Project Name: Farmer Assistance Portal

Project Members:

PRN No.	Name
210943120012	Amit Singh (Lead)
210943120003	Abhishek Badal
210943120013	Ankit Sharma
210943120048	Mehul Kunte

Technologies Used:

- 1. **HTML:** Page Layout has been designed in HTML.
- 2. CSS: Used for all designing part.
- 3. JavaScript: All Validation task and animations has been developed by JS.
- 4. JSP: All front-end logic has been written in JSP.
- 5. JAVA: All the business logic has been written in JAVA.
- **6.** MySQL: MySQL database has been used as database.
- **7. Tomcat:** Project will run using Tomcat server.

System Requirements:

Software Requirements:

- Windows (All Versions)
- Tomcat 7
- VS Code, Eclipse, MySQL, XAMMP

Hardware Components:

- Processor i3
- Hard Disk 5 GB
- Memory 1GB RAM

Roles and Responsibilities:

Roles And Responsibilities		
	Role	Handling Frontend and Database
1	Member Name	Amit Singh
+	PRN No	210943120012
	Description	
	Role	Handling Frontend and Database
	Member Name	Abhishek Badal
2	PRN No	210943120003
	Description	
	Role	Handling Backend
3	Member Name	Ankit Sharma
3	PRN No	210943120013
	Description	
	Role	Documentation & Presentation
_	Member Name	Mehul Kunte
4	PRN No	210943120048
	Description	

Abstract

A Web project to help farmers ensure greater profitability through direct farmer to supplier and farmer to farmer communication. This service boosts business communication and brings transparency in the system.

This innovative site allows for good farmer, retailer and supplier communication. It allows farmers to login and communicate to respective dealers. When dealers publish an advertisement or offer, the respective farmers get notified via SMS message. The farmers may also submit their grievances and complaints to respective dealers or authorities using their farmer login on a separate complaints page and authorities will get access to that page regularly using their login id and passwords.

This web project provides following features:

- Separate login areas with appropriated functionality for farmers, administrators and dealers/retailers.
- A separate page where only farmers can post complaints and only assigned administrators can read and edit this page.
- Pages where dealers and retailers may post their ads and notifications.
- Farmers are notified of these notifications via SMS whenever new ads are published.
- An effective GUI so that rural people may easily use the service.

Advantages:

- Farmers can directly contact retailers' suppliers by searching online.
- Farmers may submit their grievances online.
- Farmers get notification of any new offers/schemes.

Disadvantages:

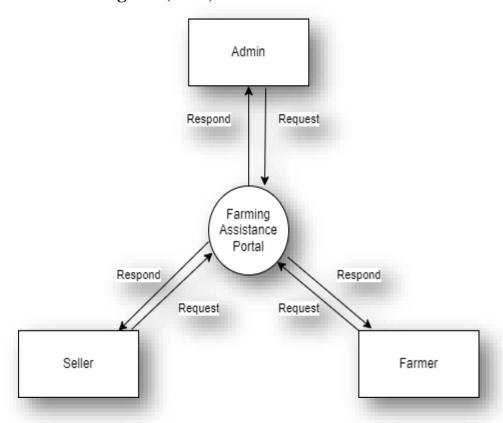
- Verification of the users cannot be done online. They have to first get themselves verified by visiting before using the system.
- It requires a large database and memory.

<u>Applications:</u> This system can be used in developing countries to enhance farmer, manufacturer, retailer communication thus eliminating unnecessary intermediaries.

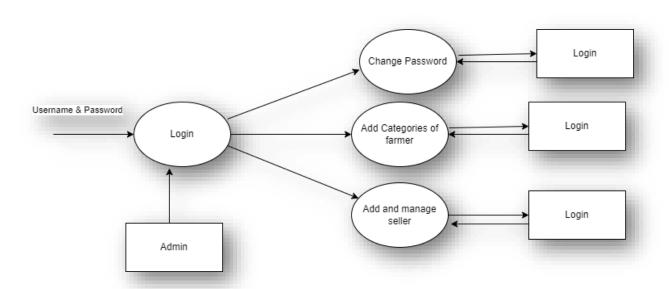
Future Scope

- 1. Verification of users.
- 2. Improvement in design.
- 3. Mobile Application
- 4. UPI payment
- 5. Integration of new function like farmers can rent equipment
- 6. Chat BOT

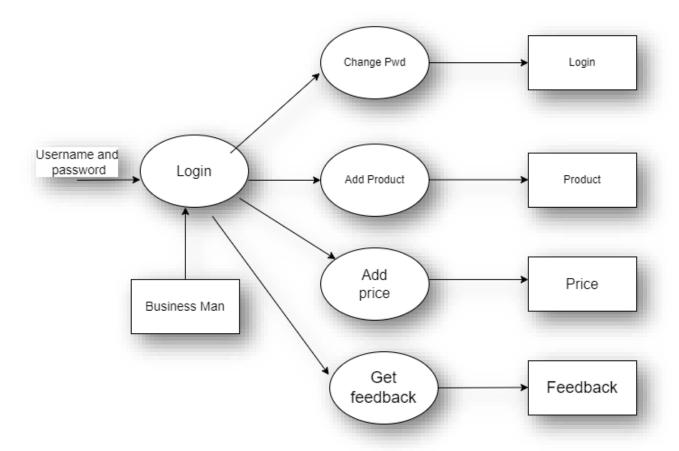
Data Flow Diagram (DFD): Level Zero



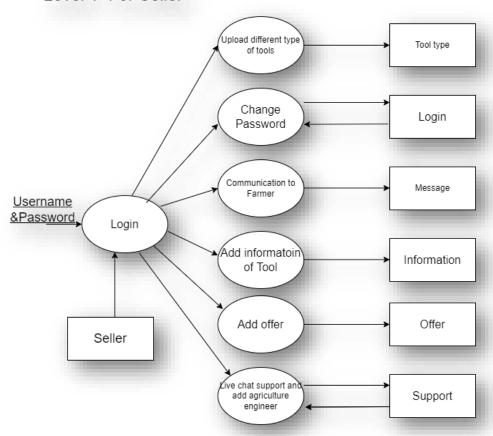
Level 1—



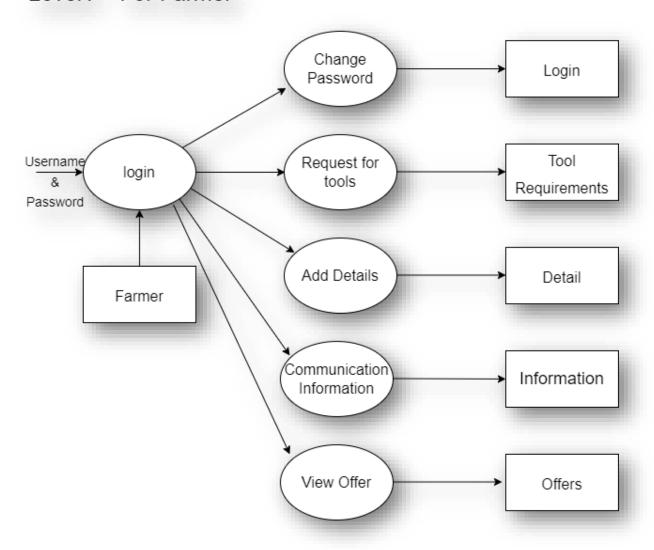
Level 1 Diagram for Business Man



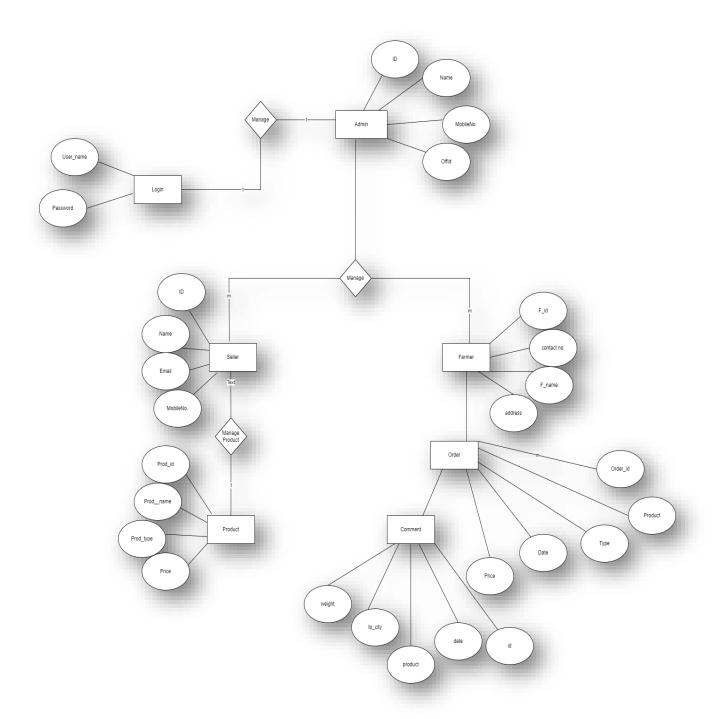
Level 1 For Seller



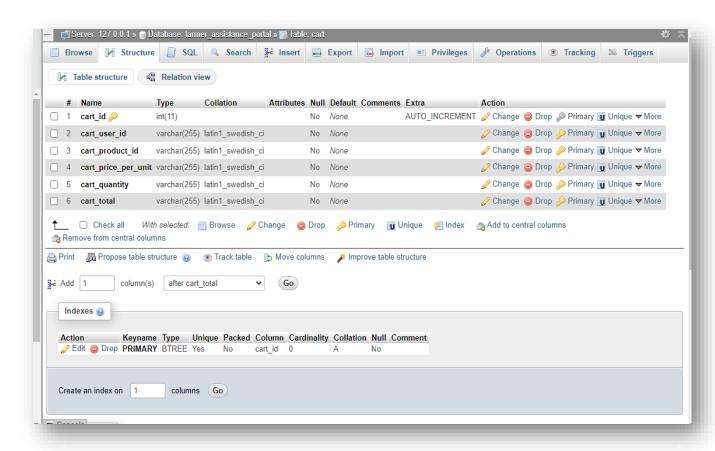
Level1 For Farmer

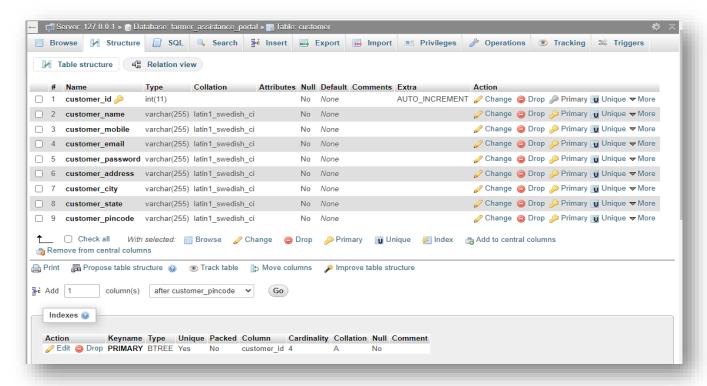


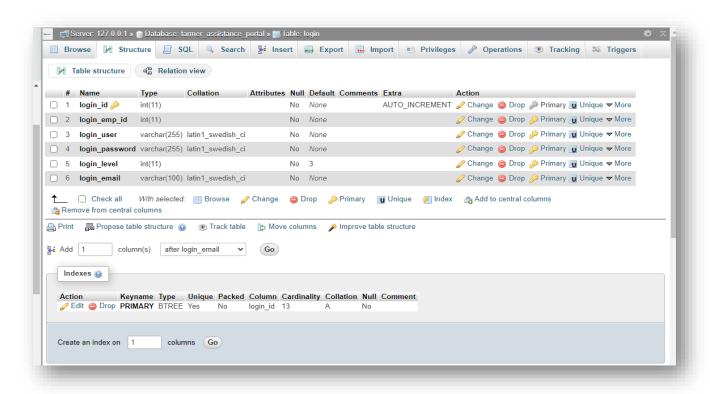
ERD:

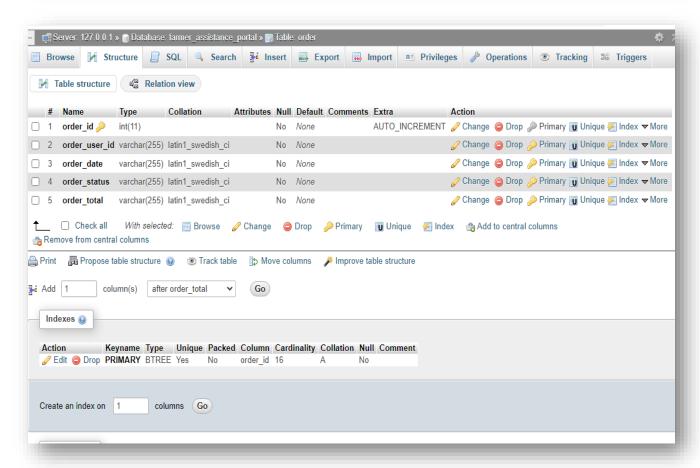


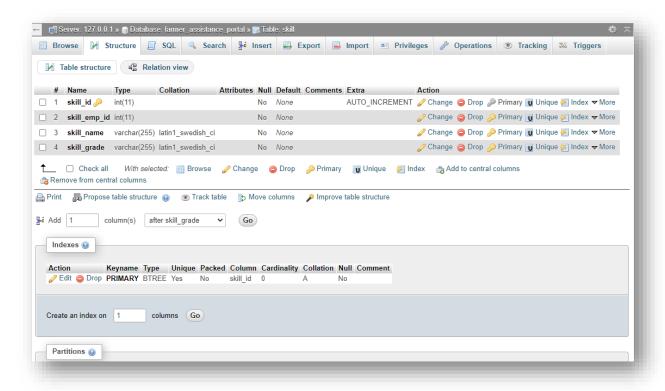
Database Tables:

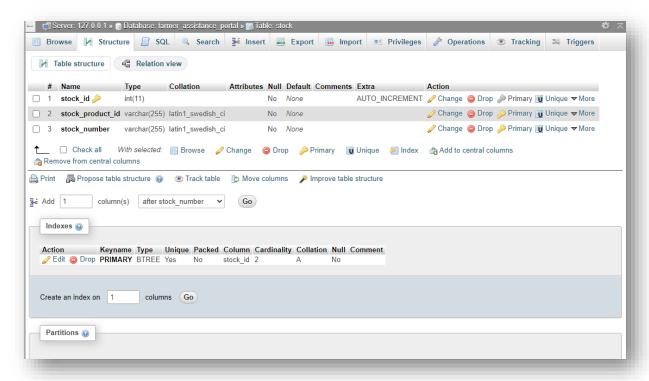


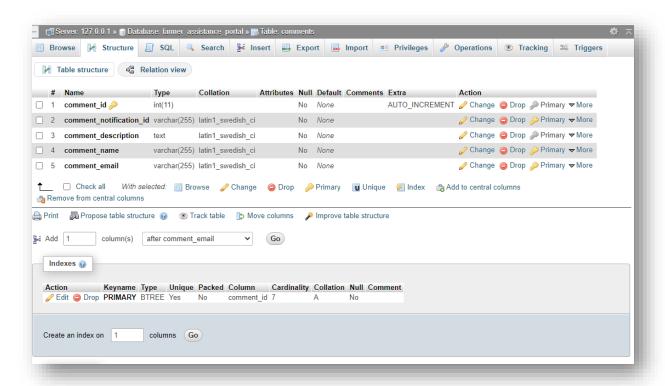


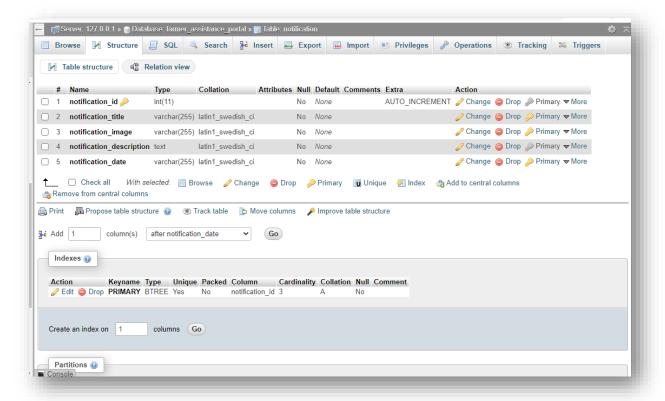












Folder Structure Explanation

In CSS folder we have kept our third-party library files, while in images folder there are images that we have used in the frontend. In include folder we have placed the code which are used in more than one page. In JS folder we have kept the java script files which can also be considered as third-party library. In layout we kept the theme related file which we have used in our project. Our model folder acts as a mediator between JSP files and java class files. At the same time, it will communicate between the front end and the database. In notification and product images folder all the images used in this project is kept. In Web-Inf folder all business logic, public methods and database connection code is written. Rest all JSP files are presentation files which will be displayed when required.

We have integrated tomcat server for smooth run of our project. The product is up and running with all modules.

Implementation

Introduction of Technologies Used

1. JAVA

Java is a general-purpose, class-based, object-oriented programming language designed for having lesser implementation dependencies. It is a computing platform for application development. Java is fast, secure, and reliable, therefore. It is widely used for developing Java applications in laptops, data centres, game consoles, scientific supercomputers, cell phones, etc.

Java Platform is a collection of programs that help programmers to develop and run Java programming applications efficiently. It includes an execution engine, a compiler, and a set of libraries in it. It is a set of computer software and specifications. James Gosling developed the Java platform at Sun Microsystems, and the Oracle Corporation later acquired it.

Here are some important Java features:

- It is one of the easy-to-use programming languages to learn.
- Write code once and run it on almost any computing platform.
- Java is platform-independent. Some programs developed in one machine can be executed in another machine.
- It is designed for building object-oriented applications.
- It is a multithreaded language with automatic memory management.
- It is created for the distributed environment of the Internet.
- Facilitates distributed computing as its network-centric.

Java Virtual Machine (JVM)

Java Virtual Machine (JVM) is an engine that provides a runtime environment to drive the Java Code or applications. It converts Java bytecode into machine language. JVM is a part of the Java Run Environment (JRE). In other programming languages, the compiler produces machine code for a particular system. However, the Java compiler produces code for a Virtual Machine known as Java Virtual Machine.

Java Runtime Environment (JRE)

JRE is a piece of software that is designed to run other software. It contains the class libraries, loader class, and JVM. In simple terms, if you want to run a Java

program, you need JRE. If you are not a programmer, you don't need to install JDK, but just JRE to run Java programs.

Java Development kit (JDK)

JDK is a software development environment used for making applets and Java applications. The full form of JDK is Java Development Kit. Java developers can use it on Windows, macOS, Solaris, and Linux. JDK helps them to code and run Java programs. It is possible to install more than one JDK version on the same computer.

Different Types of Java Platforms

There are four different types of Java programing language platforms:

- **1. Java Platform, Standard Edition (Java SE):** Java SE's API offers the Java programming language's core functionality. It defines all the basis of type and object to high-level classes. It is used for networking, security, database access, graphical user interface (GUI) development, and XML parsing.
- **2. Java Platform, Enterprise Edition (Java EE):** The Java EE platform offers an API and runtime environment for developing and running highly scalable, large-scale, multi-tiered, reliable, and secure network applications.
- **3. Java Programming Language Platform, Micro Edition (Java ME):** The Java ME platform offers an API and a small-footprint virtual machine running Java programming language applications on small devices, like mobile phones.
- **4. Java FX:** JavaFX is a platform for developing rich internet applications using a lightweight user-interface API. It user hardware-accelerated graphics and media engines that help Java take advantage of higher-performance clients and a modern look-and-feel and high-level APIs for connecting to networked data sources.

2. MySQL

What is a 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 also 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 type of systems.

Nowadays, we use relational database management systems (RDBMS) to store and manage huge volume of data. This is called relational database because all the data is stored into different tables and relations are established using primary keys or other keys known as **Foreign Keys**.

A Relational Database Management System (RDBMS) is a software that –

- Enables you to implement a database with tables, columns and indexes.
- Guarantees the Referential Integrity between rows of various tables.
- Updates the indexes automatically.
- Interprets an SQL query and combines information from various tables.

RDBMS Terminology

Before we proceed to explain the MySQL database system, let us revise a few definitions related to the database.

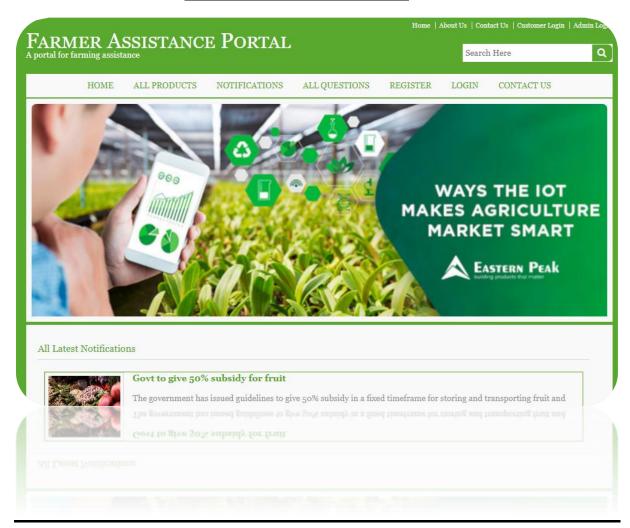
- **Database** A database is a collection of tables, with related data.
- **Table** A table is a matrix with data. A table in a database looks like a simple spreadsheet.
- Column One column (data element) contains data of one and the same kind, for example the column postcode.
- **Row** A row (= tuple, entry or record) is a group of related data, for example the data of one subscription.
- **Redundancy** Storing data twice, redundantly to make the system faster.
- **Primary Key** A primary key is unique. A key value cannot occur twice in one table. With a key, you can only find one row.
- Foreign Key A foreign key is the linking pin between two tables.
- Compound Key A compound key (composite key) is a key that consists of multiple columns, because one column is not sufficiently unique.
- Index An index in a database resembles an index at the back of a book.
- Referential Integrity Referential Integrity makes sure that a foreign key value always points to an existing row.

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, which is a Swedish company. MySQL is becoming so popular because of many good reasons —

- MySQL is released under an open-source license. So, you have nothing to pay to use it.
- MySQL is a very powerful program in its own right. It handles a large subset of the functionality of the most expensive and powerful database packages.
- MySQL uses a standard form of the well-known SQL data language.
- MySQL works on many operating systems and with many languages including PHP, PERL, C, C++, JAVA, etc.
- MySQL works very quickly and works well even with large data sets.
- MySQL is very friendly to PHP, the most appreciated language for web development.
- MySQL supports large databases, up to 50 million rows or more in a table. The default file size limit for a table is 4GB, but you can increase this (if your operating system can handle it) to a theoretical limit of 8 million terabytes (TB).
- MySQL is customizable. The open-source GPL license allows programmers to modify the MySQL software to fit their own specific environments.

Screenshots of webpages



FARMER ASSISTANCE PORTAL A portal for farming assistance

Search Here

HOME

ALL PRODUCTS

NOTIFICATIONS

ALL QUESTIONS

REGISTER

LOGIN

CONTACT US

All Notifications



Govt to give 50% subsidy for fruit

The government has issued guidelines to give 50% subsidy in a fixed timeframe for storing and transporting fruit and vegetables to prevent post-harvest losses and distress sale by farmers when prices fall. Subsidy will be disbursed if the price in notified production clusters falls below the average of the preceding three years or if it falls more than 15% from last year?s price at the time of ha



Crop Insurance Scheme

Satya Sriram is one of our promising Carnatic vocalists well trained by Akella Mallikarjuna Sarma. Sriram?s father Eswara Prasad is a well-known bhagavatar in Bhajana sampradayam and his mother too is a musician. With such influence all around, no wonder Sriram too shaped himself as a vocalist of high calibre. The concert she gave for the music sabha ?Sampradaya? functioning from A.S. Rao Nagar?s



Exports of Crops

Bihar will go dry from April 1, 2016, Chief Minister Nitish Kumar announced on Thursday. The Chief Minister made the announcement? a part of his election pledge? at an official function to mark Prohibition Day here. He said the poorest of the poor had been consuming liquor, badly hitting their families and their children?s education.



the poor had been consuming liquor, badly hitting their families and their children?s education. Increasing liquor consumption was also a major cause

FARMER ASSISTANT PORTAL (ALL AVIALABLE PRODUCTS)



Kobyashi ₹ 2000



Home Farming



Seeds Medicine ₹ 1500



Vegetables ₹ 1200



Gralic Seeds ₹ 800



Jute Orgaine ₹ 2500



Grain Seeds ₹ 1800



Grainss ₹ 100



Hybrid ₹ 400



Vitamin Seeds ₹400



Zukur Seeds ₹ 1500



Lettuce Seeds ₹ 1300











FARMER ASSISTANCE PORTAL A portal for farming assistance

ALL PRODUCTS

Search Here

LOGIN

Q

HOME

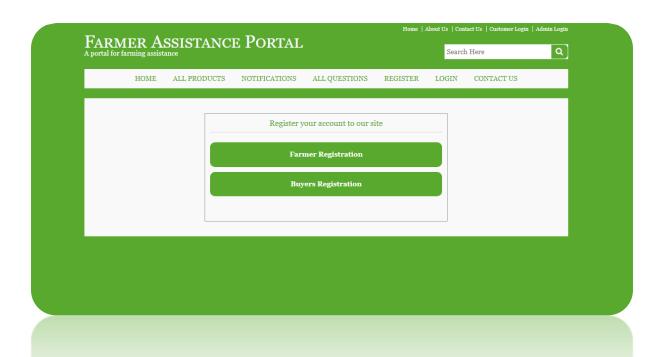
NOTIFICATIONS

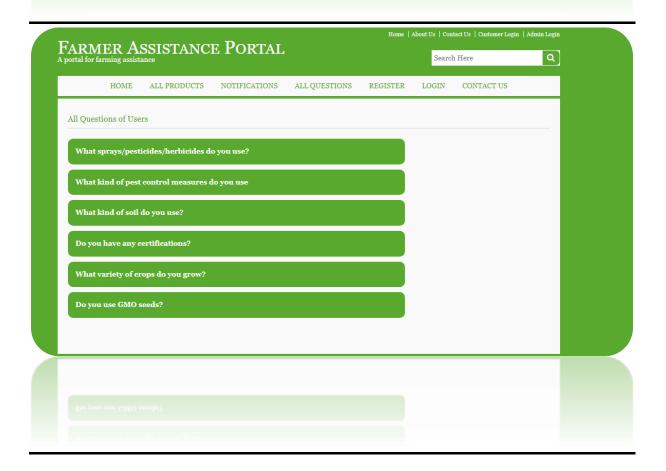
ALL QUESTIONS

REGISTER

CONTACT US

Login to your account





CONCLUSION

The farming assistance web service will be designed and developed to overcome the drawbacks of old manual system and meet the requirement of modern age. This system will digitalize the agriculture industry and give more profit to farmers. It will bring transparency between farmers, suppliers and buyers by removing intermediates. It will save time & energy of everyone using this portal. Lastly it can be improved in future according to rising demand of users.

REFERENCES

- Mr. Saleel Bagde for Database.
- Mrs. Harshita Maheshwari for HTML JS & CSS also she was our project guide.
- Mr. Raju Kolhe for JSP & JAVA.
- https://www.slideshare.net
- https://www.projectideas.co.in
- Europol report, 2016
- International Conference on I2C2, 2017

A special thanks to Infoway Management who arranged extra lab time for us.