A Report On

FARM MANAGEMENT SYSTEM

Submitted to the

Savitribai Phule Pune University

In partial fullment for the award of the Degree of

Bachelor of Engineering

in

Artificial intelligence and Data Science

By

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2022 – 2023

Matoshri college of Engineering and Research centre,
Eklahare
Dist : Nashik

DBMS MINI PROJECT

(Guidelines and Work Book)

Course Code: 217533
(2019 Course)

Second Year Engineering

Year 2022 - 2023

Group No:

Team Members:

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2. **Satpute Rutuja**
3. **Tajane Shravani**

Project Title: Farm Management System
Name of Mentor: Prof. Meenakshi Singh

A PRELIMINARY REPORT ON

"Farm Management System"

SUBMITTED TO THE SAVITRIBAI PHULE PUNE UNIVERSITY,

PUNE

IN THE PARTIAL FULFILLMENT OF THE REQUIREMENTS

FOR THE ACADEMIC

OF

SECOND YEAR OF AI&DS ENGINEERING

SUBMITTED BY

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2022-20223

CERTIFICATE

This is to certify that the project report entitles

"Farm Management System"

Submitted by

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has successfully completed the work associated with **DataBase Management System (217533)** titled as "**Farm Management**" and has submitted the work book associated under my supervision, in the partial fulfillment of Second Year degree of Artificial Intelligence and Data Science Engineering

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Guide
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Engineering

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Principal
Matoshri College of Engineering and Research Centre

Place: Nashik

Date: / / **2022**

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Apart from our efforts, the success of any project depends largely on the encouragement and guidelines of many others. So, we take this opportunity to express our gratitude to **Prof. J. J. Chopade**, Head of Department of Artificial Intelligence and Data Science Engineering, Matoshri College of Engineering and Research Centre, Nashik who have been instrumental in the successful completion of this project.

The guidance and support received from all the members who contributed and who are contributing to this project, was vital for the success of the project. I am grateful for their constant support and help.

Gaikwad Shreeya

Satpute Rutuja

Tajane Shravani

(S.E. AI&DS ENGG)

ABSTRACT

The main aim of developing “Farm Management System Project” application is to help farmers by providing all kinds agriculture related information in the site. “Farm Management System Project” is web application which helps farmers to share bestpractice farming processes. It helps farmers to improve their productivity and profitability. It enables farmers to sell their products online and farmers can purchase tools and seeds directly from seller. Farmers can view their profile and they can register, edit and delete data.

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 Agro product through mails.

CONTENT

CHAPTER-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

CHAPTER-2 STUDY OF EXISTING SYSTEM

2.1 CASE STUDY

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 PROPOSED SYSTEM

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.

CHAPTER 3 DATABASE DESIGN

3.1 SOFTWARE REQUIREMENTS SPECIFICATION

3.1.2

SOFTWARE REQUIREMENTS:

Frontend- HTML, CSS, Java Script, Bootstrap

Backend-Python flask (python 3.7) ,
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 E-R DIAGRAM:

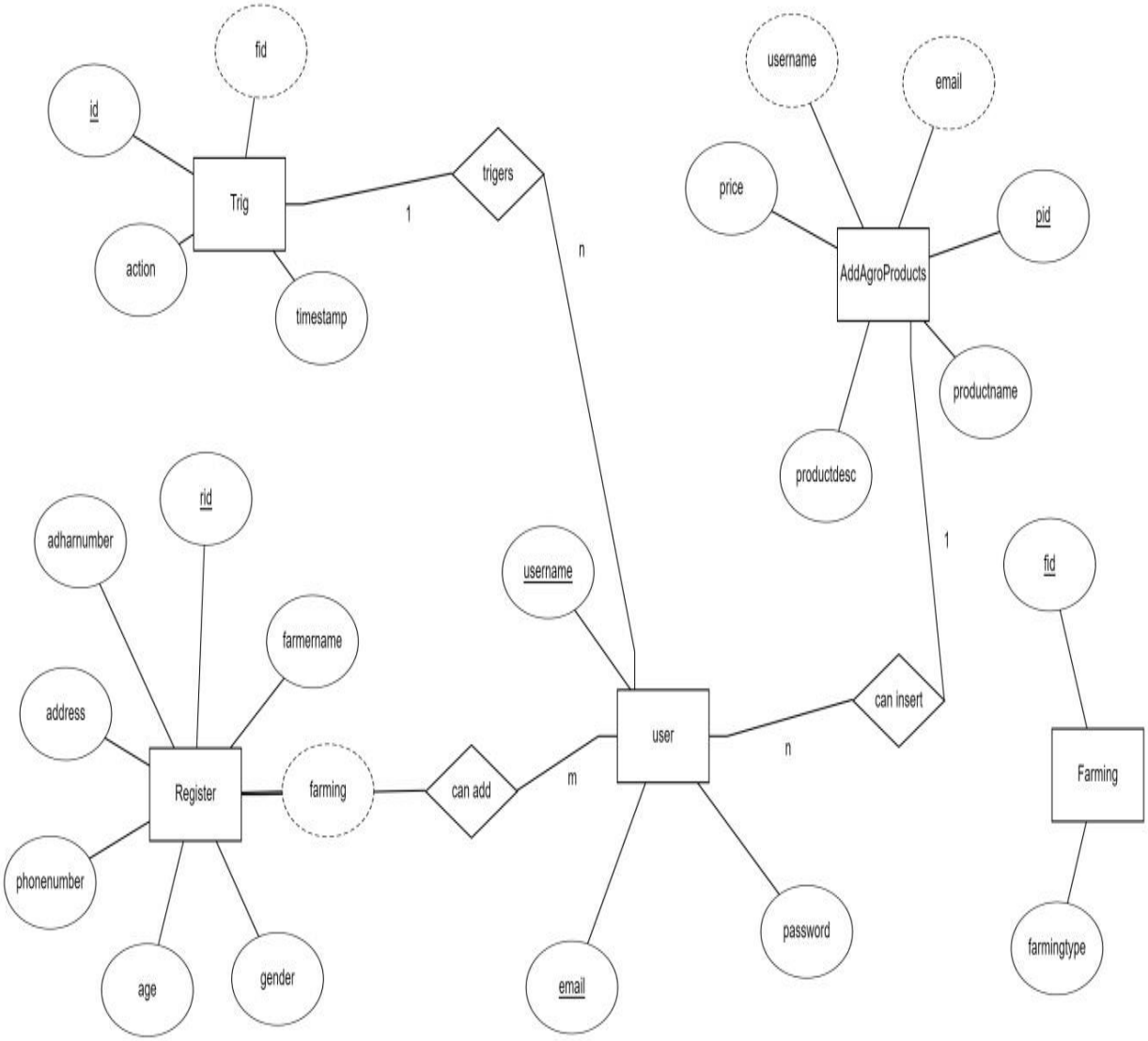


Fig.No.1 E.R.Diagram

3.2.2 SCHEMA DIAGRAM:

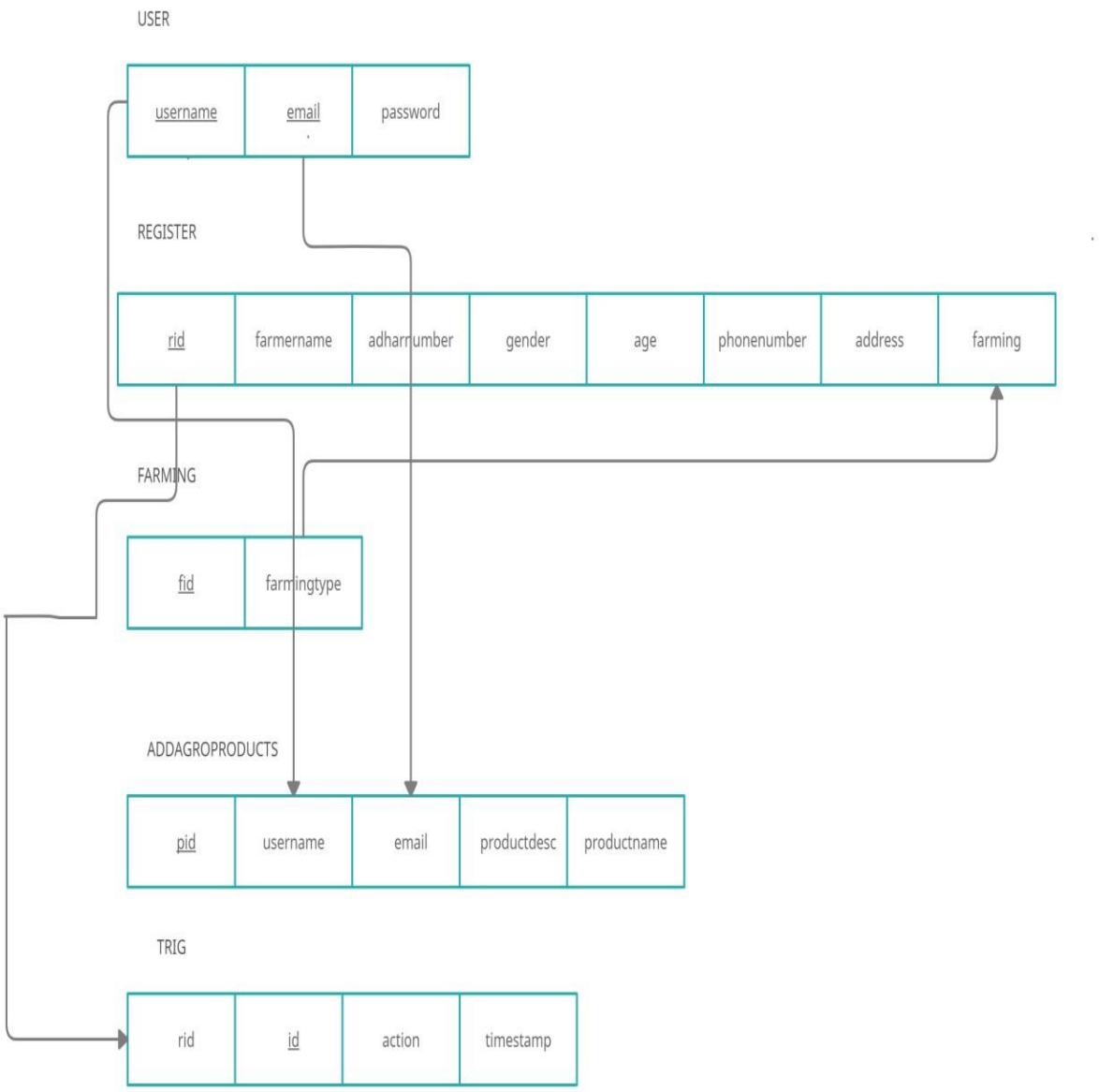


Fig.No.2.Schema Diagram

3.3 IMPLEMENTATION:

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.

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. Typical examples of DBMS use include accounting, human resources and customer support systems. Originally found only in large companies with the computer hardware needed to support large data sets, DBMSs have more recently emerged as a fairly standard part of any company back office.

A DBMS is a complex set of software programs that controls the organization, storage, management, and retrieval of data in a database. A DBMS includes:

- A modeling language to define the schema of each database hosted in the DBMS, according to the DBMS data model.
- The dominant model in use today is the ad hoc one embedded in SQL, despite the objections of purists who believe this model is a corruption of the relational model, since it violates several of its fundamental principles for the sake of practicality and performance. Many DBMSs also support the Open Database Connectivity API that supports a standard way for programmers to access the DBMS.

Data structures (fields, records, files and objects) optimized to deal with very large amounts of data stored on a permanent data storage device (which implies relatively slow access compared to volatile main memory).A database query language and report

writer to allow users to interactively interrogate the database, analyze its data and update it according to the users privileges on data.

- Data security prevents unauthorized users from viewing or updating the database. Using passwords, users are allowed access to the entire database or subsets of it called sub schemas. For example, an employee database can contain all the data about an individual employee, but one group of users may be authorized to view only payroll data, while others are allowed access to only work history and student data.
- If the DBMS provides a way to interactively enter and update the database, as well as interrogate it, this capability allows for managing personal databases. However, it may not leave an audit trail of actions or provide the kinds of controls necessary in a multi-user organization. These controls are only available when a set of application programs are customized for each data entry and updating function.

✓ A transaction mechanism, that ideally would guarantee the ACID properties, in order to ensure data integrity, despite concurrent user accesses (concurrency control), and faults (fault tolerance).

- It also maintains the integrity of the data in the database.
- The DBMS can maintain the integrity of the database by not allowing more than one user to update the same record at the same time. The DBMS can help prevent duplicate records via unique index constraints; for example, no two customers with the same customer numbers (key fields) can be entered into the database. See ACID properties for more information (Redundancy avoidance).

When a DBMS is used, information systems can be changed much more easily as the organization's information requirements change. to the Organizations may use one kind of DBMS for daily transaction processing and then move the detail onto another computer that uses another DBMS better suited for random inquiries and analysis. Overall systems design decisions are performed by data administrators and systems analysts. Detailed database design is performed by database administrators.

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)

.

4.2 : Stored Procedure

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

4.3: 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

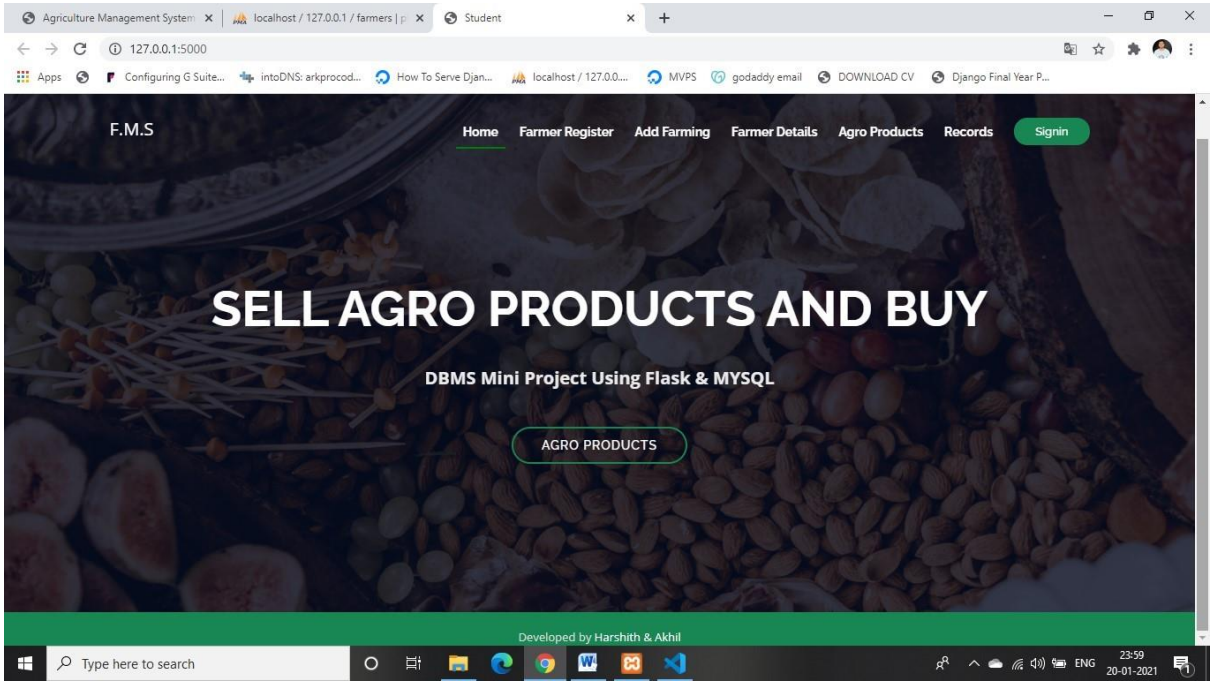
Event: update

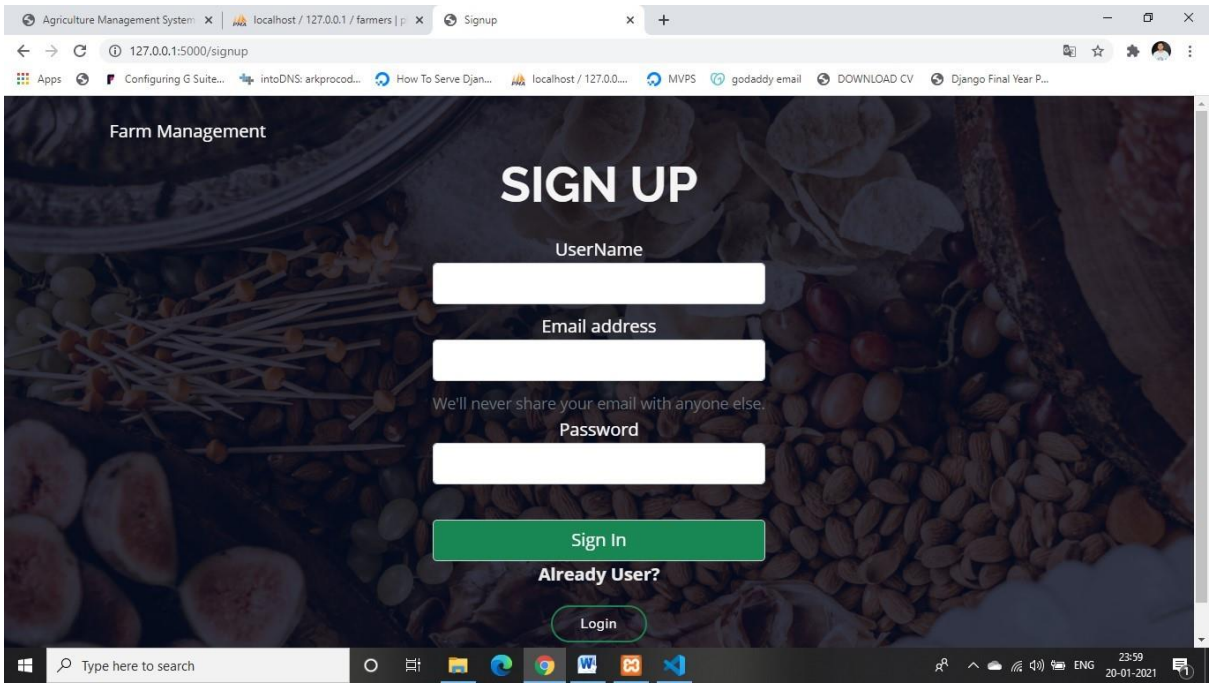
Definition: INSERT INTO trig VALUES(null,NEW.rid,'FARMER UPDATED',NOW())

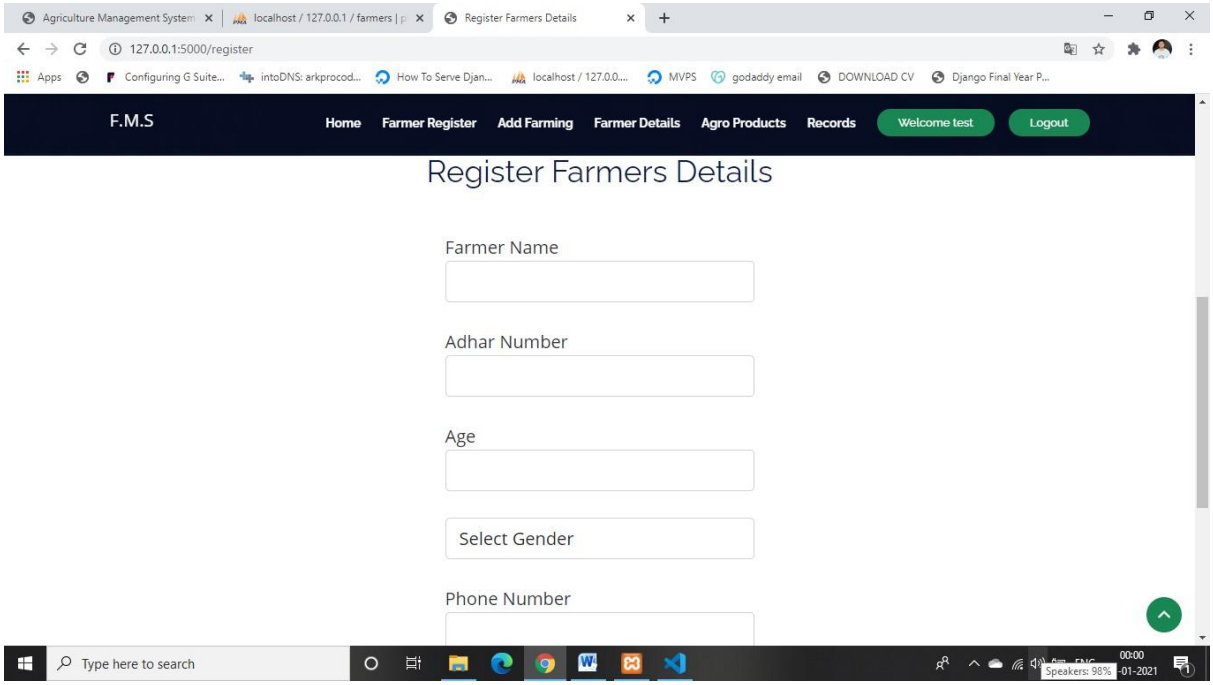
USER INTERFACE

4.1 SCREEN SHOTS

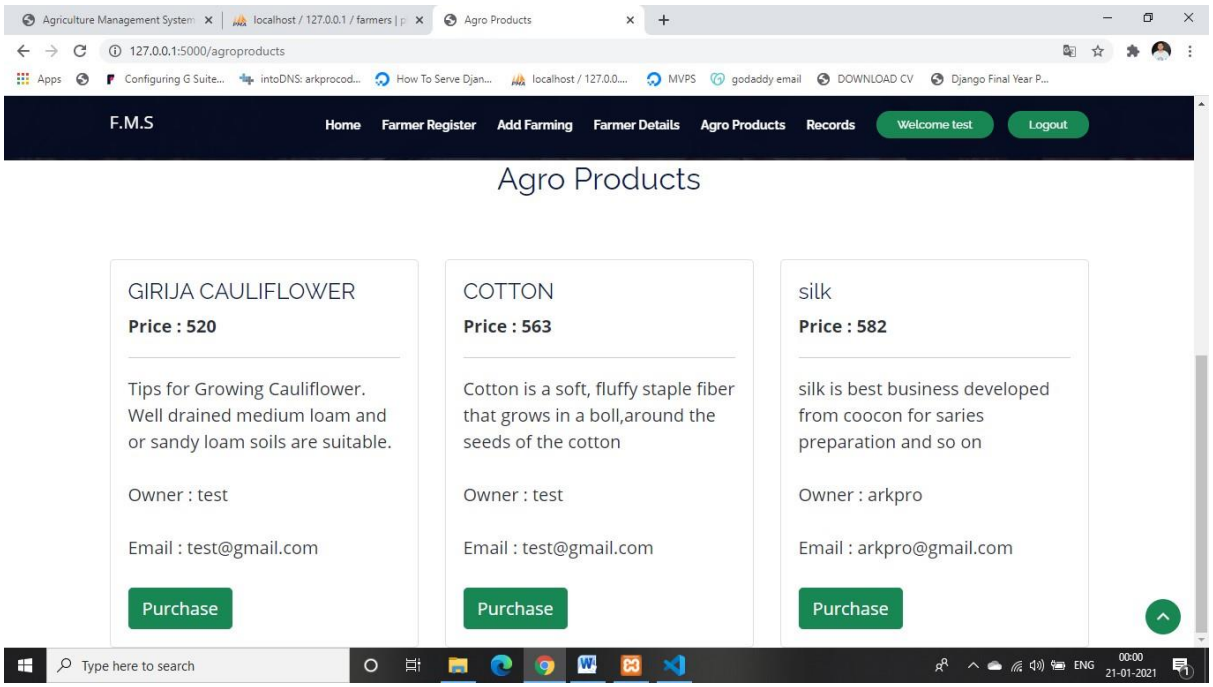
SIGN IN PAGE:

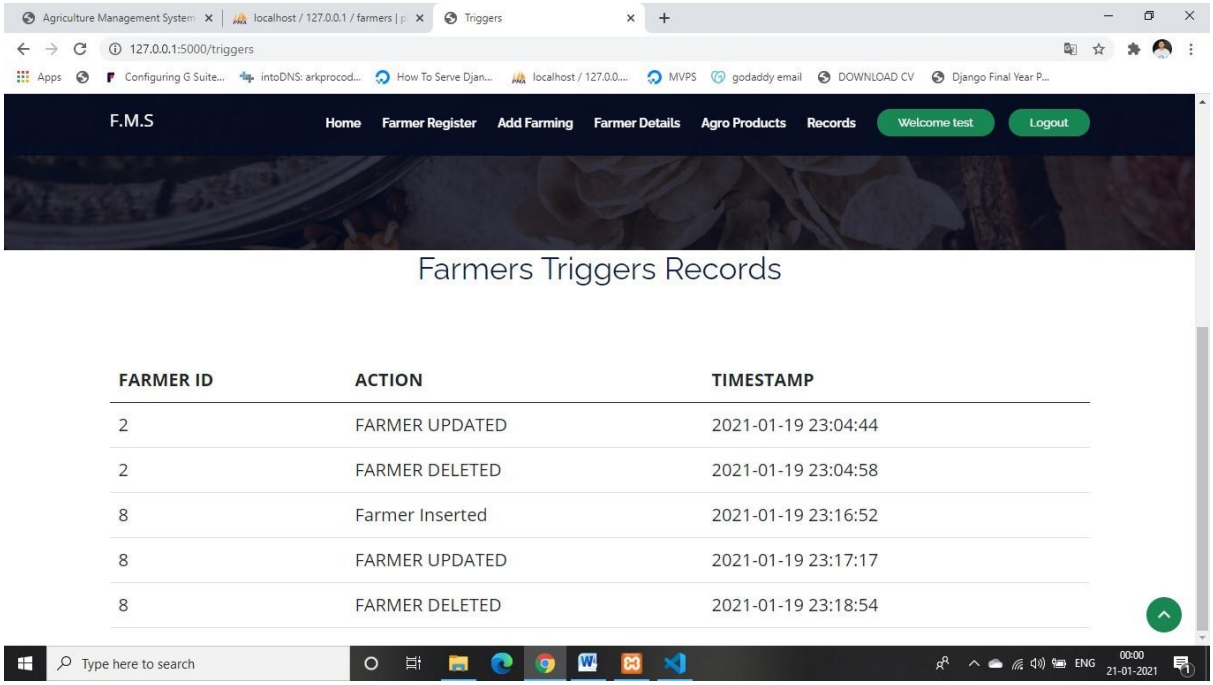




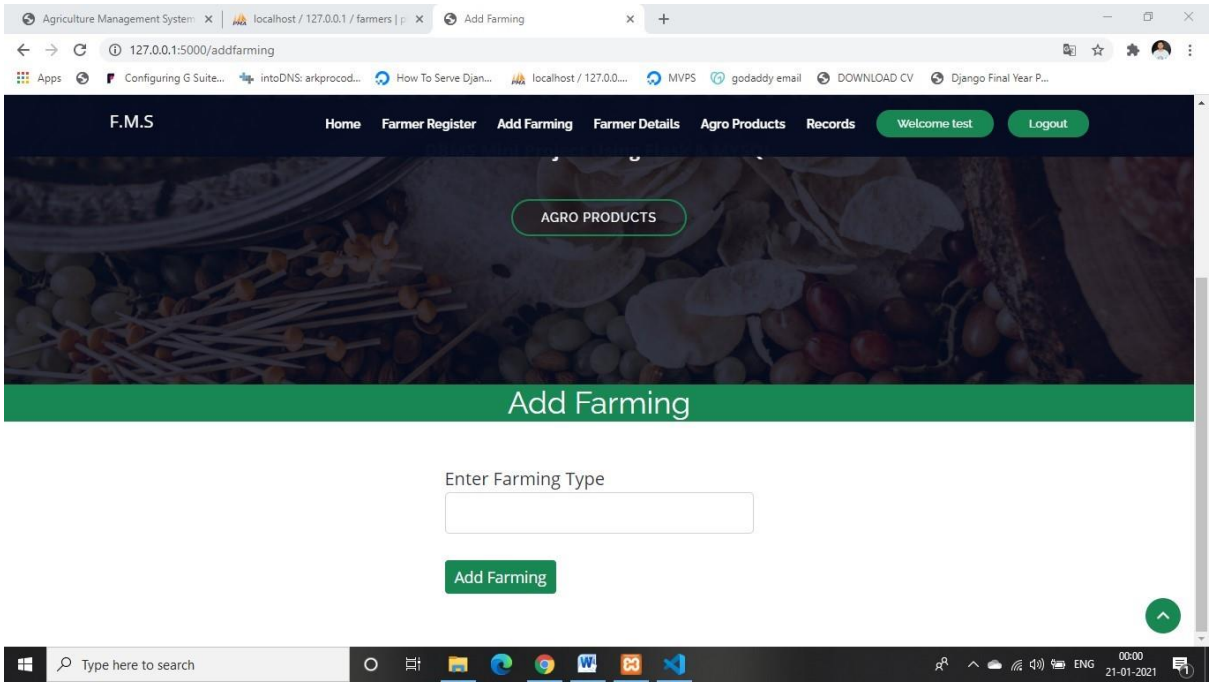


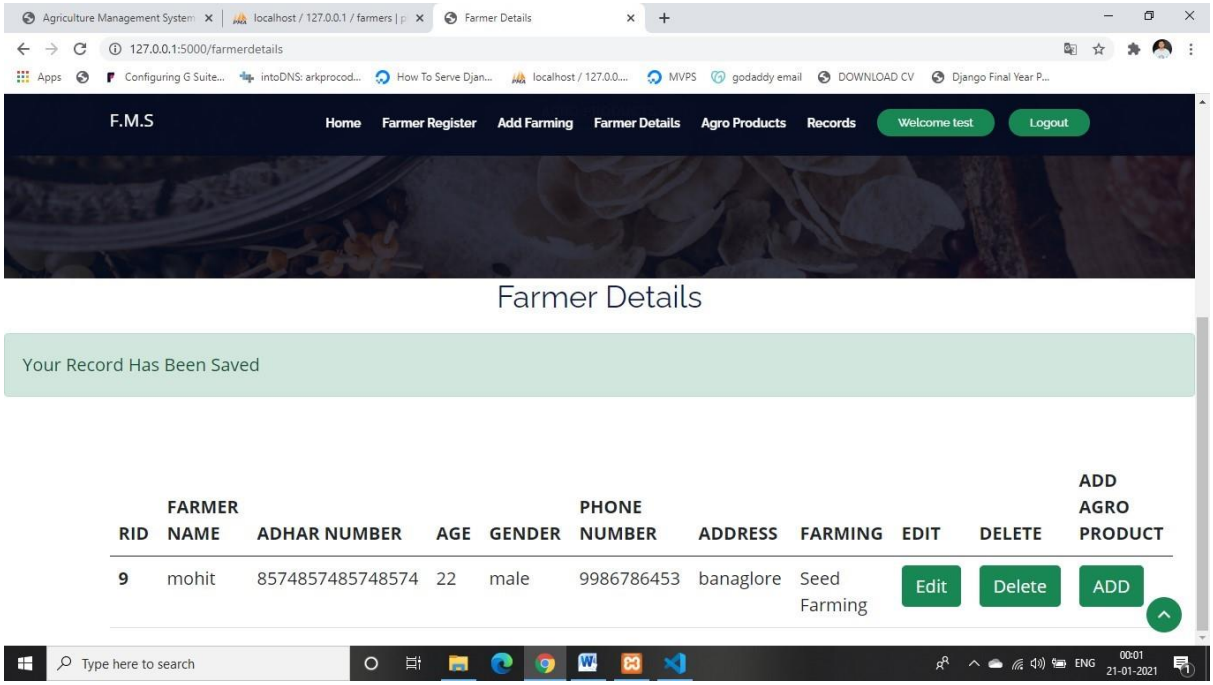
REGISTERATION PAGE & PRODUCTS:



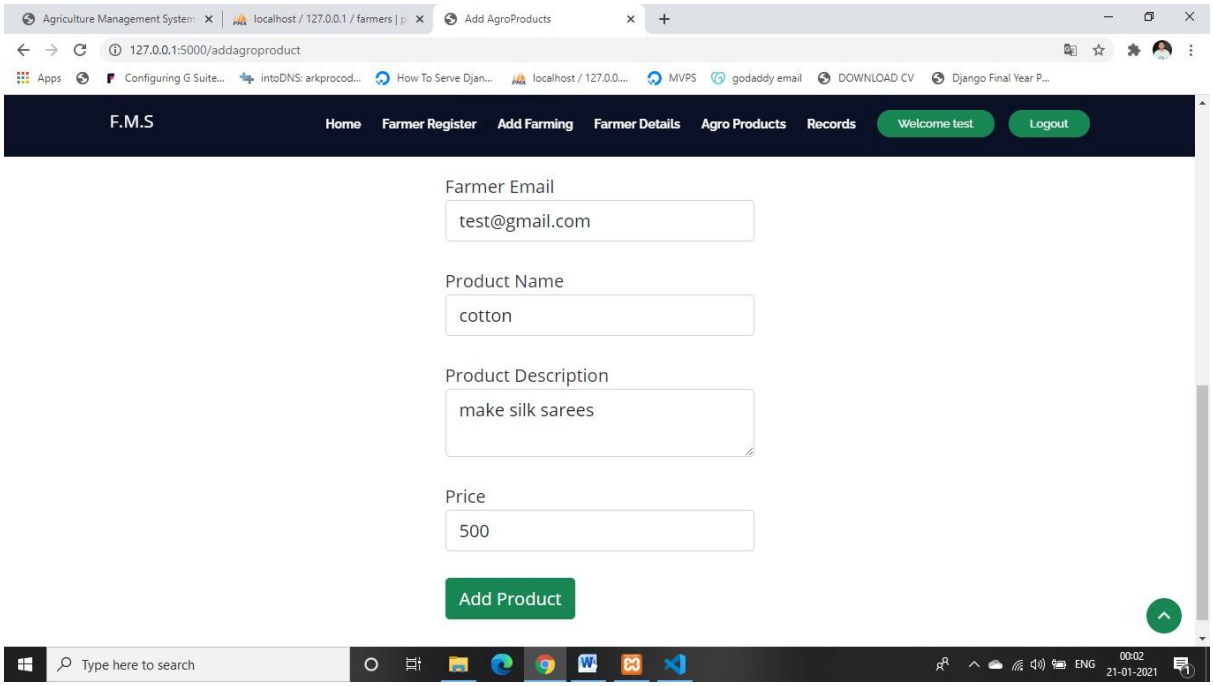


TRIGGERS RECORDS

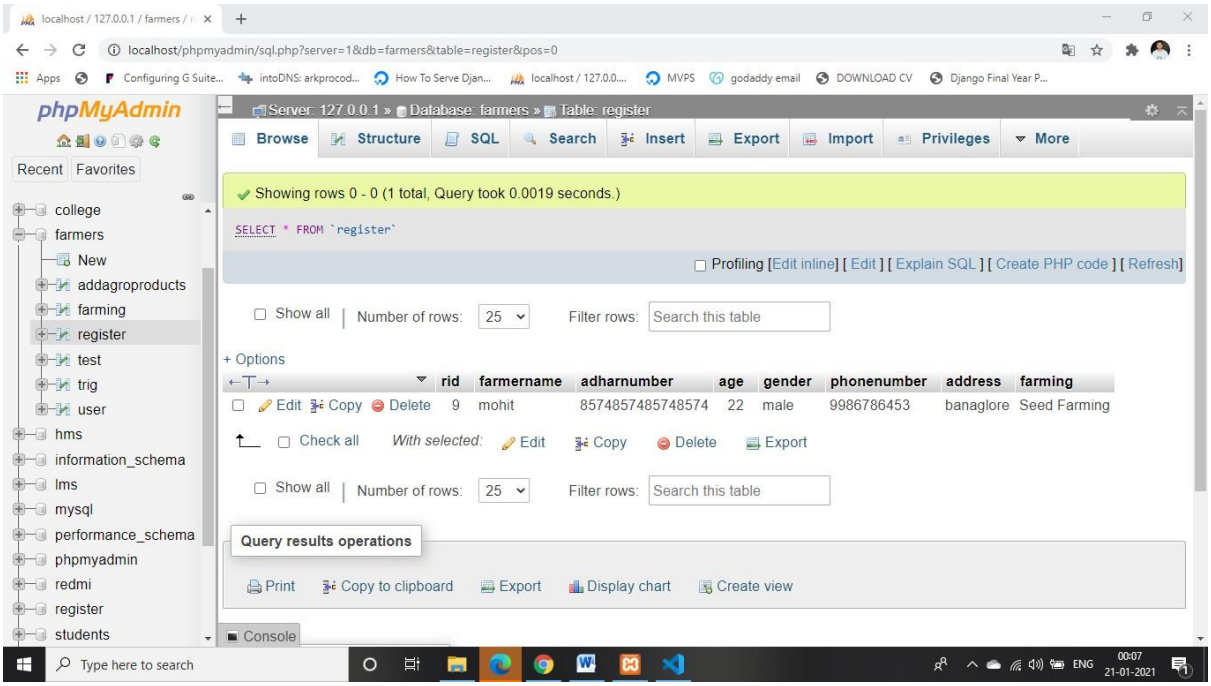


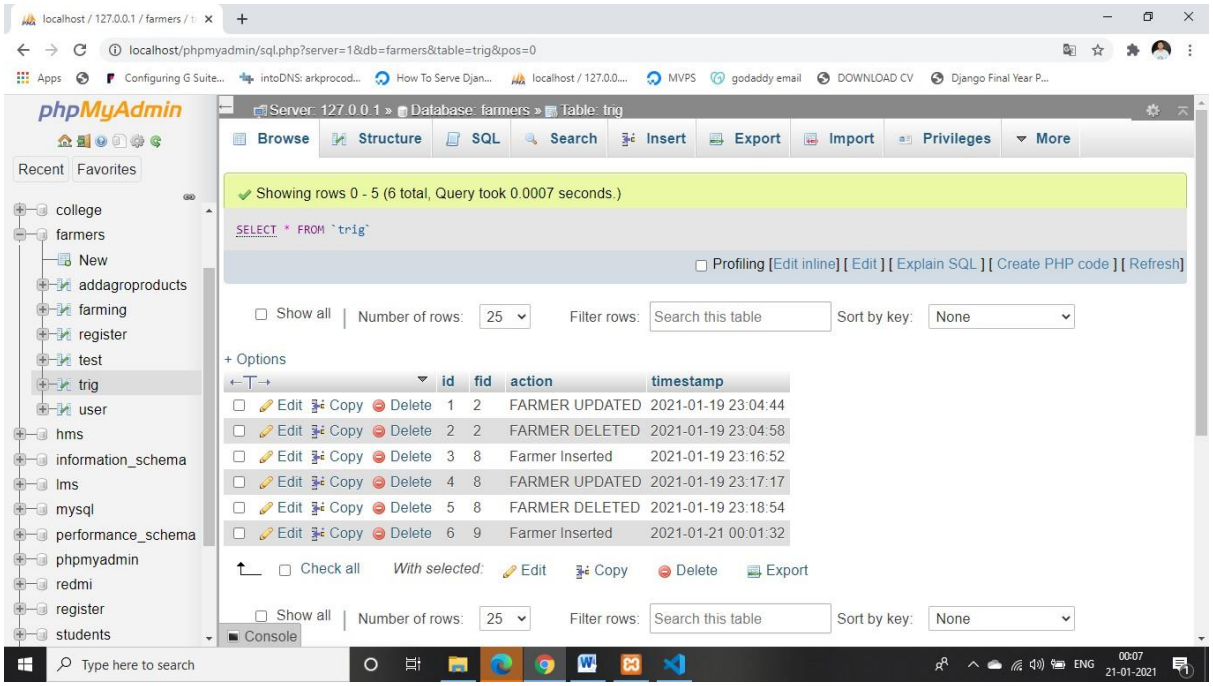


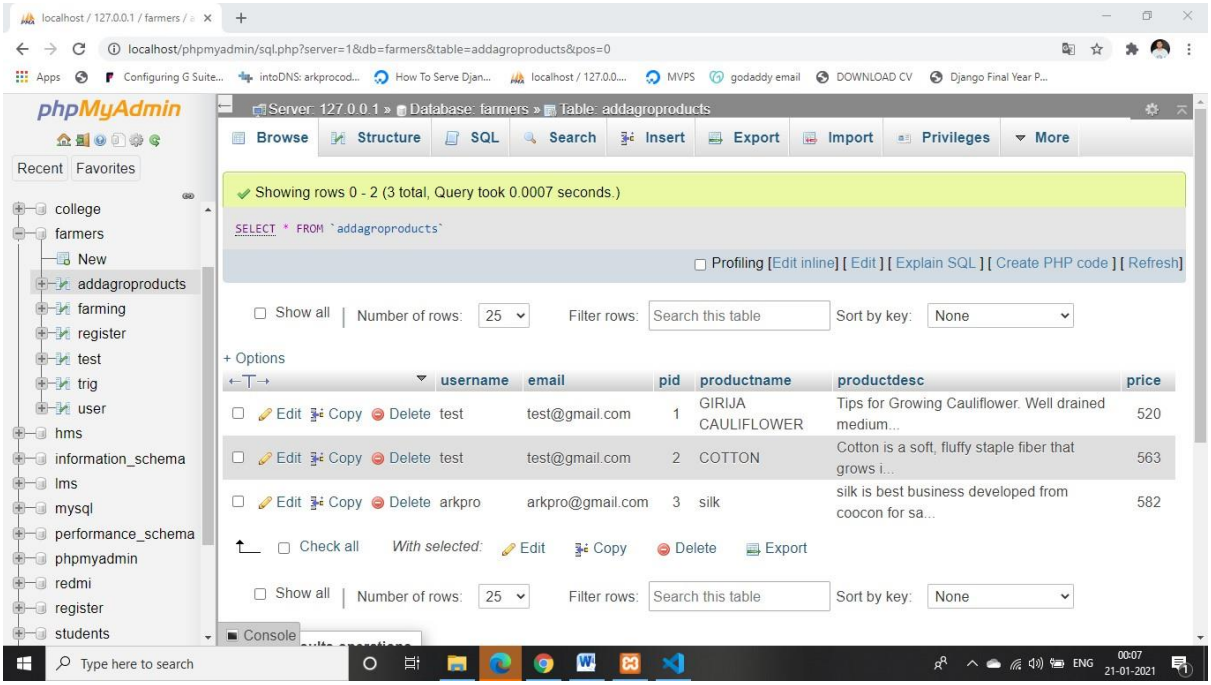
ADDING AGRO PRODUCTS



DATABASE :


localhost / 127.0.0.1 / farmers /
localhost/phpmyadmin/sql.php?server=1&db=farmers&table=register&pos=0
phpMyAdmin
Server: 127.0.0.1 » Database: farmers » Table: register
Browse
Structure
SQL
Search
Insert
Export
Import
Privileges
More
Showing rows 0 - 0 (1 total, Query took 0.0019 seconds.)
SELECT * FROM `register`
Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]
Show all | Number of rows: 25 Filter rows: Search this table
+ Options
rid farmername adharnumber age gender phonenumber address farming
Edit Copy Delete 9 mohit 857485748485748574 22 male 9986786453 banaglore Seed Farming
Check all With selected: Edit Copy Delete Export
Query results operations
Print Copy to clipboard Export Display chart Create view
Console
college
farmers
New
addagroproducts
farming
register
test
trig
user
hms
information_schema
lms
mysql
performance_schema
phpmyadmin
redmi
register
students
Type here to search
ENG
00:07
21-01-2021


localhost / 127.0.0.1 / farmers /
localhost/phpmyadmin/sql.php?server=1&db=farmers&table=trig&pos=0
phpMyAdmin
Server: 127.0.0.1 » Database: farmers » Table: trig
Browse
Structure
SQL
Search
Insert
Export
Import
Privileges
More
Showing rows 0 - 5 (6 total, Query took 0.0007 seconds.)
SELECT * FROM `trig`
Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]
Show all | Number of rows: 25 Filter rows: Search this table Sort by key: None
+ Options
id fid action timestamp
Edit Copy Delete 1 2 FARMER UPDATED 2021-01-19 23:04:44
Edit Copy Delete 2 2 FARMER DELETED 2021-01-19 23:04:58
Edit Copy Delete 3 8 Farmer Inserted 2021-01-19 23:16:52
Edit Copy Delete 4 8 FARMER UPDATED 2021-01-19 23:17:17
Edit Copy Delete 5 8 FARMER DELETED 2021-01-19 23:18:54
Edit Copy Delete 6 9 Farmer Inserted 2021-01-21 00:01:32
Check all With selected: Edit Copy Delete Export
Show all | Number of rows: 25 Filter rows: Search this table Sort by key: None
Console
college
farmers
New
addagroproducts
farming
register
test
trig
user
hms
information_schema
lms
mysql
performance_schema
phpmyadmin
redmi
register
students
Type here to search
ENG
00:07
21-01-2021


localhost / 127.0.0.1 / farmers /
localhost/phpmyadmin/sql.php?server=1&db=farmers&table=addagroproducts&pos=0
phpMyAdmin
Recent Favorites
college
farmers
New
addagroproducts
farming
register
test
trig
user
hms
information_schema
lms
mysql
performance_schema
phpmyadmin
redmi
register
students
Server: 127.0.0.1 » Database: farmers » Table: addagroproducts
Browse Structure SQL Search Insert Export Import Privileges More
Showing rows 0 - 2 (3 total, Query took 0.0007 seconds.)
SELECT * FROM `addagroproducts`
Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]
Show all | Number of rows: 25 Filter rows: Search this table Sort by key: None
+ Options
username email pid productname productdesc price
Edit Copy Delete test test@gmail.com 1 GIRIJA CAULIFLOWER Tips for Growing Cauliflower. Well drained medium... 520
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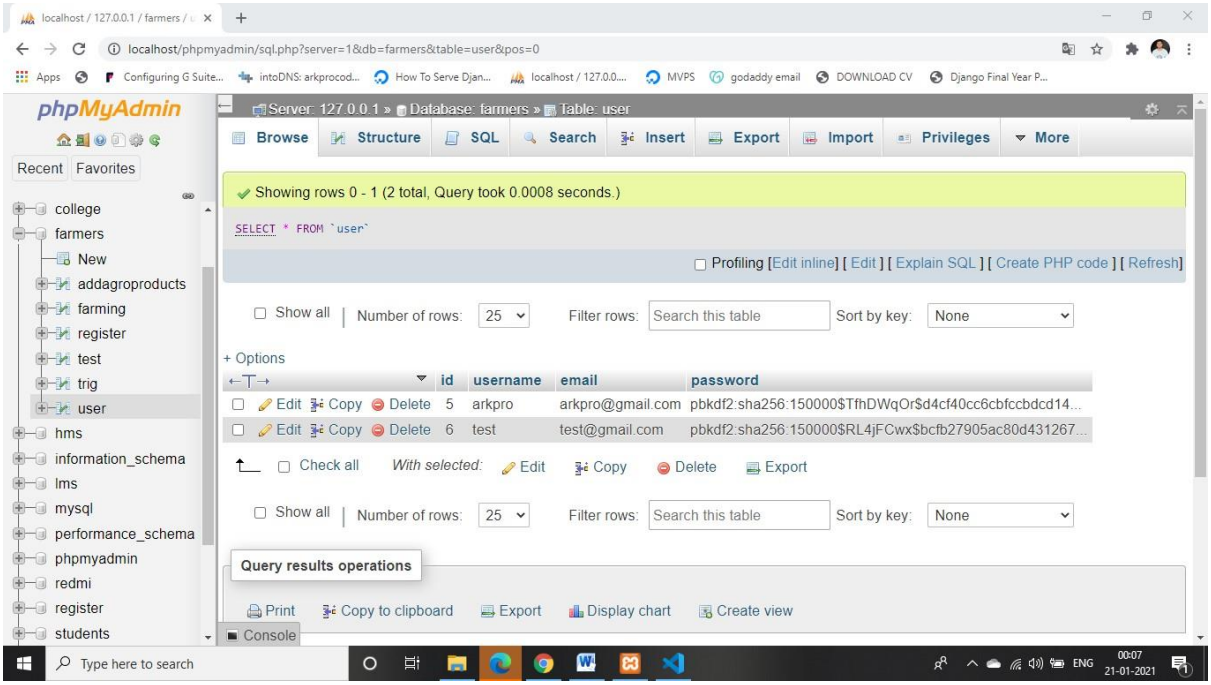
Edit Copy Delete arkpro arkpro@gmail.com 3 silk silk is best business developed from coocon for sa... 582
Check all With selected: Edit Copy Delete Export
Show all | Number of rows: 25 Filter rows: Search this table Sort by key: None
Console
Type here to search
ENG 00:07 21-01-2021


localhost / 127.0.0.1 / farmers /
localhost/phpmyadmin/sql.php?server=1&db=farmers&table=user&pos=0
phpMyAdmin
Recent Favorites
college
farmers
New
addagroproducts
farming
register
test
trig
user
hms
information_schema
lms
mysql
performance_schema
phpmyadmin
redmi
register
students
Server: 127.0.0.1 » Database: farmers » Table: user
Browse Structure SQL Search Insert Export Import Privileges More
Showing rows 0 - 1 (2 total, Query took 0.0008 seconds.)
SELECT * FROM `user`
Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]
Show all | Number of rows: 25 Filter rows: Search this table Sort by key: None
+ Options
id username email password
Edit Copy Delete 5 arkpro arkpro@gmail.com pbkdf2:sha256:150000$TfhDWqOr$d4cf40cc6cbfccbdcd14...
Edit Copy Delete 6 test test@gmail.com pbkdf2:sha256:150000$RL4jFCwx$bcfb27905ac80d431267...
Check all With selected: Edit Copy Delete Export
Show all | Number of rows: 25 Filter rows: Search this table Sort by key: None
Query results operations
Print Copy to clipboard Export Display chart Create view
Console
Type here to search
ENG 00:07 21-01-2021

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.

FUTURE ENHANCEMENT

• Enhanced database storage facility

• Enhanced user friendly GUI

• more advanced results systems

• online payments

REFERENCES

- https://www.youtube.com
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- http://www.getbootstrap.com