PONDICHERRY UNIVERSITY

SCHOOL OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF COMPUTER SCIENCE

CSCA 513 MINI PROJECT

PROJECT REPORT

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SEMESTER : III

ACKNOWLEDGEMENT

The satisfaction and euphoria that accompany the successful completion of any task would be incomplete without complementing those who made it possible, whose guidance and encouragement made our efforts successful.

I am grateful to **Dr. S.Ravi**, Asst.Professor, Dept.of **CSE**, **Pondicherry University** who helped me to complete this project successfully by providing guidance,encouragement and valuable suggestion during entire period of the project.

I thank all my computer science faculties and others who helped directly or indirectly to meet my project work with grand success.

HITESH BEMAL [22352026]

CONTENT

CHAPTER NO.

Title :- Report of Krishi-Vikas - A Farming Management Website

1. INTRODUCTION

1.1 OBJECTIVES

- The main objective of the project is to design and develop a user friendly-system.
- Easy to use and an efficient computerized system.
- To develop an accurate and flexible system, it will eliminate data redundancy.
- To study the functioning of Farm management System.
- To make a software fast in processing, with good user interface.
- To make software with good user interface so that user can change it and it should be used for a long time without error and maintenance.
- To provide synchronized and centralized farmer and seller database.
- Computerization can be helpful as a means of saving time and money.
- To provide better Graphical User Interface (GUI).
- Less chances of information leakage.
- Provides Security to the data by using login and password method.
- To provide immediate storage and retrieval of data and information.
- Improving arrangements for farmers co-ordination.
- Reducing loss.

1.2 LIMITATIONS

- Small size of **farm** business: Due to fragmentation and subdivision of holding the average size of operational holdings is very small.

- Less labour per unit areas is required to **farm** large areas, especially since expensive alterations to land (like terracing) are completely absent.

- Mechanisation can be used more effectively over large, flat areas.

2.STUDY OF EXISTING SYSTEM

2.1 A CASE STUDY ON

SourceTrace is collaborating with Small Farmers Agri-business consortium (SFACH) and Karnataka Horticulture Department, deploying its digital solutions to support the horticulture farmers of India.

Karnataka Agriculture Department is committed to providing a responsive and effective mechanism for the welfare of farmers and farm-based communities and recognizes the need to harness the growing power of Information Technologies for the betterment of life of the farmers and management of Farmer Producer Organizations (FPOs) in Haryana.

To deploy its digital solution, Source Trace is in the process of creating 100,000 farmer profiles. The system was developed using technologies such as, HTML, CSS ,JS and MySQL. PYTHON- FLASK, HTML and CSS are used to build the user interface and database was built using MySQL.

The system is free of errors and very efficient and less time consuming due to the care taken to develop it. All the phases of software development cycle are employed and it is worthwhile to state that the system is very robust. Provision is made for future development in the system.

2.2 PROPOSEDSYSTEM

The farmers can sell their productions online and the buyer can purchase various agricultural products online. Buyer can send purchase request to check the quality of the product.

After collecting all the farm produce from the farmers, it should be sold to the customers. This project covers these entries and the data collections.

There are 2 types of users: Customer & Farmers.

The login id and password must be required to login the system. The article and agro products section helps farmers to share their products and increase profitability.

2. DATABASE DESIGN

3.1 SOFTWAREREQUIREMENTSPECIFICATION

3.1.1 SOFTWARE AND HARDWARE REQUIREMENTS

SOFTWARE REQUIREMENTS:

Frontend- HTML, CSS, Java Script, Bootstrap

Backend-Python flask (Python 3.9) , SQLAlchemy,

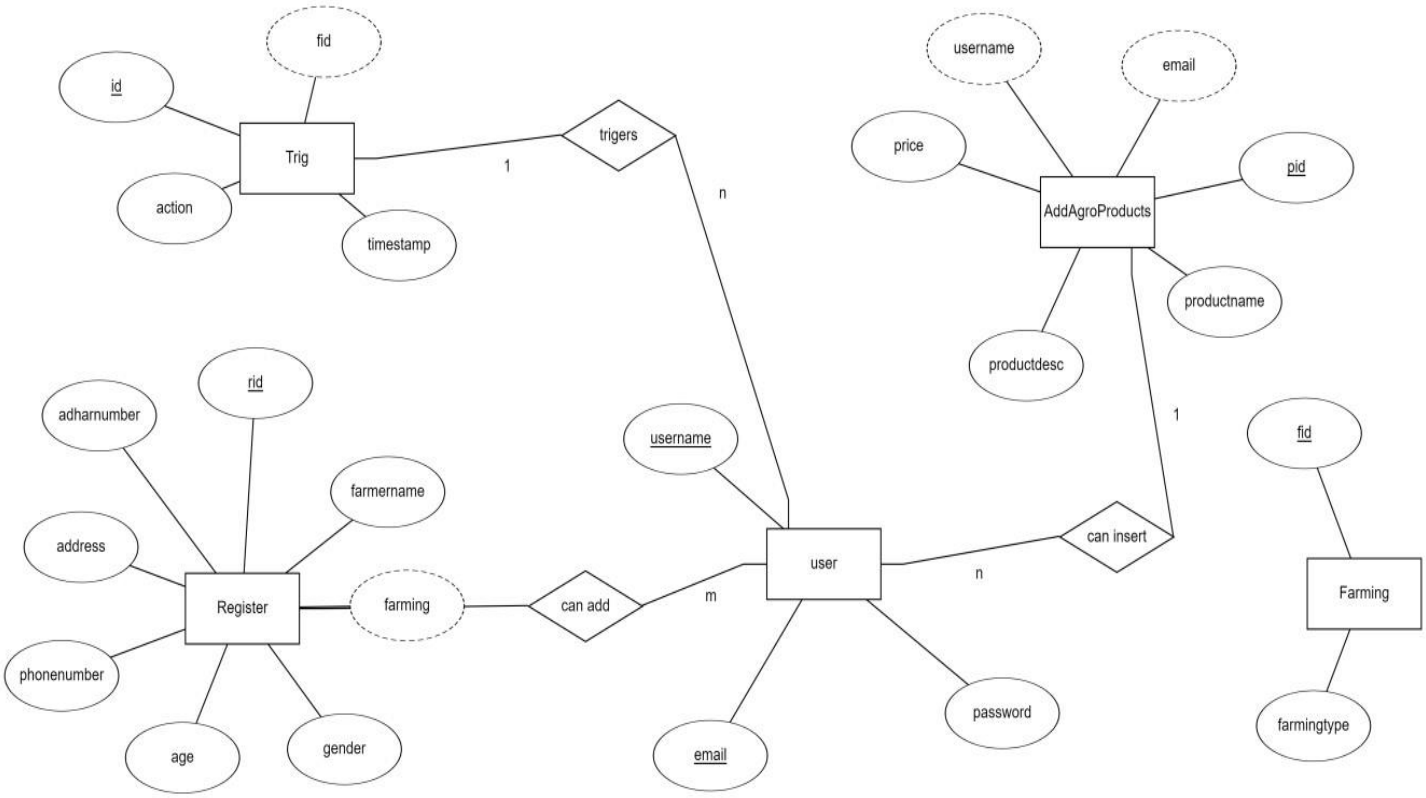
- Operating System: Windows 10
- Google Chrome/Internet Explorer
- XAMPP (Version-3.7)
- Python main editor (user interface): PyCharm Community
- workspace editor: Sublime text 3

HARDWARE REQUIREMENTS:

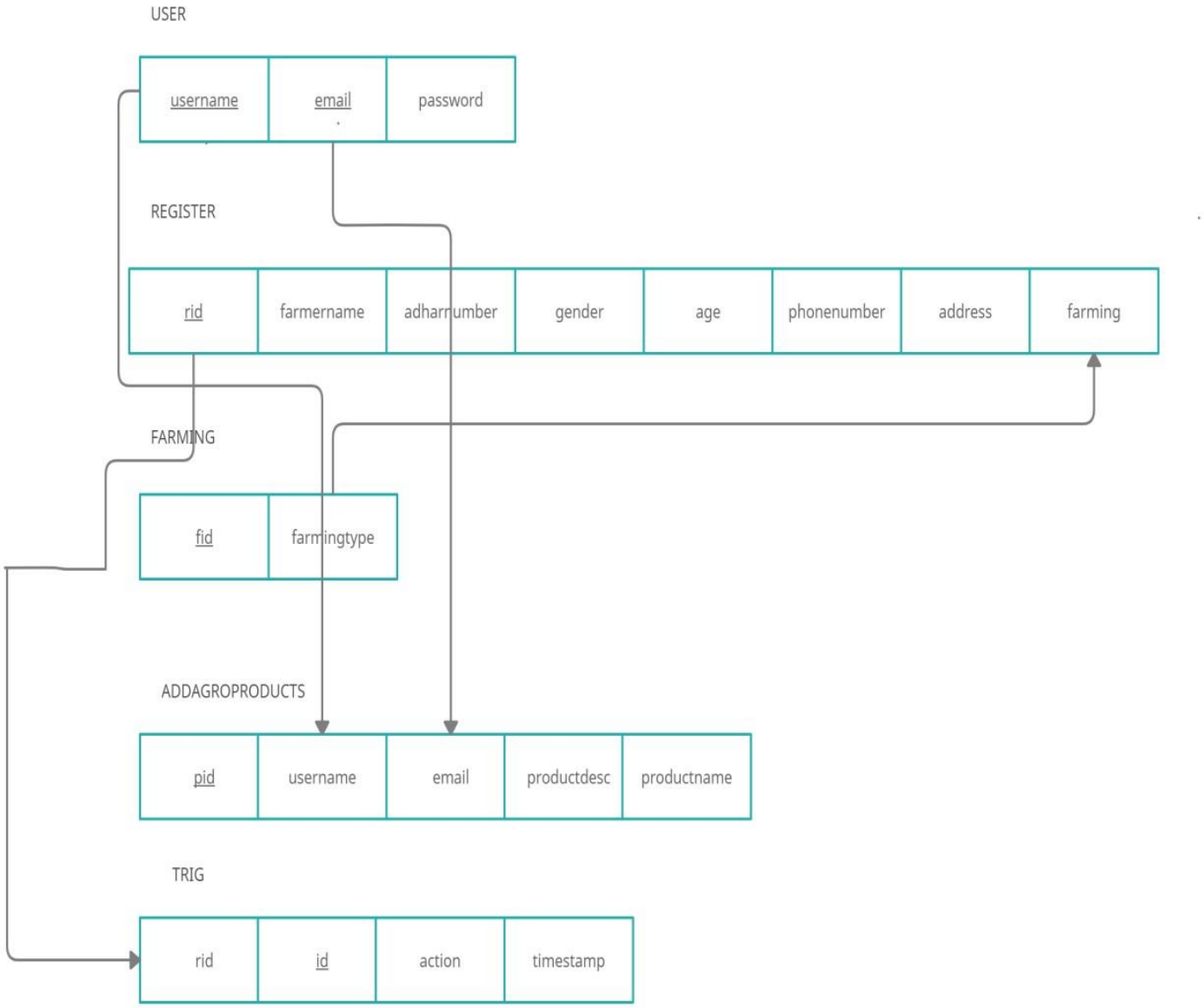
- Computer with a 1.1 GHz or faster processor
- Minimum 2GB of RAM or more
- 2.5 GB of available hard-disk space
- 5400 RPM hard drive
- 1366 × 768 or higher-resolution display
- DVD-ROM drive

3.2 CONCEPTUAL DESIGN

3.2.1 ER DIAGRAM



3.2.2 SCHEMA DIAGRAM



3.3 **IMPLEMENTATION:**

3.3.1 FRONTEND

An "implementation" of Python should be taken to mean a program or environment which provides support for the execution of programs written in the Python language, as represented by the CPython reference implementation.

There have been and are several distinct software packages providing of what we all recognize as Python, although some of those are more like distributions or variants of some existing implementation than a completely new implementation of the language.

3.3.2 BACKEND

BackEnd (MySQL) Database:

A Database Management System (DBMS) is computer software designed for the purpose of managing databases, a large set of structured data, and run operations on the data requested by numerous users.

Typical examples of DBMSs include Oracle, DB2, Microsoft Access, Microsoft SQL Server, Firebird, PostgreSQL, MySQL, SQLite, FileMaker and Sybase Adaptive Server Enterprise.

DBMSs are typically used by Database administrators in the creation of Database systems.

SQL:

Structured Query Language (SQL) is the language used to manipulate relational databases.

SQL is tied very closely with the relational model.

- In the relational model, data is stored in structures called relations or tables.

SQL statements are issued for the purpose of:

- Data definition: Defining tables and structures in the database (DDL used to create, alter and drop schema objects such as tables and indexes)

Stored Procedure

Routine name: proc
Type: procedure
Definition: Select * from register;

Triggers

It is the special kind of stored procedure that automatically executes when an event occurs in the database.

Triggers used :

1: Trigger name: on insert

Table: register

Time: after

Event: insert

INSERT INTO trig VALUES(null,NEW.rid,'Farmer Inserted',NOW())

2: Trigger name: on delete

Table: register

Time: after

Event: delete

Definition: INSERT INTO trig VALUES(null,OLD.rid,'FARMER DELETED',NOW())

3: Trigger name: on update

Table: register

Time: after

Event: update

Definition: INSERT INTO trig VALUES(null,NEW.rid,'FARMER UPDATED',NOW())

System Architecture:

The frontend, built with HTML, CSS, Bootstrap and JavaScript, forms an intuitive user interface accessible to both farmers and buyers. Python with Flask powers the backend, handling user authentication, data processing, and communication with the MySQL database. The MySQL database stores user information, product details, and transaction records.

User Roles:

The system caters to two main user types – Farmers and Buyers. A secure login system requires a valid login ID and password for access. Farmers can showcase their products in the Agro Products section, enhancing their profitability. Buyers can place purchase requests to verify product quality.

Agro Products Section:

The Agro Products section is a key feature allowing farmers to exhibit their produce. This not only expands their market reach but also connects them with potential buyers. Buyers, in turn, can explore a diverse range of agricultural products.

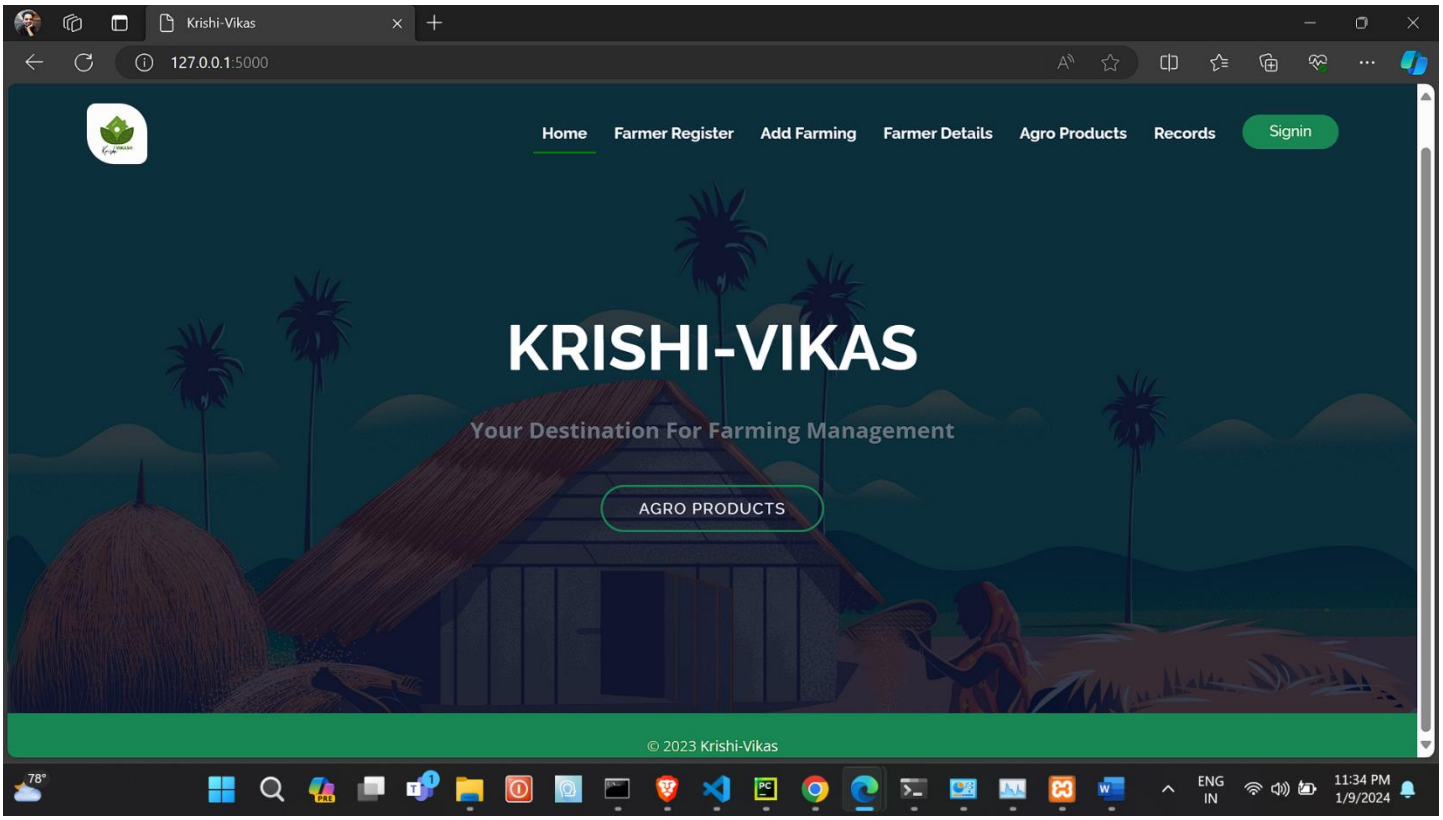
Transaction Workflow:

Upon collecting farm produce, the system facilitates the seamless sale of products to customers. The buyer's purchase requests are processed, ensuring a transparent and secure transaction experience for both parties.

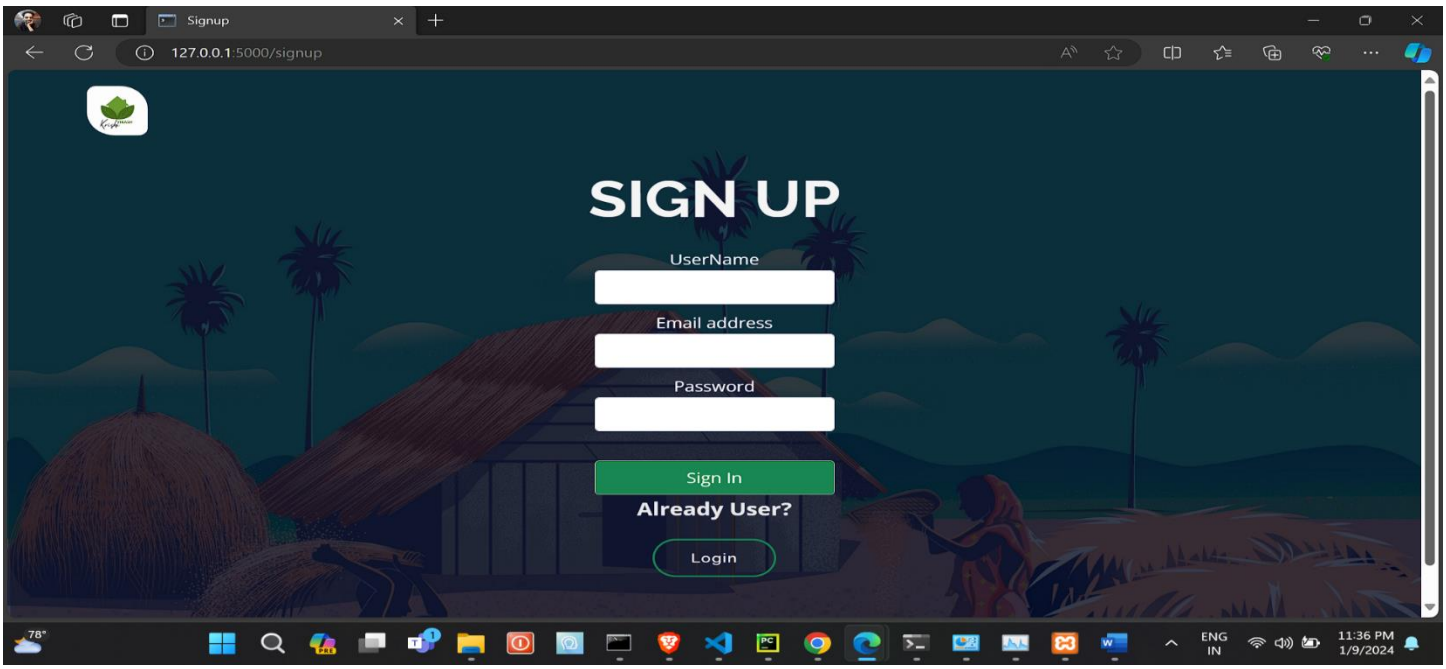
4.USER INTERFACE

Screenshots :-

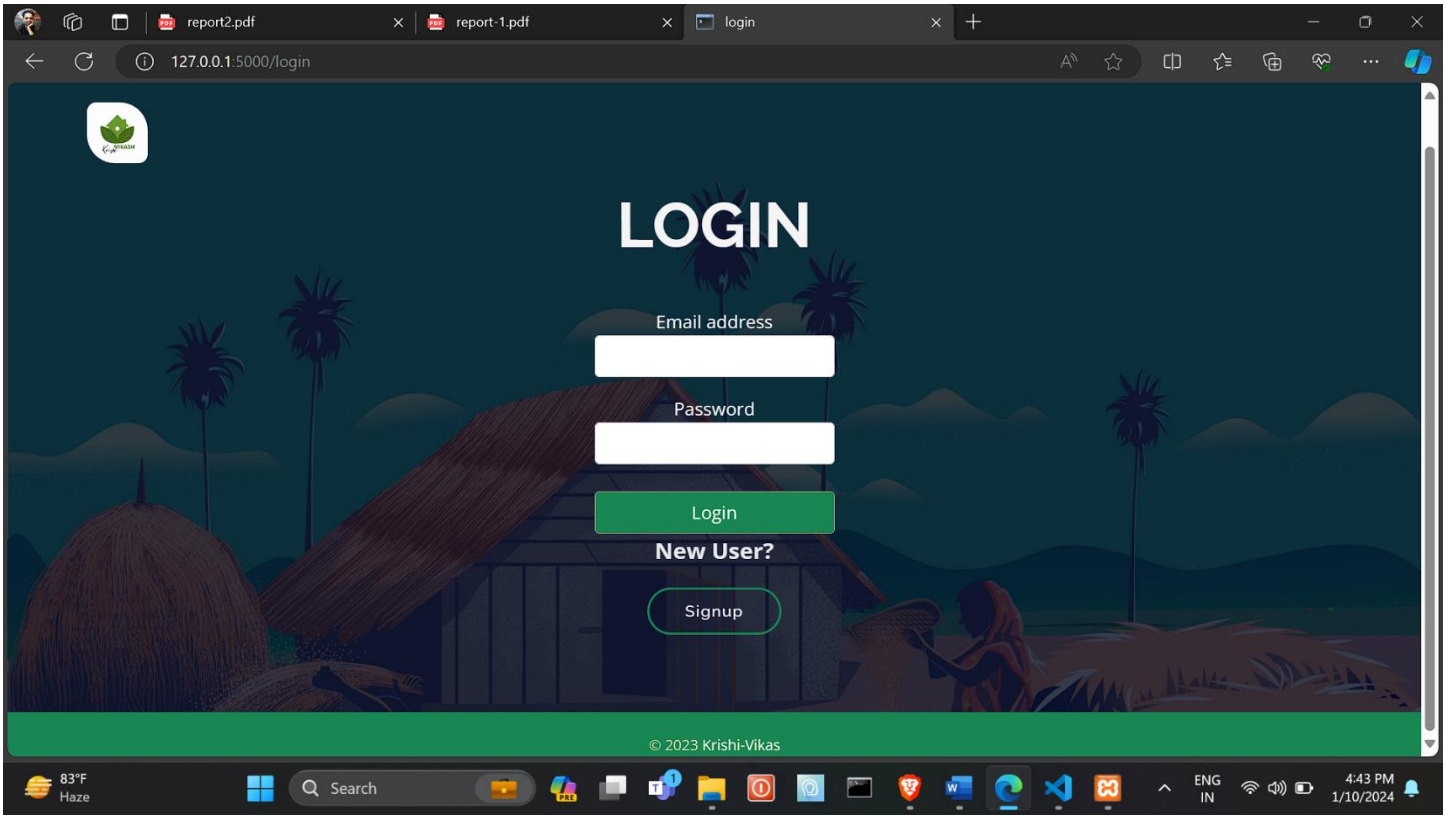
HOME PAGE:



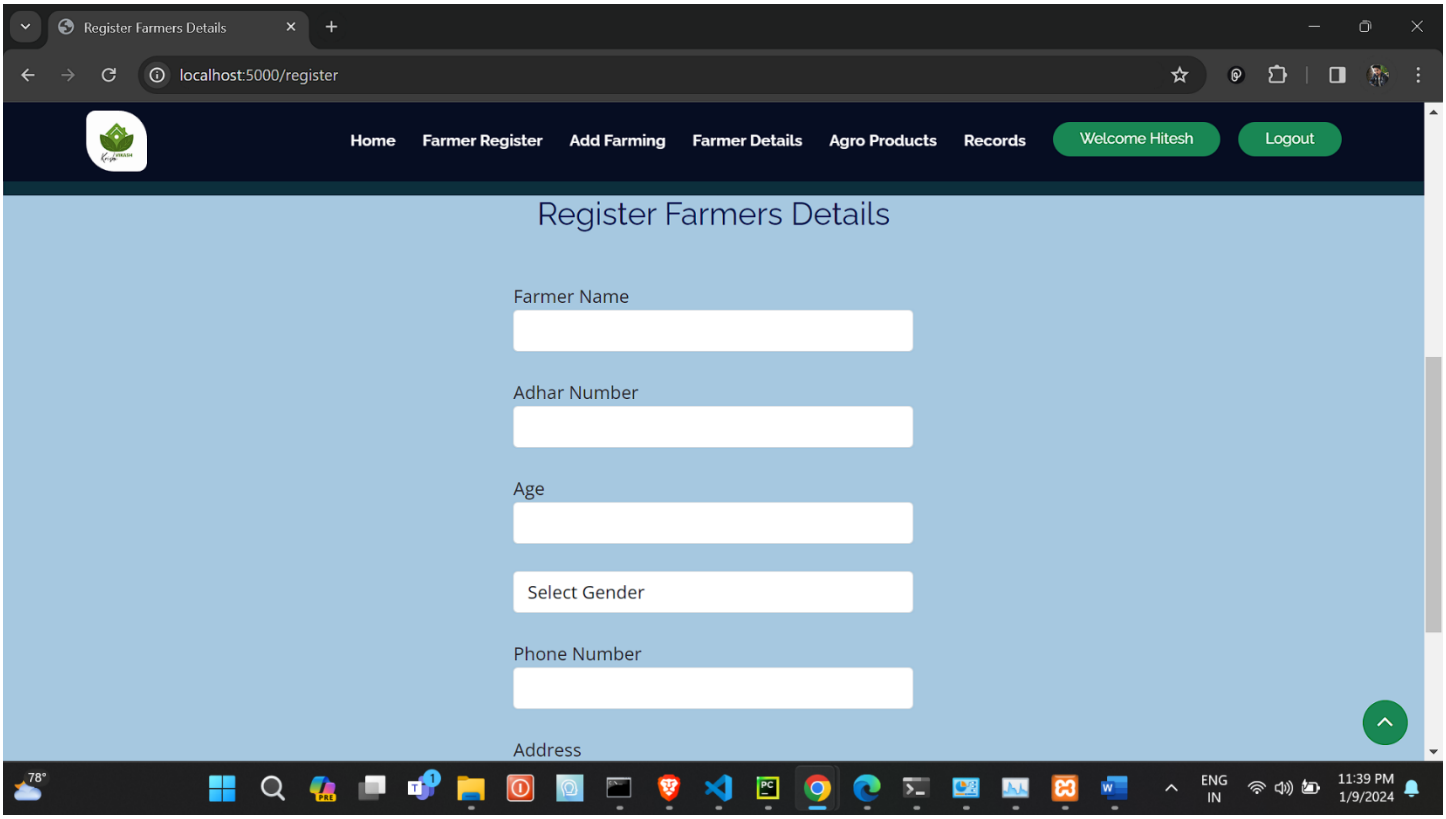
SIGNUP PAGE:



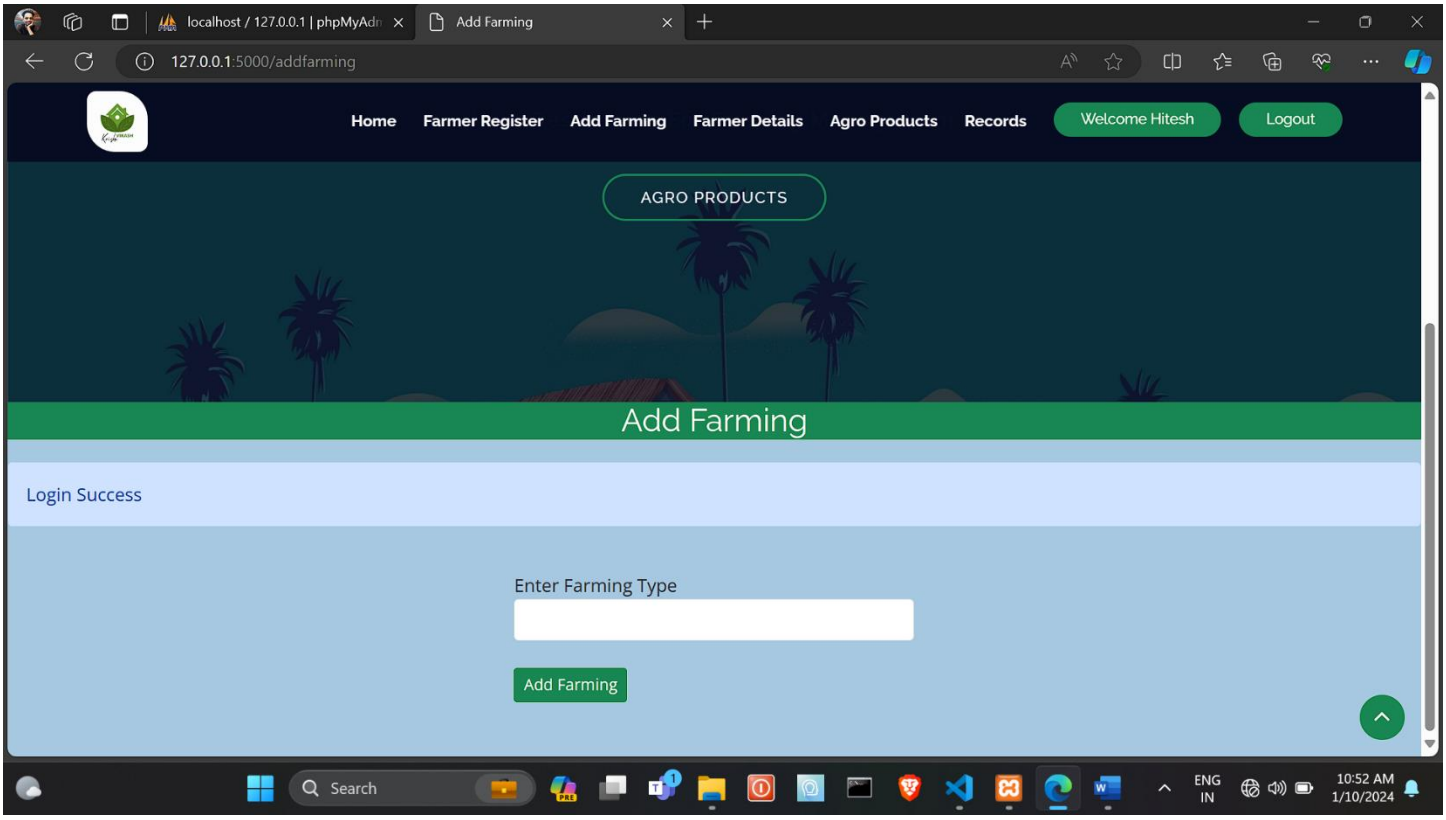
LOGIN PAGE:



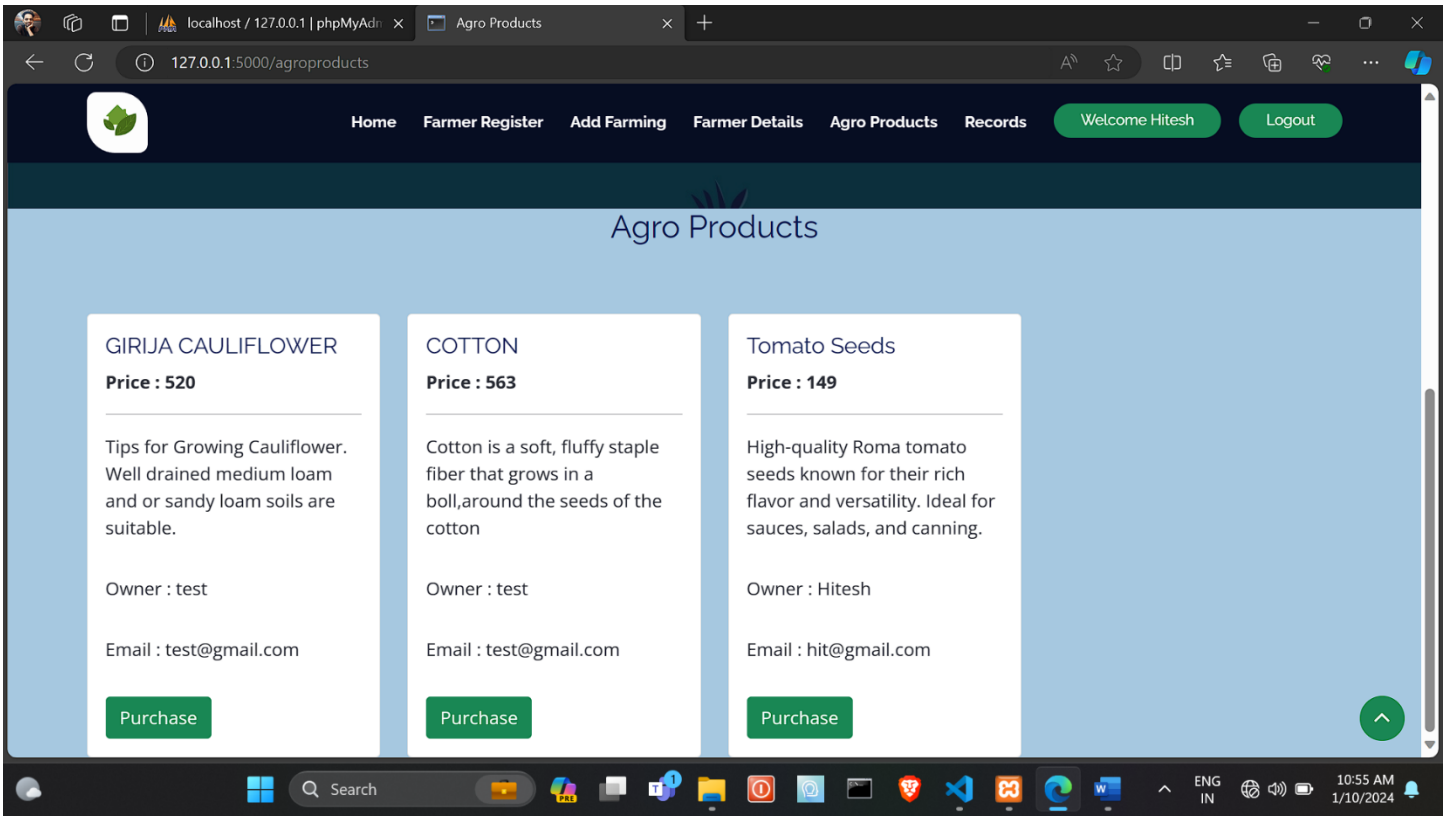
REGISTERATION PAGE & PRODUCTS:



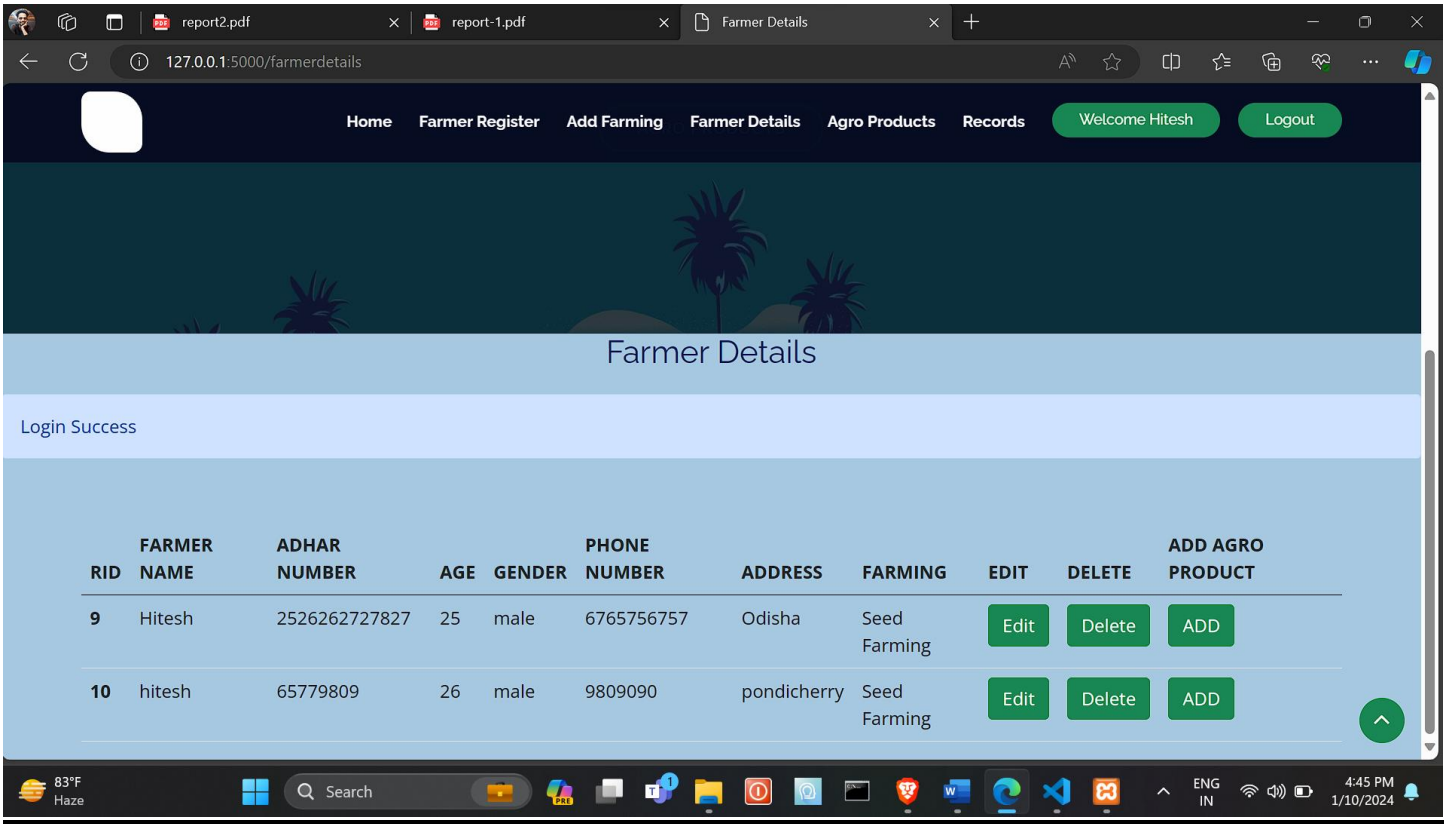
ADD FARMING:



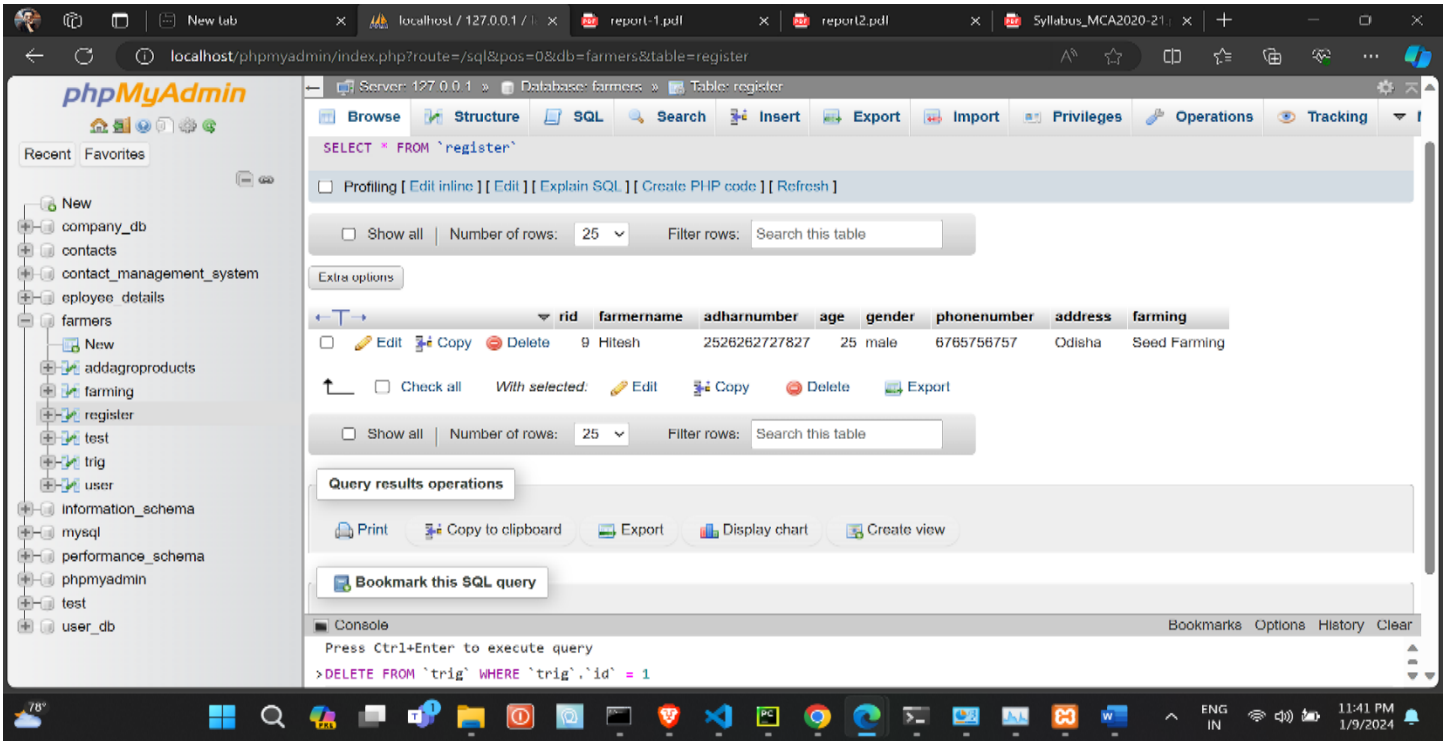
AGRO PRODUCTS:



FARMER DETAILS :-



DATABASE (Database name : Farmers, Tables :- addagroproducts, farming, register, trig, test, user) :-



5.Conclusion :-

FARM MANAGEMENT SYSTEM successfully implemented based on online selling which helps us in administrating the agroproducts user for managing the tasks performed in farmers. The project successfully used various functionalities of Xampp and python flask and also create the fully functional database management system for online portals.

Using MySQL as the database is highly beneficial as it is free to download, popular and can be easily customized. The data stored in the MySQL database can easily be retrieved and manipulated according to the requirements with basic knowledge of SQL.

With the theoretical inclination of our syllabus it becomes very essential to take the atmost advantage of any opportunity of gaining practical experience that comes along. The building blocks of this Major Project “Farm Management System” was one of these opportunities. It gave us the requisite practical knowledge to supplement the already taught theoretical concepts thus making us more competent as a computer engineer.

The project from a personal point of view also helped us in understanding the following aspects of project development:

- The planning that goes into implementing a project.
- The importance of proper planning and an organized methodology.
- The key element of team spirit and co-ordination in a successful project.

6. FUTURE ENHANCEMENT

- Enhanced database storage facility
- Enhanced user friendly GUI
- more advanced results systems
- online payments