



INSTITUTE FOR ADVANCED COMPUTING AND SOFTWARE DEVELOPMENT, AKURDI, PUNE

AgroMart

PG-DAC Feb 2024

Submitted By: Group No: 33

Roll No. 243058 243008 Name. Pankaj Dukare Akshay Balte

Mr. Harshal Waghchaure Project Guide

Mr. Rohit Puranik Centre Coordinator

ABSTRACT

AgroMart is a user-friendly, web-based application designed to simplify the management of fertilizer shops. It is built with HTML, CSS, and Bootstrap for a modern and responsive user interface, while the backend uses Spring Security and Hibernate to ensure data security and efficient handling. MySQL is used to store and manage the shop's data.

AgroMart operates on a role-based system, where users are divided into three categories: shop owners, farmers, and delivery personnel. Each user role has specific access and functionalities within the application.

Shop Owners can manage their inventory, view orders placed by farmers, and oversee deliveries. They have full control over product listings and pricing.

Farmers can easily browse through available fertilizers, check prices, and place orders online. The platform also allows them to track their order status and communicate directly with the shop owner for any inquiries.

Delivery Personnel have access to orders assigned to them for delivery. They can update the delivery status in real-time, ensuring that both the shop owner and the farmer stay informed.

AgroMart is designed to improve the efficiency of fertilizer distribution by connecting shop owners, farmers, and delivery staff on a single platform. Its goal is to streamline operations and offer a convenient, secure, and effective way to manage fertilizer sales and deliveries.

Δ	ACKNOWLEDGEMENT
The project "AgroMart" was a great	learning experience for us and we are submitting this work to
IACSD pune. We are very glad to m	nention the name of Mr. Harshal Waghchaure for her valuable
guidance to work on this project. Our	r heartfelt thanks go to Mr. Rohit Puranik (Center Coordinator,
PG_DAC) who gave us all the requir	red support and kind coordination to provide all the necessities
to complete the project and througho	out the course up to the last day of the course. We would like to
express our sincere gratitude towards	s Mrs. Madhura Anturkar, our faculty for J2SE and J2EE, who
was always there for us. Her guidan	nce and support throughout the course helped us to overcome
	ring the course of our project work. Without her tremendous
support, guidance, and efforts, this p	project would not have been possible.
	Pankaj Babaji Duakre (240341220118)
	Akshay Keshav Balte(240341220017)

Table of Contents

Sr.No	Description	Page No.
1	Introduction	1
2	Product overview	2
3	Requirements	4
4	Project design	7
4.1	Database Tables	8
4.2	Entity Relationship Diagram	10
4.3	Use Case Diagram	12
4.4	Data Flow Diagram	12
4.5	Activity Diagram	15
4.6	Class Diagram	16
4.7	Sequence Diagram	17
5	Web Site Screenshots	18
5.1	Login	18
5.2	Shop Owner	19
5.3	Farmer	22
5.4	Delivery boy	25
6	Future Scope	26
7	Conclusion	27
8	References	28

INTRODUCTION

In today's fast-moving agricultural industry, managing fertilizer shops efficiently is important to keep up with farmers' growing needs while ensuring smooth business operations. AgroMart solves this problem by bringing together online shopping features with strong inventory management into one simple system for fertilizer shop owners. It makes managing products, processing orders, and coordinating with suppliers easier, while also improving customer interaction through an easy-to-use shopping experience and personalized SMS alerts.

AgroMart helps shop owners track stock levels, control expenses, and create useful reports to make better business decisions. By automating everyday tasks and giving real-time data, it saves time, reduces errors, and boosts productivity. Farmers benefit from a user-friendly platform where they can browse products, place orders, and track their deliveries to ensure they get their supplies quickly. AgroMart also makes delivery management easier by offering features like leave management and detailed user profiles. This makes the process of delivering fertilizers more organized and efficient. Additionally, shop owners can set up special promotions, offer discounts, and send notifications to keep customers updated, increasing engagement and customer satisfaction.

AgroMart simplifies the business of running fertilizer shops by making operations faster, more reliable, and convenient for both shop owners and farmers. This can be done from any place, at any time all from the internet, thus making Easy to use for shop owner for make tasks and also making easy order for farmer.

1

PRODUCT OVERVIEW

Purpose:

The purpose of AgroMart is to provide a simple, efficient, and secure online platform for fertilizer shop owners to manage their business operations. It connects shop owners, farmers, and delivery boy in one system, making it easy to handle product listings, orders, and deliveries. AgroMart aims to improve the overall efficiency of fertilizer distribution by automating tasks, reducing errors, and providing a user-friendly experience for all users.

Scope:

- Creating a role-based web application for fertilizer shops.
- Allowing shop owners to manage their products, track orders, handle inventory, and manage deliveries.
- Enabling farmers to browse, order, and track their purchases easily online.
- Providing delivery personnel with tools to update and track their deliveries.
- Supporting automated SMS alerts, real-time data updates, and reporting features to assist shop owners in making better business decisions.

Objective:

- To simplify the management of fertilizer shops by providing an online platform for easy product handling and order processing.
- To automate routine tasks, like inventory management and order tracking, to save time and reduce mistakes.
- To provide farmers with a convenient platform to browse and order fertilizers, ensuring quick delivery of products.
- To improve communication between shop owners, farmers, and delivery personnel, making operations smoother and more efficient.

Functionalities Provided by AgroMart:

• Role-Based Access:

Shop owners, farmers, and delivery personnel each have their own dashboards and tools.

• Product Management:

Shop owners can add, update, and remove products from their inventory.

• Order Processing:

Farmers can place orders, and shop owners can track and manage these orders.

• Inventory Tracking:

Shop owners can monitor stock levels in real-time.

• Delivery Management:

Delivery personnel can view assigned orders and update delivery statuses.

• User Profiles:

Detailed profiles for shop owners, farmers, and delivery personnel to manage their roles effectively

REQUIREMENTS

Functional Requirements:

FR 1. User Registration and Authentication:

- Users (shop owners, farmers, and delivery personnel) can register by providing necessary details.
- User authentication is required for secure access to the system.
- Forgot password functionality allows users to reset their passwords via email or SMS.

FR 2. Role-Based Access:

- Shop owners can manage inventory, view orders, and handle deliveries.
- Farmers can browse products, place orders, and track delivery statuses.
- Delivery personnel can view and update assigned deliveries.

FR 3. User Profiles:

- Users can view and update their profiles, which store personal information and contact details.
- Profile management is available for shop owners, farmers, and delivery personnel.

FR 4. Order and Delivery Management:

- Shop owners can process orders, update statuses, and coordinate deliveries.
- Farmers can track their orders and receive real-time delivery updates.

FR 5. Error Handling and Reporting:

- The system handles errors gracefully and displays appropriate error messages.
- Admins have access to logs and error reports for troubleshooting and system management.

Non-Functional Requirements:

NFR 1. Security:

- User passwords are securely stored using encryption techniques.
- Access controls ensure that users can only access features based on their roles.

NFR 2. Performance:

- The system should handle a large number of simultaneous users without significant slowdowns.
- Efficient image loading and retrieval ensure a smooth user experience.

NFR 3. Scalability:

 AgroMart is designed to accommodate future growth, including more users and higher activity levels.

NFR 4. Usability:

- The user interface should be intuitive and user-friendly for all roles (shop owners, farmers, and delivery personnel).
- Clear and concise error messages guide users through any issues.

NFR 5. Reliability:

• AgroMart should be operational 24/7 with minimal downtime.

NFR 6. Data Integrity:

• Data integrity and consistency are maintained through proper validation and database design.

NFR 7. Data Privacy:

• User data, especially personal and sensitive information, is securely stored to ensure privacy.

Other Requirements:

Hardware and Network Interfaces:

- Back-end Server Configuration:
 - o Intel Core i5 Processor
 - o 8 GB RAM
 - o 256 GB SSD
- Front-end Client Configuration:
 - o Intel Core i3 Processor
 - o 4 GB RAM
 - o 128 GB SSD
 - o 104 Keys Keyboard
 - o Optical Mouse with pad

Software Interfaces:

- Back-end Configuration:
 - o Java EE (Jakarta EE 10)
 - o Spring Boot(3.1.2), Hibernate(6.2.6), MySQL(8.1.0)
 - o STS (4.19.1)
- Front-end Configuration:
 - o ReactJS(18.2.0)
 - o HTML5, CSS3, JavaScript (ECMAScript 2023 (ES14))
 - o Bootstrap(5.3.0)
 - o Visual Studio Code(1.81.1)

PROJECT DESIGN

4.1 DataBase Tables:

The following tables in database are used for 'AgroMart':

All Tables:

```
mysql> use agromart
Database changed
mysql> show tables
->;
| Tables_in_agromart |
| address |
| cart |
| catagory |
| fertilizer_order |
| order_details |
| payment |
| stock |
| user |
| 8 rows in set (0.01 sec)
```

Table 1: User

```
vsql> desc user:
Field
                                                                         | Null | Key | Default | Extra
                                                                                                            auto_increment
contact_no
                  varchar(13)
varchar(30)
                                                                                             NULL
email
                                                                           YES
                  varchar(50)
                  varchar(255)
enum('OWNER', 'FARMER', 'DELIVERYBOY')
enum('ACTIVE', 'INACTIVE')
role
                                                                                             NULL
status
rows in set (0.08 sec)
ysql> select * from user;
id | contact_no | email
                                                              name
                                                                                     password
                                                                                                                                                                                role
                                                                                                                                                                                                    status
       9373889473 | pankajdukare73@gmail.com | pankaj dukare | $2a$10$H1DjsdBKnffVgbVUghTUVeuM5IMid7.jE705XQqkJuOuRFkHZDxVV | OWNER
7447686704 | akshay73@gmail.com | Akshay balte | $2a$10$Jn6BzJH0bnKQnr6g0THRveyw6HNpWCuE5juKXzobJ65pQfvxU2lRC | FARME
                                                                                                                                                                                                      ACTIVE
                                                                Akshay balte
                                                                                       $2a$10$Jn6BzJH0bnKGNr6g0THRveyw6HWpWCuE5juKXzobJ65pQfvxU21RC
       7654796347 | patil73@gmail.com
9561367818 | mahesh73@gmail.com
                                                                yogesh patil
                                                                                       $2a$10$MMe/l4107gU/dj54izcTPOpQ21U/c5XDJb.8UDtzMizc3oaxo.sfO | DELIVERYBOY
$2a$10$aUUbc2aQK0pBNeAkZuiBheNsrxqtTJbjmlHgkPHvRUaF74RjG/z.2 | FARMER
                                                                                                                                                                                                      ACTIVE
                                                                                                                                                                                                      ACTIVE
                                                                mahesh
```

Table 2: Address

```
nysql> desc address;
 Field
                            | Null | Key | Default | Extra
              Type
 id
              int(11)
                             NO
                                     PRT
                                           NULL
                                                      auto_increment
 city
               varchar(20)
                             YES
                                           NULL
 contact_no
              varchar(15)
                             YES
                                           NULL
 pincode
              int(11)
                                           NULL
 state
              varchar(20)
                                           NULL
                                     MUL
 user_id
              int(11)
                             NO
                                           NULL
 rows in set (0.03 sec)
ysql> select * from address;
 id | city
               contact_no | pincode | state | user_id |
      pune
                87659042546
                               435789
                                         mh
      pune
                87659042546
                               435789
                                         mh
      nashik
               9834071786
                               410504
                                                        4
 rows in set (0.00 sec)
```

Table 3: Catagory

Table 4: Stock

description		image	pr	rice	product_	name	status	type	cat_id	user_id
Company name: T-Stanes Pa	ckage: 40Kg	Anandham.png	1 2	2999	Anandham		1	FERTILIZER		1 1
	ory Company name:. Humic Factory			2500	N:P:K (20:20:20)			NPK		
Company name: mahadhan Pa Company name: JAYAL FED		MAJOR NUTRIENT Mono Ammonium Phosph		4025 266	MAJOR N Urea	UTRIENT		NPK NPK		
Company name: Dhanlaxmi P		Urea.png bajara seeds.png		308	Bajara			SEED		
Company name: Syngenta Pa	ckage: 3kg	SUGAR 75 SHEET CORN.png		3149	SMEET CO	RN		SEED		
Company name: BioSeed Pac		BIOSEED HYBRID PADOY 799.png		570		HYBRID PADOY		SEED		
Company name: Yashoda see Company name: VNR Package		Hybrid jowar seeds.png 212 BRINDAL SEEDS.png		75e 125	212 BRIN	Owar seeds DAL SEEDS		SEED SEED		;
Company name: Seminis Pac		ABHILASH TOMATO SEEDS.png		617	TOMATO S	EEDS		SEED		
Company name:Namdhari See		NS 295 F1 HYBRID WATERMELON SEEDS.pn KRISH F1 CUCUMBER.png		612	WATERMEL			SEED SEED		! !
Company name: VMR Packag Company name: RS ENTERPRI		IRIS HYBRID PAPAYA SEEDS.png		208	PAPAYA S					1 :
Company name: Namdhari Se	eds Package: 50gms	NS 910 MUSKMELON SEEDS.png		978	Musk Mel			SEED		
Company name: Ashoka seed Company name: Bayer agroc		VELLOW MARIGOLD.png ROUNDUP HERBICIDE.png		1099 479	AETTOM W	ARIGOLD HERBICIDE		SEED FERTILIZER	9 4	
Company name: Bayer agroc		GLYCEL HERBICIDE.png		478	GLYCEL H			FERTILIZER	4	
Company name: Dhanuka Ag	ritech itd Package: 18 gms	SEMPRA HERBICIDE.png		799	SEMPRA H			FERTILIZER		
Company name: Excel Cro Company name: FMC Corpor	p Care Package: 100 gms	MERA 71 HERBICIDE.png Benevia Insecticide.png		122 1366	MERA 71 Benevia	HERBICIDE		FERTILIZER FERTILIZER		
Company name: Syngenta P		Actara Insecticide.png		277	Actara			FERTILIZER		
Company name: Bayer Pack	age: 25@ml	Solomon Insecticide.png		732	Solomon			FERTILIZER		
Company name: Syngenta	op Protection Package: 500gm	Karate Insecticide.png BLUE COPPER FUNGICIDE.png		219 455	Karate BLUE COP	oco		FERTILIZER		
Company name: Syngenta Pa		SCORE FUNGICIDE.png		277	SCORE	ran				
Company name:. Syngenta P Company name:. Bayer Pack		KAVACH FUNGICIDE.png		499 1899	KAVACH NATIVO			FERTILIZER FERTILIZER		
	ck									
sql> desc sto	ck +		+	-+-		+	+			
	ck + Type		Null	†	Key	+ Defai	ult	Extra		
-> ; Field	Type		Null	+++++	Key	+ Defau +	ult	Extra		emen
-> ; Field id	Type int(11)		NO	+-+-		NULL	ult			 emen
> ; Field id description	Type		+	+-+		+	ult			emen
-> ; Field id description image	Type int(11) varchar(100)		NO YES	+-+		NULL NULL	ult			emen
	Type 		NO YES	+-+		NULL NULL NULL	ult			emen
-> ; Field id description image price product_name	Type int(11) varchar(100) varchar(100) double		NO YES YES YES	1		+ NULL NULL NULL	ult			emen
-> ; Field id description image price product_name status	Type int(11) varchar(100) varchar(100) double varchar(20) tinyint(4)	ERTILIZER','NPK')	NO YES YES YES			HOULL NULL NULL NULL NULL NULL	ult			emen
`-> ;	Type int(11) varchar(100) varchar(100) double varchar(20) tinyint(4)	ERTILIZER','NPK')	NO YES YES YES YES	1		NULL NULL NULL NULL NULL NULL	ult			emen
-> ; Field id description image price product_name status type	Type int(11) varchar(100) varchar(100) double varchar(20) tinyint(4) enum('SEED', F	ERTILIZER','NPK')	NO YES YES YES YES YES YES		PRI	NULL NULL NULL NULL NULL NULL NULL NULL	ult			emen

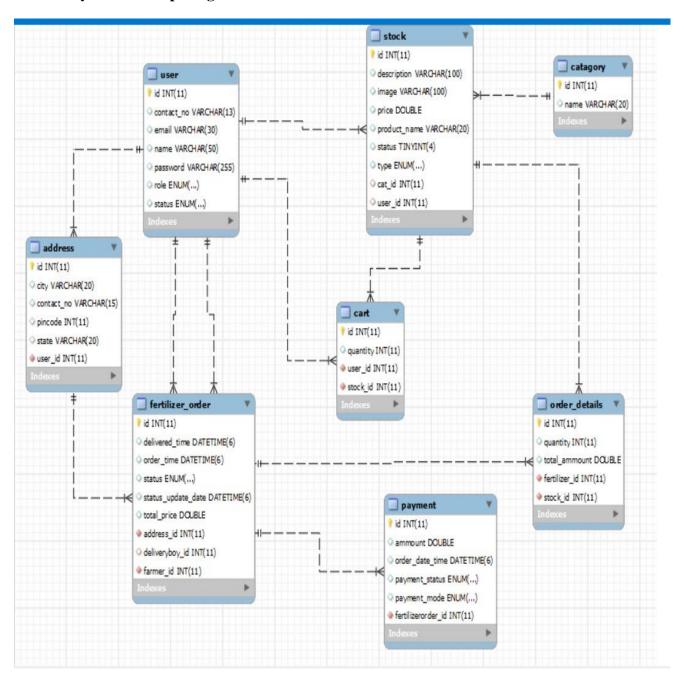
Table 5: order_deatils

```
ysql> desc order_details;
                           | Null | Key | Default | Extra
 Field
                Type
 id
                  int(11)
                            NO
                                    PRI
                                           NULL
                                                    auto_increment
 quantity | int(11)
total_ammount | double
                             YES
                                           NULL
                            YES
                                           NULL
 fertilizer_id | int(11)
                            NO
                                           NULL
                                    MUL
 stock_id
                | int(11) | NO
                                    MUL | NULL
rows in set (0.02 sec)
ysql> select * from order_details;
 id | quantity | total_ammount | fertilizer_id | stock_id
                             357
              2
                                                1
                                                           11
  1
                            2999
              2
                                                2 |
                                                            1
  2
```

Table 6: Payment

```
ysql> desc payment;
Field
                                                                                        | Null | Key | Default | Extra
id
                       int(11)
                                                                                                       NULL
                                                                                                                   auto_increm
                                                                                         NO
                                                                                                 PRI
 ammount
                        double
                                                                                                        NULL
order_date_time
                        datetime(6)
                                                                                                        NULL
                      | datelime()
| enum('PENDING','COMPLETED','REFUNDED')
| enum('COD','CREDIT_CARD','DEBIT_CARD','UPI','NETBANKING')
 payment_status
                                                                                                        NULL
                                                                                                        NULL
payment mode
 fertilizerorder_id | int(11)
                                                                                                 UNI | NULL
                                                                                         NO
rows in set (0.02 sec)
ysql> select * from payment;
id | ammount | order_date_time
                                               | payment_status | payment_mode | fertilizerorder_id |
          714 | 2024-08-17 02:44:39.000000 | PENDING
                                                                   COD
         5998 | 2024-08-17 02:49:11.000000 | PENDING
rows in set (0.00 sec)
```

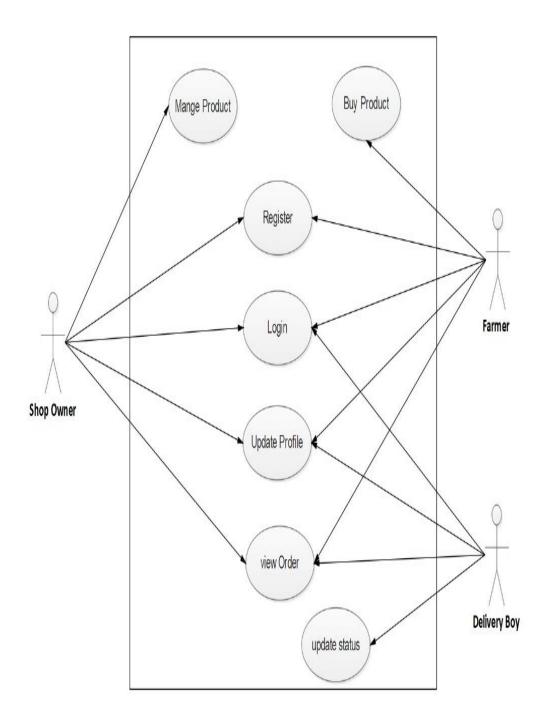
4.2 Entity Relationship Diagram:



IACSD AgroMart role shop_id email name id id password price contact Stock User added М Type Status has has cart Payment quantity id TO (1) stockid city farmerid Catagory Address state has name contry M id (farmer_id) М contains Order_Details Fertilizer_Order has stock_id qty (total_amout) id Order_ detil_id (shop_id) deliveryboy_id

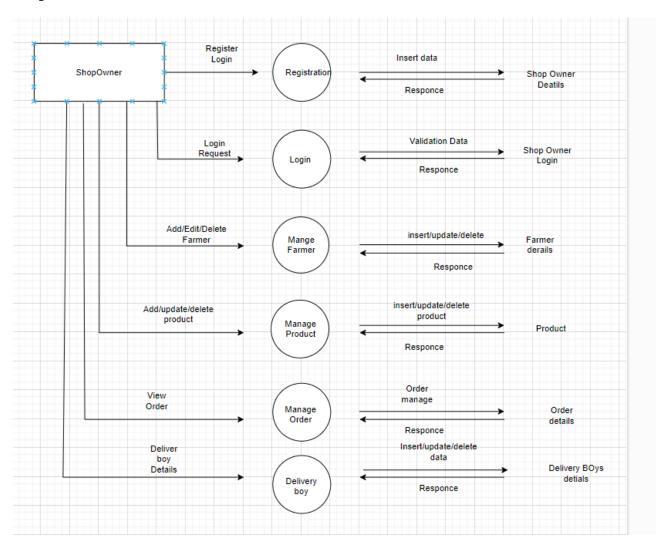
IACSD

4.4 Use Case Diagram:

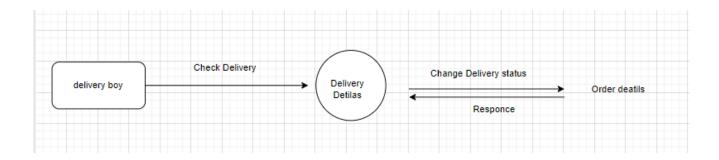


Data Flow Diagram

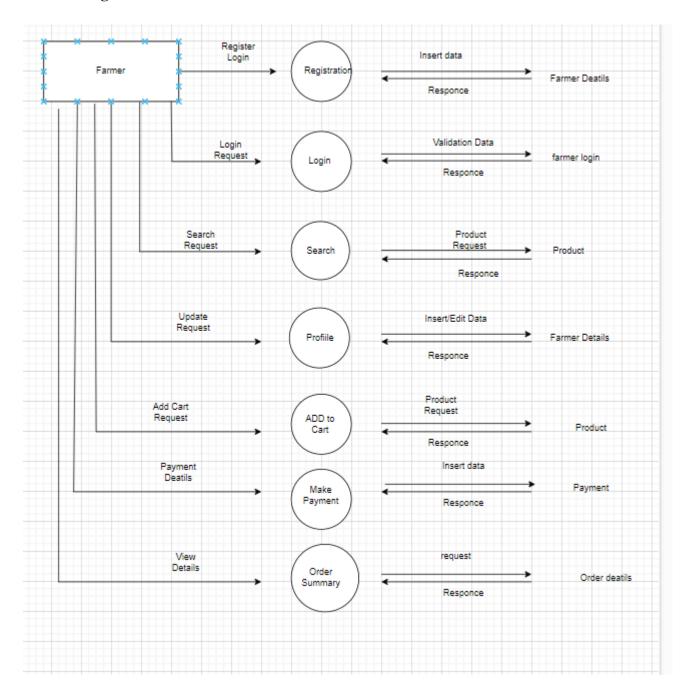
Shop Owner:



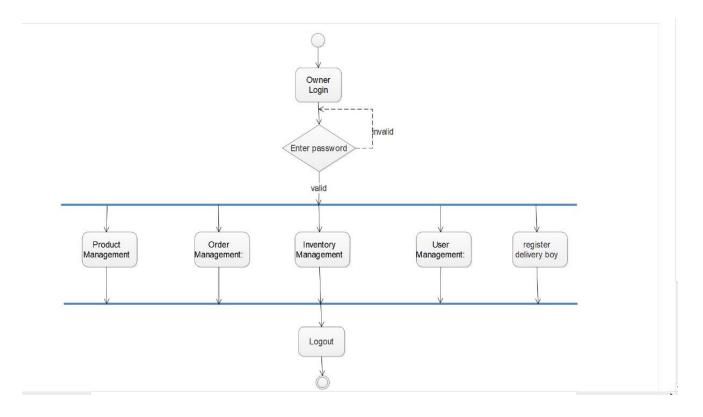
Delivery Boy:



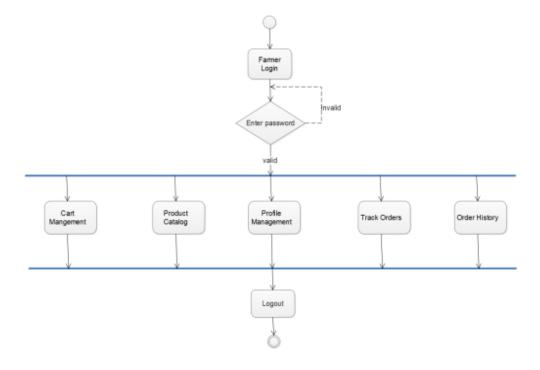
Farmer diagram:



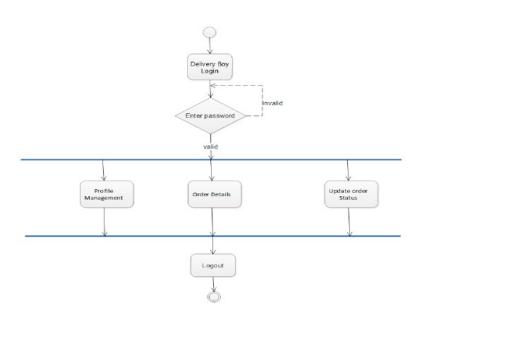
Shop Owner Activity Diagram:



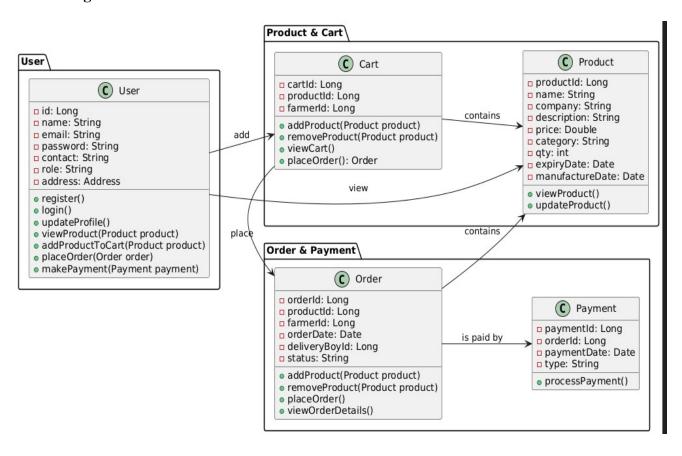
Farmer activity diagram:



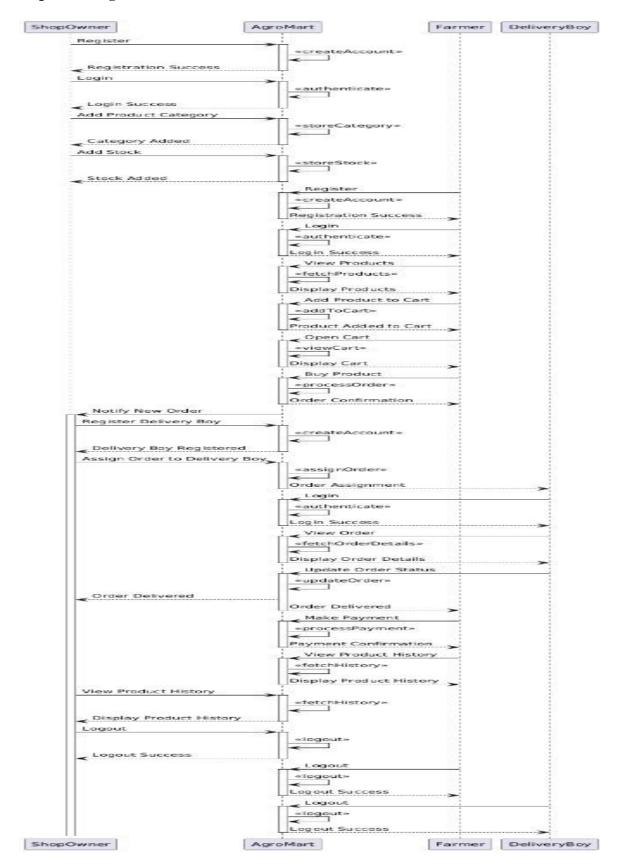
Delievery boy



Class Diagram:



Sequence diagream

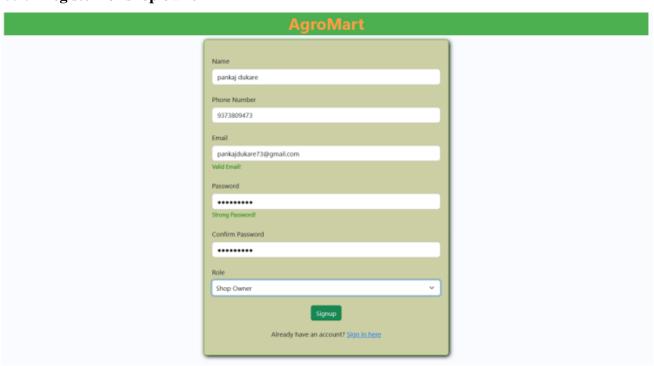


Project Scrrenshots

- 5.1 Login Page
- 5.1.1 Login Page

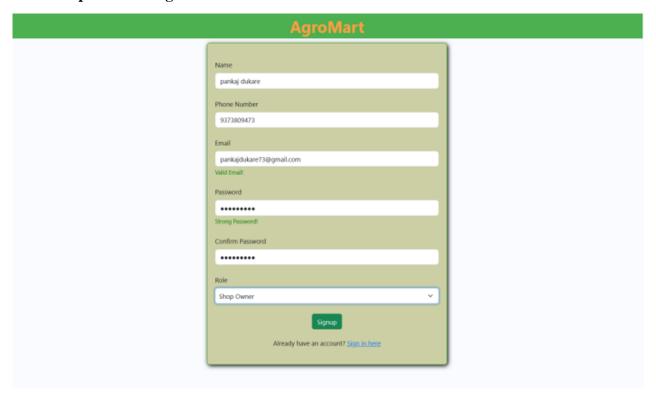


5.1.2 Register for shop owner

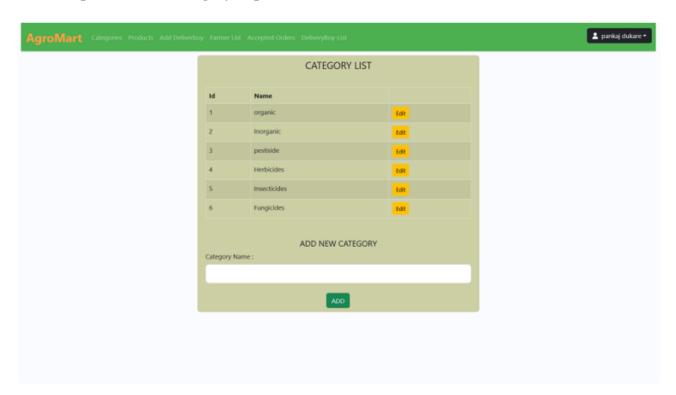


5.2 Shop Omwer

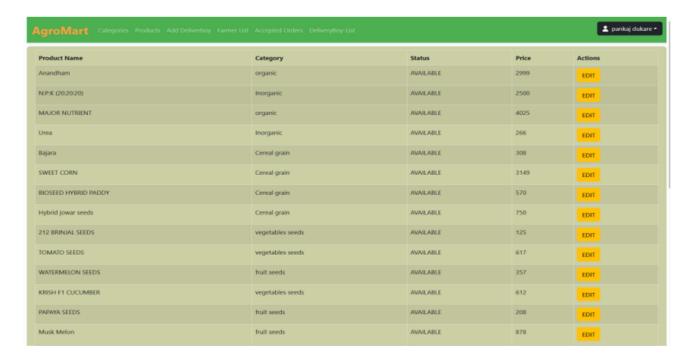
5.2.1 Shop Owmer Login:



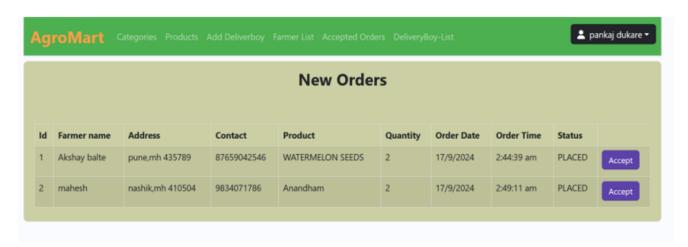
5.2.2 Shop Owner add category of product



5.2.3 All Product List



5.2.4 Shop Omwer View new orders



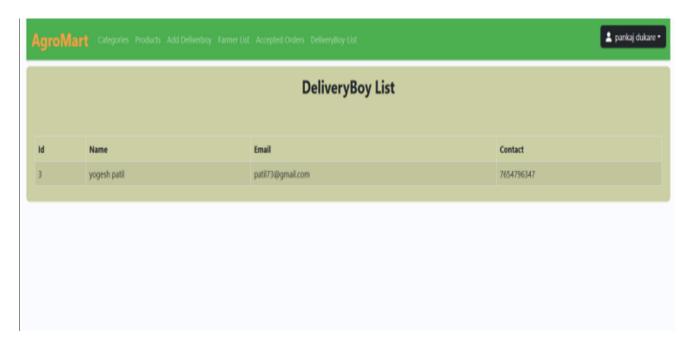
5.2.5 Shop Owner Accepted order



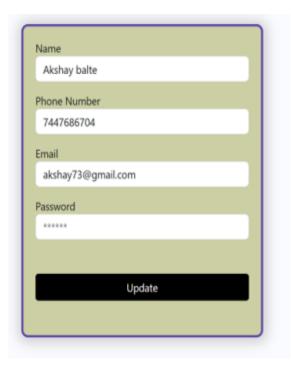
5.2.7 Shop Owner see Farmer List



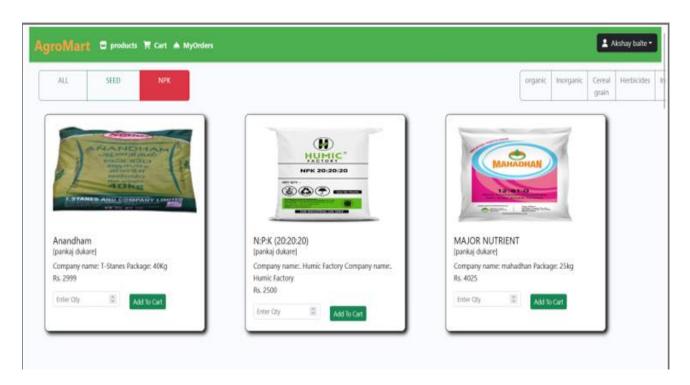
5.2.8 shop owner see Delivery Boy list



5.3 Farmer Login



5.3.1 View All Peoducts



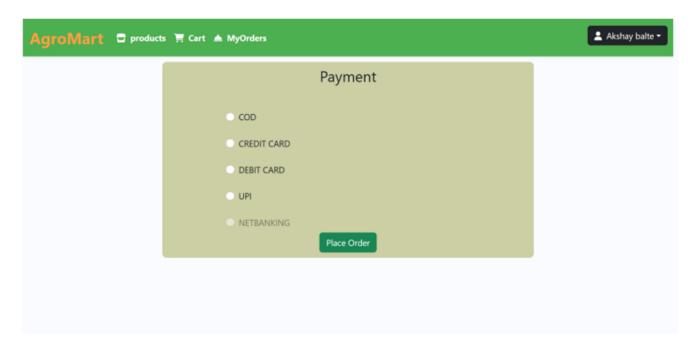
5.3.2 View Cart



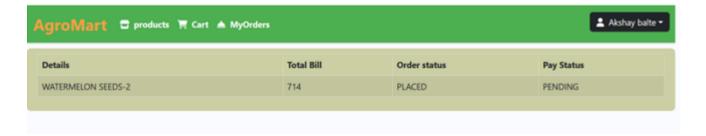
5.3.3 for payment Process start it first take Addrees



5.3.4 Payment Process



5.3.5 Order List



5.3.6 Farmer can update profile



5.4 Delivery Boy Homepage:



5.4.1 Delivery Boy order



FUTURE SCOPS

Future Scope for AgroMart Project:

In the future, Our project 'AgroMart' can expand its features to serve a larger audience and offer more advanced tools. Some potential improvements include:

Mobile App: Developing a mobile app for AgroMart would make it easier for farmers and shop owners to manage their tasks on the go, offering even more convenience.

Advanced Analytics: AgroMart could introduce more detailed data analysis tools to help shop owners make better business decisions by understanding customer buying patterns and predicting future demands.

Multi-Language Support: Adding support for multiple languages would allow more users from different regions to use AgroMart comfortably in their native language.

Partnerships with Suppliers: The system could expand to connect fertilizer shops with suppliers, allowing for automated restocking based on inventory levels.

Weather-based Recommendations: AgroMart could offer weather-based suggestions for fertilizers and other farming supplies, helping farmers make better decisions.

With these enhancements, AgroMart can continue to grow and offer even better support to fertilizer shops and farmers, helping them succeed in the evolving agricultural landscape.

CONCLUSION

AgroMart is a simple and efficient web-based solution that helps fertilizer shop owners, farmers, and delivery workers manage their work more easily. It brings together product management, order processing, and delivery tracking into one platform, making daily tasks faster and more organized. With features like real-time updates, automatic alerts, and easy-to-use reports,

AgroMart improves how fertilizer shops operate. By focusing on ease of use, security, and the ability to grow with more users, AgroMart makes fertilizer shops more productive and reduces the chances of mistakes. It helps farmers get the fertilizers they need quickly, while shop owners and delivery workers can better manage their jobs .

AgroMart can helps Shop owner to manage all product ,list of farmer for anyalis and give direct delivery to farmer. AgroMart connects technology and farming, making fertilizer supply easier and more efficient for everyone involve

REFERENCES

Following is the list of websites we referred to 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