep

Pay INR 112

Your Delivery Address:

Name: Sandeep Rachatte

Address: pune

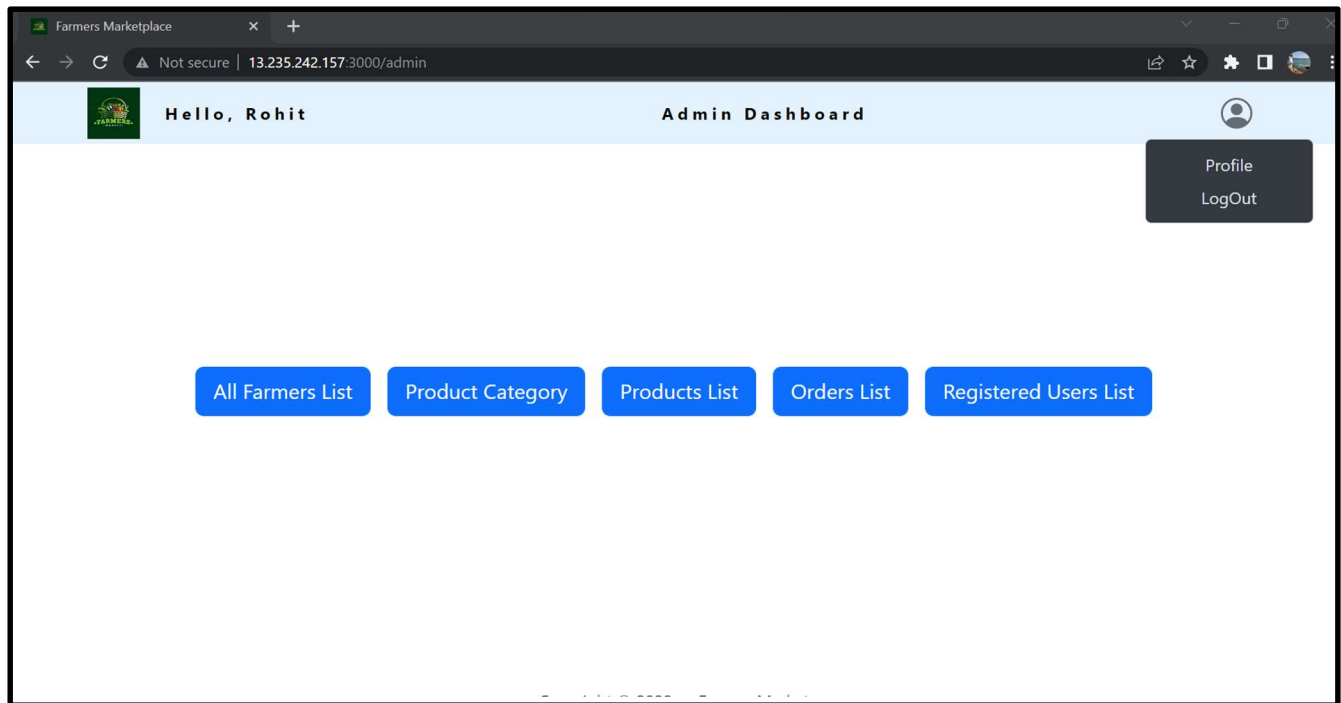
Email: sandeepachatte10@gmail.com

Phone No.: 7028211302

Use Card Number: 4444-4444-4444-3333 Exp Date: 12/25 CVC: 654

5.2. ADMIN

Admin Dashboard

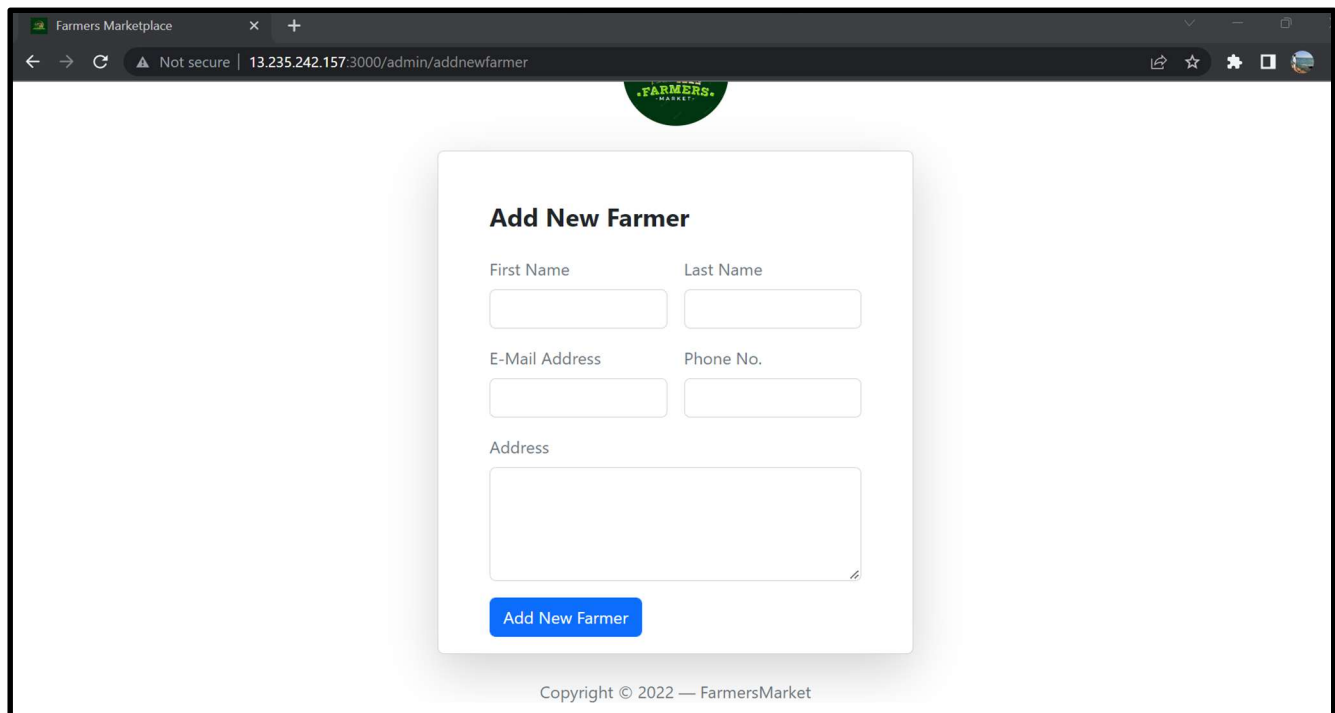


View All Users

The screenshot shows the "List of Users Details" page. The browser address bar displays "Not secure | 13.235.242.157:3000/admin/userslist". A "Go To Back Page" button is located in the top right corner. The table below lists 8 users with their details and an "Update" button for each.

User Id	First Name	Last Name	Phone No.	Email	Address	Is admin?	Password	Function
1	Rohit	Chaudhari.	1234567890	rohit@gmail.com	Vikas Colony, Bhusawal	Yes	123456	<button>Update</button>
2	Rohit	Chaudhari	1234567890	rohitkbc@gmail.com	Near Hanuman Mandir, Bhusawal	No	123456	<button>Update</button>
3	Gargi	Nigade	9975002255	gargi.vr11@gmail.com	B-403 , Panchavati , Chavan nagar , Dhankawadi	No	123456	<button>Update</button>
4	Rushikesh	Jagtap	0125698743	rushikesh372@gmail.com	Nashik	No	123456	<button>Update</button>
5	Sandeep	Rachatte	7028211302	sandeeprachatte10@gmail.com	pune	No	123456	<button>Update</button>
6	Neha	Mistry	9876543210	nehaparagmistry@gmail.com	Nashik	No	123456	<button>Update</button>
7	Saurabh	Renge	7841091654	saurabh@gamil.com	Jadgaon	No	123456	<button>Update</button>
8	Jethalal	Gada	1234557890	gada@gmail.com	Gokuldharm Society, Powder Gully, Goregaon East, Mumbai	Yes	123456	<button>Update</button>

Add New Farmer



The screenshot shows a web browser window with the title 'Farmers Marketplace'. The address bar displays '13.235.242.157:3000/admin/addnewfarmer'. The page features a green circular logo with a basket of produce and the text 'FARMERS MARKET'. The main content is a white form titled 'Add New Farmer' with the following fields: 'First Name', 'Last Name', 'E-Mail Address', 'Phone No.', and 'Address'. A blue 'Add New Farmer' button is at the bottom of the form. The footer text reads 'Copyright © 2022 — FarmersMarket'.

Add New Farmer

First Name

Last Name

E-Mail Address

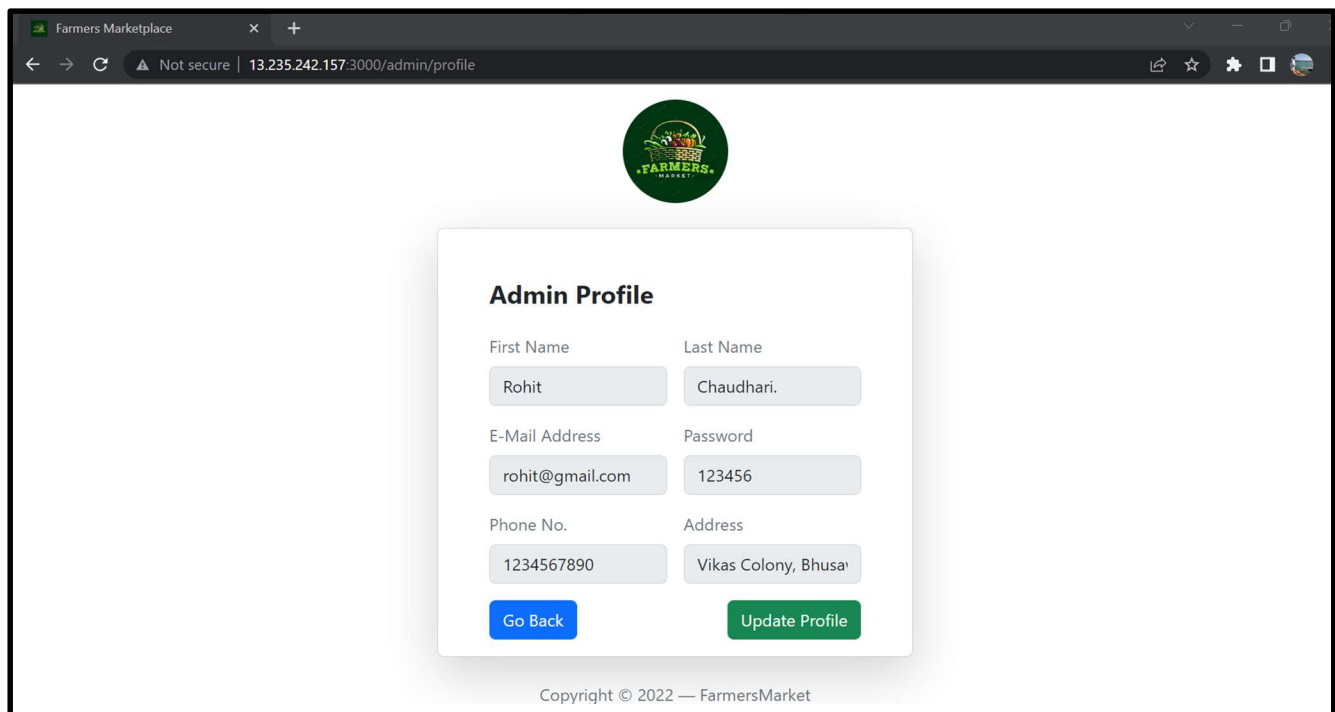
Phone No.

Address

[Add New Farmer](#)

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Admin Profile



The screenshot shows a web browser window with the title 'Farmers Marketplace'. The address bar displays '13.235.242.157:3000/admin/profile'. The page features a green circular logo with a basket of produce and the text 'FARMERS MARKET'. The main content is a white form titled 'Admin Profile' with the following fields: 'First Name' (Rohit), 'Last Name' (Chaudhari), 'E-Mail Address' (rohit@gmail.com), 'Password' (123456), 'Phone No.' (1234567890), and 'Address' (Vikas Colony, Bhusa). There are two buttons at the bottom: a blue 'Go Back' button and a green 'Update Profile' button. The footer text reads 'Copyright © 2022 — FarmersMarket'.

Admin Profile

First Name

Last Name

E-Mail Address

Password

Phone No.

Address

[Go Back](#) [Update Profile](#)

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List of Farmers

Farmers Marketplace

Not secure | 13.235.242.157:3000/admin/farmer

Hello, Rohit Admin Dashboard

List of Farmers

[Add New Farmer](#) [Go To Back Page](#)

Farmer Id	First Name	Last Name	Phone No.	Email	Address	Functions
1	Vinit	Gunjal	1234567890	vinit@gmail.com	405, Near Marimata Mandir, Dhule	Update Add Product Delete
2	Kaustubh	Pathak	1234567809	pathak@gmail.com	Amba Puri Nagar, Nashik	Update Add Product Delete
3	Chetan	Vaghmare	1234567980	chetan@gmail.com	Kashi Colony, Near Jalgaon Bus Stand, Jalgaon	Update Add Product Delete
4	Vaibhav	Pawar	1234568790	pawar@gmail.com	Kolhe Nagar, Near Water Supply Center, Satara	Update Add Product Delete
5	Sameer	Gomate	1234576890	sameer@gmail.com	101, Tukaram Nagar, Aurangabad	Update Add Product Delete
6	Akshay	Bacchav	1234567899	akshay@gmail.com	Nashik	Update Add Product Delete

Update User Details

Farmers Marketplace

Not secure | 13.235.242.157:3000/admin/userslist

Hello, Rohit

List of Users Details

[Go To Back Page](#)

Update User

First Name

Rohit

Last Name

Chaudhari.

E-Mail Address

rohit@gmail.com

Password

123456

Phone No.

1234567890

Address

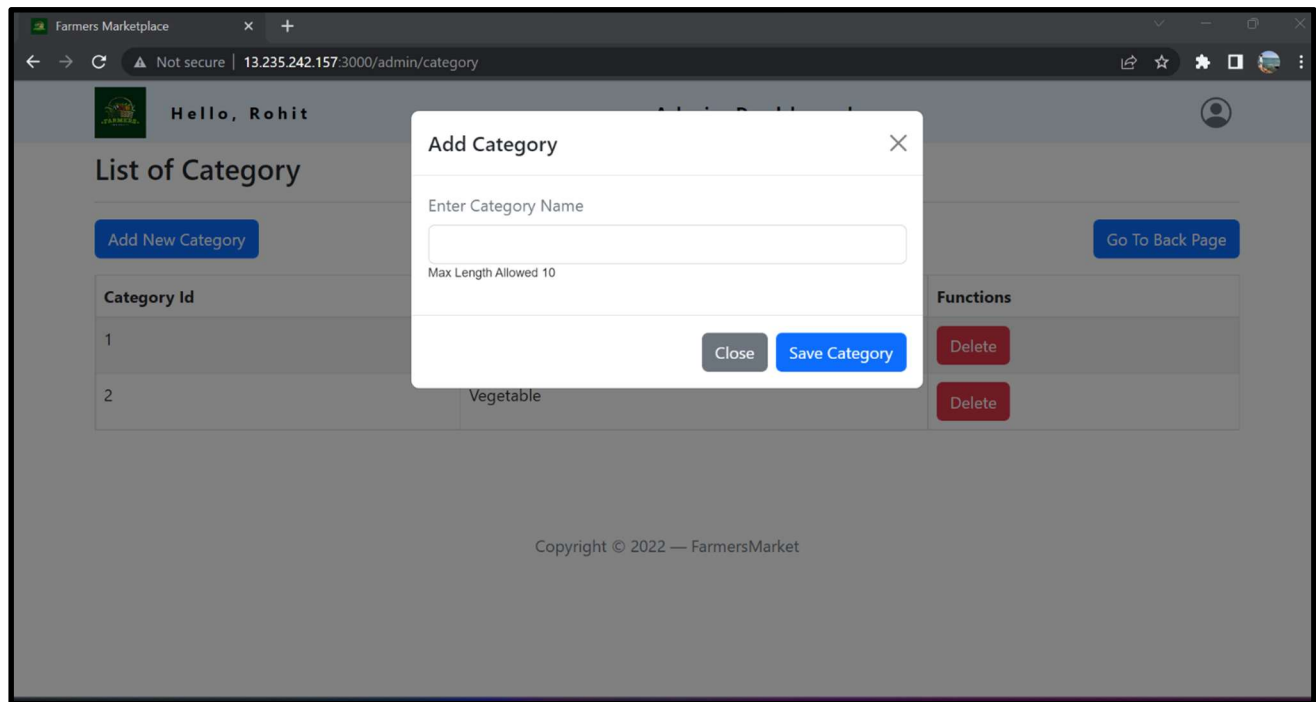
Vikas Colony, Bhusawal

Close

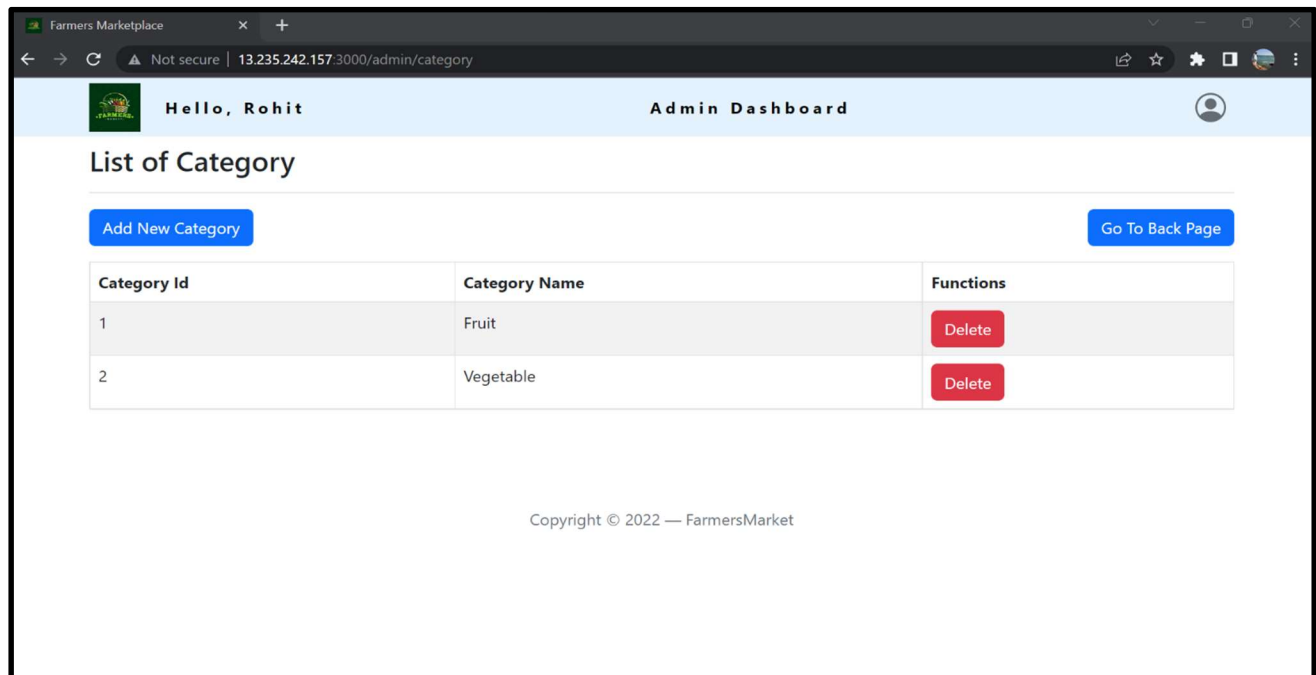
Save Data

User Id	First Name	Last Name	Phone	E-Mail Address	Password	Is admin?	Function
1	Rohit	Chaudhari.	123456	rohit@gmail.com	123456	Yes	Update
2	Rohit	Chaudhari	123456	1234567890	Vikas Colony, Bhusawal	No	Update
3	Gargi	Nigade	997500			No	Update
4	RUSHIKESH	Jagtap	0125698743	rushikesh372@gmail.com	Nashik	No	Update
5	Sandeep	Rachatte	7028211302	sandeeprachatte10@gmail.com	pune	No	Update

Add Category






List of Category



List of Products

The screenshot shows the 'List of Products' page in the Farmers Marketplace Admin Dashboard. The page has a header with 'Hello, Rohit' and 'Admin Dashboard'. Below the header, there are two buttons: 'Add New Product' and 'Go To Back Page'. The main content is a table with the following data:

Product Id	Product Name	Quantity	Price per Unit	Category	Image	Functions
1	Banana	150	10	Fruit	 banana.jpg	<button>Update</button> <button>Add Image</button> <button>Delete</button>
2	Apple	450	15	Fruit	 apple.jpg	<button>Update</button> <button>Add Image</button> <button>Delete</button>
3	Mango	350	18	Fruit	 mango.png	<button>Update</button> <button>Add Image</button> <button>Delete</button>


Add New Product

The screenshot shows the 'Add New Product' modal in the Farmers Marketplace Admin Dashboard. The modal is titled 'Choose Farmer' and has a dropdown menu with 'Vinit Gunjal' selected. There is a 'Go To Next Step' button. The background shows the 'List of Products' page with the same table as in the previous screenshot.

Order Details


Farmers Marketplace

Not secure | 13.235.242.157:3000/admin/order



Hello, Rohit

Admin Dashboard



List of Order Details

Go To Back Page

Order Id	Product Name	Customer Name	Phone No.	Email	Address	Quantity	Amount	Payment Status	Delivery Date
1	Tomato	Rohit Chaudhari	1234567890	rohitkbc@gmail.com	Near Hanuman Mandir, Bhusawal	5	25	Done	2022-09-28
1	Banana	Rohit Chaudhari	1234567890	rohitkbc@gmail.com	Near Hanuman Mandir, Bhusawal	10	100	Done	2022-09-28
2	Mango	Gargi Nigade	9975002255	gargi.vr11@gmail.com	B-403 , Panchavati , Chavan nagar , Dhankawadi	5	90	Done	2022-09-28
3	Mango	Gargi Nigade	9975002255	gargi.vr11@gmail.com	B-403 , Panchavati , Chavan nagar , Dhankawadi	5	90	Done	2022-09-28
4	Strawberry	RUSHIKESH	0125698743	rushikesh372@gmail.com	Nashik	5	100	Done	2022-09-

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 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. CUSTOMER FEATURES TEST

#	Description	Outcome	Result
1	Register as Customer	New customer details saved in the database.	Passed
2	Login as Customer	Fetches authenticated user details saved in database.	Passed
3	Browse Products	Fetches list of all products from the database.	Passed
4	Add Food items to Cart	The product along with necessary details were saved in database in the customer's cart.	Passed
5	Place Order	The cart items associated with the customer were saved in the form of a placed order in the database.	Passed
6	View Order History	The past orders made by the customer were fetched from the database.	Passed
7	Update User Profile	The profile information updates/ modifications get reflected in Database	Passed
8	Logout	The session was cleared.	Passed

B. ADMIN FEATURES TEST

#	Description	Outcome	Result
1.	Sign in as Admin	Fetches authenticated user details saved in database.	Passed
2.	Add New Farmers	The Farmer details along with all their related details were added to database.	Passed
3.	Update/ Delete Farmers	The Farmer details along with all their related details were updated to database.	Passed
4.	Add New Product Category	New product-category gets added to database.	Passed
5.	Add New Product Item	New item and all its respective details saved in database.	Passed
4.	Manage Product stock	The stock of the product was updated in the database.	Passed
5.	Update/Delete Product Details	The details of an existing product were updated/deleted in the database.	Passed
6.	View Customer List	All Customers details are fetched from the database.	Passed
7.	Update/Delete Customer Details	The details of an existing Customer updated/deleted in the database.	Passed
8.	View order details	All Orders placed by all customer are fetched from the database.	Passed
9.	Logout	The session was cleared.	Passed

7.CONCLUSION

“Farmers Market Place”, an online Grocery store application, was developed by our project team to simplify the online sale and purchase of Fresh-organic merchandise.

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 conclusion, “Farmers Market Place” is an application would definitely be a good choice for any fresh-food merchandise trading Farmers that wishes to enter the online market. At the same time, it provides one-stop platform for Customers to purchase their daily need of merchandise directly from authenticated Farmers.

We are confident that the numerous features and visually appealing look of application will certainly give a big boost to the Farmers.

8. FUTURE SCOPE

Using whatever we have learnt over the duration of this course, we tried to make our project as user-friendly and gave it as many features as possible in the limited time allotted for the project work. That said, there are certainly more features that can be added to our application. Some of those are mentioned below:

1. The most purchased and/or sponsored products can be highlighted as customer favorites to promote merchandise further.
2. Rating chart for Farmers and Products.
3. Product Display based on Categories, distributing Farmers and respective ratings.
4. Discounts can be given on a per-user basis depending on the customer's purchase history as well as how many products they buy at the same time.
5. Customers can upvote/downvote/report feedbacks.
6. Additional payment means can be added other than cards.
7. In case the user forgets the password, a 'reset password' functionality can be added.
8. CAPTCHA can be added to login page.

9. REFERENCES

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

- i. <https://getbootstrap.com/docs/5.1/getting-started/introduction/>
- ii. <https://reactjs.org/docs/getting-started.html>
- iii. <https://www.baeldung.com/>
- iv. <https://www.w3schools.com/>
- v. <https://docs.spring.io/spring-data/jpa/docs/current/reference/html/#reference>
- vi. <https://javaee.github.io/javaee-spec/javadocs/>
- vii. <https://javadoc.io/doc/org.springframework.data/spring-data-jpa/latest/index.html>
- viii. <https://github.com/amaroteam/react-credit-cards>