

Chapter 1

INTRODUCTION

1.1 introduction

Agriculture is the farmer system where they can plan, monitor and analyze the activity of the farmers production system. It manages farmer operation with one system and organizes data in one place. It helps smart farmers become even smarter. This creates in partnership with growers and buyers. It inspire farmer to produce and buyers to consume fresh goods.

AgroCulture System will make better connection among Farmers and Buyers ensure quality food. Standardize and increase efficiency of Farm Buddy process.

1.2 Objectives of the Project

The specific objectives of the project include:

- ❖ To provide qualitative foods to the buyers.
- ❖ Implementing an automated/online AgroCulture system.
- ❖ To inspire farmer to produce quality goods and supply to the buyers.
- ❖ Eco-friendly farming system.

1.3 Scope of the Project

It is focused on studying the existing system of Agriculture in and to make sure that the peoples are getting quality fresh goods. This is also will produce:

- Less effort and less labour intensive, as the primary cost and focus primary on creating, managing, and running a secure quality food supply.
- Increasing number of buyers as individuals will find it easier and more convenient to buy goods.
- Easy management.

1.4 Methodology/Procedure

For the development of project the designing of database was done on PHPMYADMIN, back end was coded in basic PHP and for frontend we used the same basic PHP codes. Software methodologies are concerned with the process of creating software – not so much the technical side but the organizational aspects. Several software development approaches have been used since the origin of information technology.

1.5 Project Framework

A framework is a standardized set of concepts, practices, and criteria for dealing with a common type of problem, which can be used as a reference to help us approach and resolve new problems of a similar nature. The aim of framework is to provide a common structure so that developers don't have to redo it from scratch and can reuse the code provided. In this way, frameworks allow's us to cut out much of the work and save a lot of time.

1.6 Data and Information

Data collection plays an important role in a projects succession and also it plays an inevitable role in the timely completion of the project. The data in the project includes contact information of the clients and their respective feedbacks/complaints which is stored in a database. To assure safety, only the admin has proper access to the information provided by the clients.

1.7 Primary Source of Data

Primary data are the first hand data. The necessary information was collected from day to day observation, problems, instructions of supervisor. Queries and personal discussion with the staff of the organization.

- Observation of working environment

1.8 Source of Data

The Secondary sources of data were collected in order to achieve the real and fact data as far as available. The major sources of secondary data are as follows:

- Annual reports of the concerned organization
- Related websites.

Chapter 2

SOFTWARE REQUIREMENTS

2.1 Software Used:

Operating system : Windows 98, XP , 7,8 or 10 or Linux
Languages(Front end) : HTML,PHP and Bootstrap
(Back end) : SQL
IDE : Notepad++, Xampp and MySQL

2.2 Software Description:

2.2.1 XAMPP(PhpMyAdmin)

PhpMyAdmin can manage a whole MySQL server as well as a single database. To accomplish the later you'll need a properly set up MySQL user who can read/write only the desired database. It's up to you to look up the appropriate part in the MySQL manual.

- browse and drop databases, tables, views, columns and indexes
- create, copy, drop, rename and alter databases, tables, columns and indexes
- maintenance server, databases and tables, with proposals on server configuration
- execute, edit and bookmark any SQL-statement, even batch-queries
- load text files into tables
- create¹ and read dumps of tables
- export¹ data to various formats: CSV, XML, PDF, ISO/IEC 26300 – Open Document Text and Spreadsheet, Word, and L^AT_EX formats
- import data and MySQL structures from Open Document spreadsheets, as well as XML, CSV, and SQL files

- administer multiple servers
- manage MySQL users and privileges
- check referential integrity in MyISAM tables
- using Query-by-example (QBE), create complex queries automatically connecting required tables
- create PDF graphics of your Database layout
- search globally in a database or a subset of it
- transform stored data into any format using a set of predefined functions, like displaying BLOB-data as image or download-link
- track changes on databases, tables and views
- support InnoDB tables and foreign keys
- support mysqli, the improved MySQL extension
- create, edit, call, export and drop stored procedures and functions
- create, edit, export and drop events and triggers.
- communicate in
- synchronize two databases residing on the same as well as remote servers .

2.2.2 PHP

- You need PHP 5.2.0 or newer, with session support, the Standard PHP Library (SPL) extension and JSON support.
- To support uploading of ZIP files, you need the PHP zip extension.
- For proper support of multibyte strings (eg. UTF-8, which is currently the default), you should install the mbstring and ctype extensions.
- You need GD2 support in PHP to display inline thumbnails of JPEGs ("image/jpeg: inline") with their original aspect ratio.
- When using the "cookie" authenticated method, the mcrypt extension is strongly suggested for most users and is required for 64-bit machines. Not using mcrypt will cause phpMyAdmin to load pages significantly.

2.3 Problem Analysis

It is related with the accessing the detailed information of a user and a candidate. So, I have initiated this project with simple requirements regarding the user and candidate information. Some of the problems for designing and developing this project are discussed below:

2.3.1 Design and Development Problem

- Problem in running XAMPP.
- To debug the error during the development.
- To show a relationship between entity.
- Minor error with database table.

2.4 Operational Feasibility

The system is operational feasible as the system can be operate by normal users with basic computer skills without any additional trainings. We have developed this system with the willingness and ability to create, manage and operate the system which is easy for the end users to operate it.

CHAPTER 3

SYSTEM ANALYSIS AND DESIGN

3.1 System Analysis

System Analysis is a detailed study of the various operations performed by a system and their relationships within and outside of the system. Here the key question is- why all problems exist in the present system? What must be done to solve the problem? Analysis begins when a user or manager begins a study of the program using existing system. During analysis, data collected on the various files, decision points and transactions handled by the present system. The commonly used tools in the system are Data Flow Diagram etc. Training, experience and common sense are required for collection of relevant information needed to develop the system. The success of the system depends largely on how clearly the problem is defined, thoroughly investigated and properly carried out through the choice of solution. A good analysis model should provide not only the mechanisms of problem understanding but also the frame work of the solution. Thus it should be studied thoroughly by collecting data about the system. Then the proposed system should be analyzed thoroughly in accordance with the needs. System analysis can be categorized into four parts.

- System planning and initial investigation
- Information Gathering
- Applying analysis tools for structured analysis
- Feasibility study
- Cost/ Benefit analysis.

In our existing system the recording of user's information is done manually, So taking more time for searching the information of the users. Another major disadvantage is that preparing the list of members that viewed any user's information takes more time. So, after conducting the feasibility study I decided to make the AgroCulture System to be computerized.

3.2 Use Case Diagram

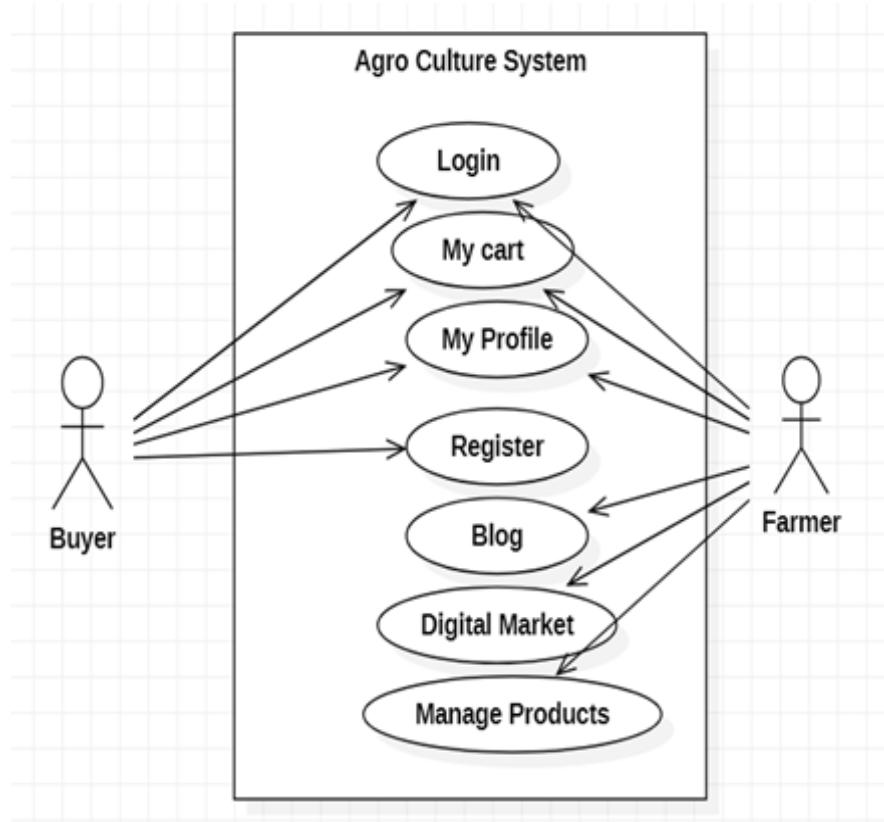


Fig3.2 Use Case Diagram

Above figure represents Use Case Diagram of the project and is a useful technique for identifying, clarifying, and organizing system requirements. It describes how a user uses a system to accomplish a particular goal. Use cases help ensure that the correct system is developed by capturing the requirements from the user's point of view.

3.3 Sequence Diagram

A sequence diagram is a type of interaction diagram because it describes how—and in what order—a group of objects works together. A sequence diagram specifically focuses on lifelines, or the processes and objects that live simultaneously, and the messages exchanged between them to perform a function before the lifeline ends.

Above diagram represents Sequence Diagram of the project which is a type of interaction diagram because it describes how—and in what order—a group of objects works together. A sequence diagram specifically focuses

on lifelines, or the processes and objects that live simultaneously, and the messages exchanged between them to perform a function before the lifeline ends.

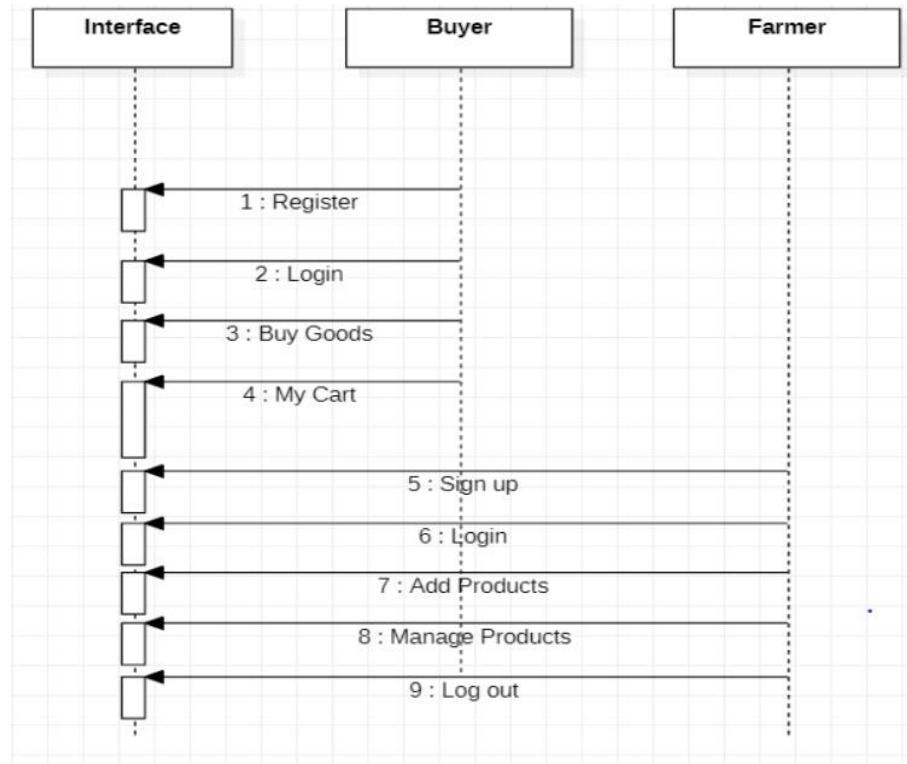


Fig3.3 Sequence Diagram

3.4 Activity Diagram

Below diagram describes the flow of control of a system. The flow can be sequential, concurrent or branched showing the overall functions of the system

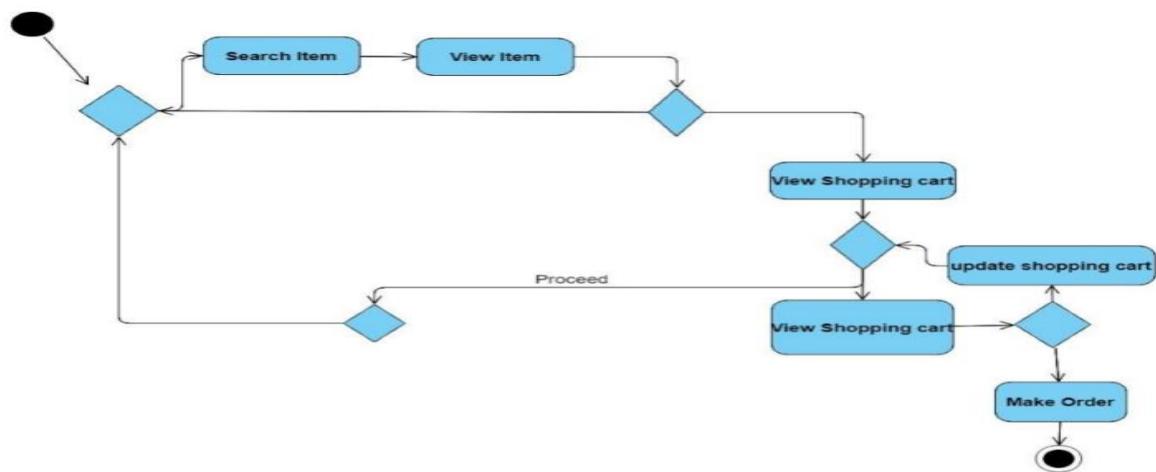


Fig3.4 Activity Diagram

3.5 ER DIAGRAM

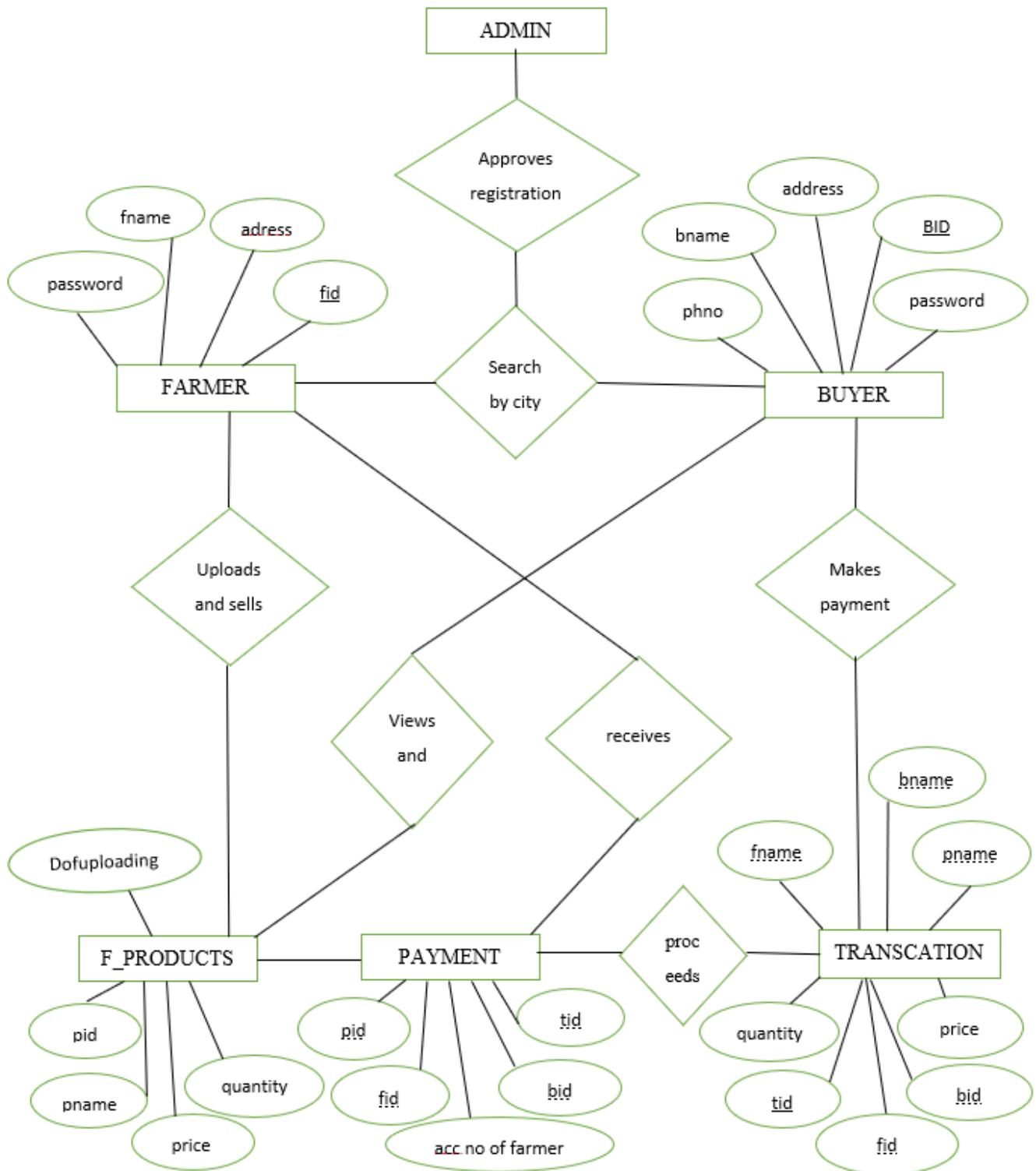


Fig3.5 ER Diagram

3.6 TABLES

FARMER

FID	F_NAME	PASSWORD	F_PH_NO	ADDRESS	F_USERNAME

BUYER

BID	B_NAME	PASSWORD	PH_NO	ADDRESS	B_USERNAME

F_PRODUCT

FID	PID	PCAT	P_INFO	PRICE

MY_CART

BID	PID

TRANSCATION

TID	BID	PID	NAME	CITY	PIN_CODE	ADRESS	PH_NO

3.7 TABLES DESCRIPTION

The “BUYER” table provides all information about Buyer.

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	bid	int(100)			No	None		AUTO_INCREMENT	Change Drop More
2	bname	varchar(100)	latin1_swedish_ci		No	None			Change Drop More
3	busername	varchar(100)	latin1_swedish_ci		No	None			Change Drop More
4	bpassword	varchar(100)	latin1_swedish_ci		No	None			Change Drop More
5	bhash	varchar(100)	latin1_swedish_ci		No	None			Change Drop More
6	bemail	varchar(100)	latin1_swedish_ci		No	None			Change Drop More
7	bmobile	varchar(100)	latin1_swedish_ci		No	None			Change Drop More
8	baddress	text	latin1_swedish_ci		No	None			Change Drop More
9	bactive	int(100)			No	0			Change Drop More

The “FARMER” table provides all information about Farmer.

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	fid	int(255)			No	None		AUTO_INCREMENT	Change Drop More
2	fname	varchar(255)	latin1_swedish_ci		No	None			Change Drop More
3	fusername	varchar(255)	latin1_swedish_ci		No	None			Change Drop More
4	fpassword	varchar(255)	latin1_swedish_ci		No	None			Change Drop More
5	fhash	varchar(255)	latin1_swedish_ci		No	None			Change Drop More
6	femail	varchar(255)	latin1_swedish_ci		No	None			Change Drop More
7	fmobile	varchar(255)	latin1_swedish_ci		No	None			Change Drop More
8	faddress	text	latin1_swedish_ci		No	None			Change Drop More
9	factive	int(255)			No	0			Change Drop More
10	frating	int(11)			No	0			Change Drop More
11	picExt	varchar(255)	latin1_swedish_ci		No	png			Change Drop More
12	picStatus	int(10)			No	0			Change Drop More

The “F_PRODUCT” table provides all information about f_product.

+ Options											
	Edit	Copy	Delete	fid	pid	product	pcat	pinfo	price	pimage	picStatus
<input type="checkbox"/>				3	27	Mango	Fruit	<p>Mango raseela</p>	500	Mango3.jpeg	1
<input type="checkbox"/>				3	28	Ladyfinger	Vegetable	<p>Its veggie</p>	1000	Ladyfinger3.jpg	1
<input type="checkbox"/>				3	29	Bajra	Grains	<p>bajre di rti</p>	400	Bajra3.jpg	1
<input type="checkbox"/>				3	30	Banana	Fruit	<p>Jalgaon banana</p>	400	Banana3.jpg	1
<input type="checkbox"/>				4	31	Strawberry	Fruit		100	Strawberry4.png	1
<input type="checkbox"/>				4	32	sweet lime	Fruit		80	sweet lime4.png	1

The “MY_CART” Table provides all information about my_cart.

 Table structure Relation view										
#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action	
1	bid	int(10)			No	None			Change Drop More	
2	pid	int(10)			No	None			Change Drop More	
<input type="checkbox"/> Check all		With selected:		Browse	Change	Drop	Primary	Unique	Index	Fulltext
Add		<input type="text" value="1"/>	column(s)	<input type="text" value="after pid"/>	<input type="button" value="Go"/>	Add to central columns Remove from central columns				
Print		Propose table structure	Track table	Move columns	Normalize					

The “TRANSACTION” Table provides all information about transaction.

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	tid 	int(10)			No	None		AUTO_INCREMENT	 Change  Drop  More
2	bid	int(10)			No	None			 Change  Drop  More
3	pid	int(10)			No	None			 Change  Drop  More
4	name	varchar(255)	latin1_swedish_ci		No	None			 Change  Drop  More
5	city	varchar(255)	latin1_swedish_ci		No	None			 Change  Drop  More
6	mobile	varchar(255)	latin1_swedish_ci		No	None			 Change  Drop  More
7	email	varchar(255)	latin1_swedish_ci		No	None			 Change  Drop  More
8	pincode	varchar(255)	latin1_swedish_ci		No	None			 Change  Drop  More
9	addr	varchar(255)	latin1_swedish_ci		No	None			 Change  Drop  More

The “f_product” Table provides all the information about the farmer products

<input type="checkbox"/> Show all Number of rows: 25 <input type="button" value="▼"/> Filter rows: <input type="text" value="Search this table"/> Sort by key: <input type="button" value="None"/>								
<input type="checkbox"/> Options <input type="button" value="←"/> <input type="button" value="→"/> <input type="button" value="fid"/> <input type="button" value="pid"/> <input type="button" value="product"/> <input type="button" value="pcat"/> <input type="button" value="pinfo"/> <input type="button" value="price"/> <input type="button" value="pimage"/> <input type="button" value="picStatus"/>								
<input type="checkbox"/>	   3	27	Mango	Fruit	<p>Mango raseela</p>	500	Mango3.jpeg	1
<input type="checkbox"/>	   3	28	Ladyfinger	Vegetable	<p>Its veggie</p>	1000	Ladyfinger3.jpg	1
<input type="checkbox"/>	   3	29	Bajra	Grains	<p>bajre di rti</p>	400	Bajra3.jpg	1
<input type="checkbox"/>	   3	30	Banana	Fruit	<p>Jalgaon banana</p>	400	Banana3.jpg	1
<input type="checkbox"/>	   4	31	Strawberry	Fruit		150	Strawberry.png	1
<input type="checkbox"/>	   4	35	sweet lime	Fruit		80	sweet lime4.png	1

Chapter 4

DATABASE TECHNIQUE AND RESULTS

4.1 TRIGGER:

There is a basic triggers in this project.

If we entered the mobile number more than 10 digits or less than 10 digits, then the message Invalid mobile number will pop up.

```
$sql = "SELECT * FROM members WHERE Username='$user'";
$result = mysqli_query($conn, $sql);
$num_rows = mysqli_num_rows($result);

if($num_rows == 0)
{
    $_SESSION['message'] = "Invalid User Credentials!";
    header("location: error.php");
}
else
{
    $User = $result->fetch_assoc();
```

4.2 PROCEDURE:

The stored procedure in this project will fetch details of all the buyers.

```
<%
    String sql = "SELECT `bid`, `bname`, `bmail`, `b_phno`, `b_address`,
`b_username`, `b_password`, WHERE b_name = '" + b_name + "'";
    ResultSet rs = dao.getData(sql);
%>
```

4.3 NORMALIZATION:

The complete tables of the database in the project is normalized , obeying all the rules of normalization

1NF:

1NF disallows relations within relations or relations as attribute values within tuples. The only attribute values permitted by 1NF are single **atomic** (or **indivisible**) **values**.

2NF:

A functional dependency $X \rightarrow Y$ is a **full functional dependency** if removal of any attribute A from X means that the dependency does not hold any more; that is, for any attribute $A \in X$, $(X - \{A\})$ does not functionally determine Y

3NF:**Transitive functional dependency**

A functional dependency $X \rightarrow Y$ in a relation schema R is a **transitive dependency** if there exists a set of attribute Z that are neither a primary nor a subset of any key of R(candidate key) and both $X \rightarrow Z$ and $Z \rightarrow Y$ holds

Definition: A relation schema R is in third normal form (3NF) if it is in 2NF *and* no non-prime attribute A in R is transitively dependent on the primary key.

1NF: In the above table there are no multi valued attributes. Thus, the functional dependency FD1 and relation satisfies 1NF.

2NF: There are no partial dependencies found in the above defined functional dependencies. Thus, we can say that relation satisfies 2NF.

3NF: There are no transitive dependencies found in the above defined functional dependencies. Thus, we can say that relation satisfies 3NF.

4.4 TESTING:

4.4.1 Testing

Testing is evaluation of the software against requirements gathered from users and system specifications. Testing identifies important defects, flaws, or an error in the application code that must be fixed .It also assesses the feature of a system. Testing assesses the quality of the product.

4.4.2 Unit Testing

Unit testing refers to the testing certain functions and areas of the code. It gives the ability to verify that all the functions work as expected.

4.4.3 Integration Testing

Integration testing is basically a logical extension of unit testing. In simple words, two tested units are combined into a component and the interface between them is tested. It identifies problems that occur when different units are combined. The different modules of this project have undergone integration testing while being merged.

4.4.4 System Testing

System testing tests the behavior of whole system as defined by the scope of the development project. It might include tests based on risks as well as requirement specifications, business process, use cases or other high level descriptions of system behavior, interactions with the operating systems and system resources. It is most often the final test performed to verify that the system meets the specification and its objectives. System testing has been performed at the completion of each feature and is still taking place to make improvements on the existing system.

TEST CASE ID	TEST CASE NAME	TEST CASE DESCRIPTION	INPUT	EXPECTED RESULT	ACTUAL RESULT	RESULT
TC 01	Admin login	Validate Admin id and Password	Enter valid Admin id and Password	Admin login should be successful	Admin login successful	PASS
TC 02	Admin login	Validate Admin id and Password	Enter Invalid Admin id and Password	“Invalid username/password” Error message should be display	“Invalid username/password” Error message is displayed	FAIL
TC 03	Admin login	Validate Admin id and Password	If any fields are left blank	“Fields are empty” Error message should be display	“Fields are empty” Error message is display	FAIL

CHAPTER 5

SNAPSHOTS

5.1 snapshots of project

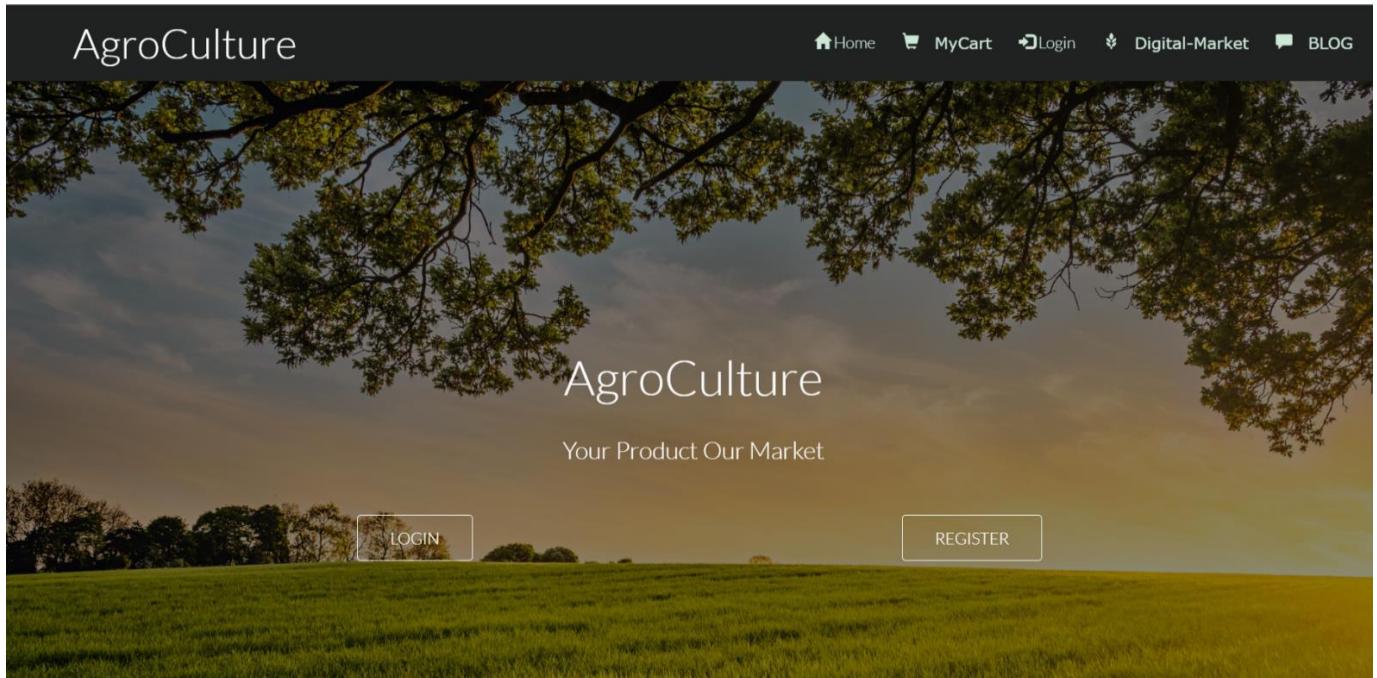


Fig.5.1.1 Home page

The image shows the "SignUp" registration page. It has fields for Name, UserName, Mobile Number, Email, Password, Retype Password, and Address. There are two radio buttons for Category: "Farmer" (checked) and "Buyer". At the bottom are "Submit" and "Reset" buttons.

Fig.5.1.2 Farmer/Buyer registration page

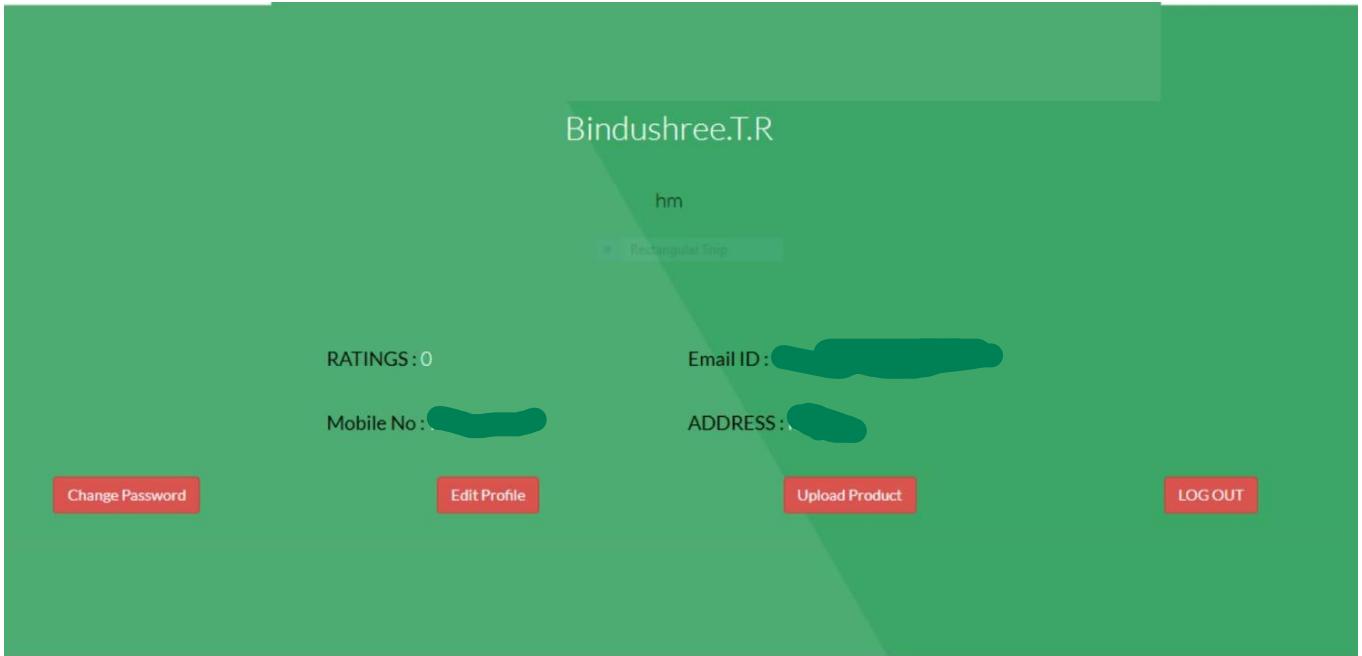


Fig.5.1.3 Farmer/Buyer Profile page

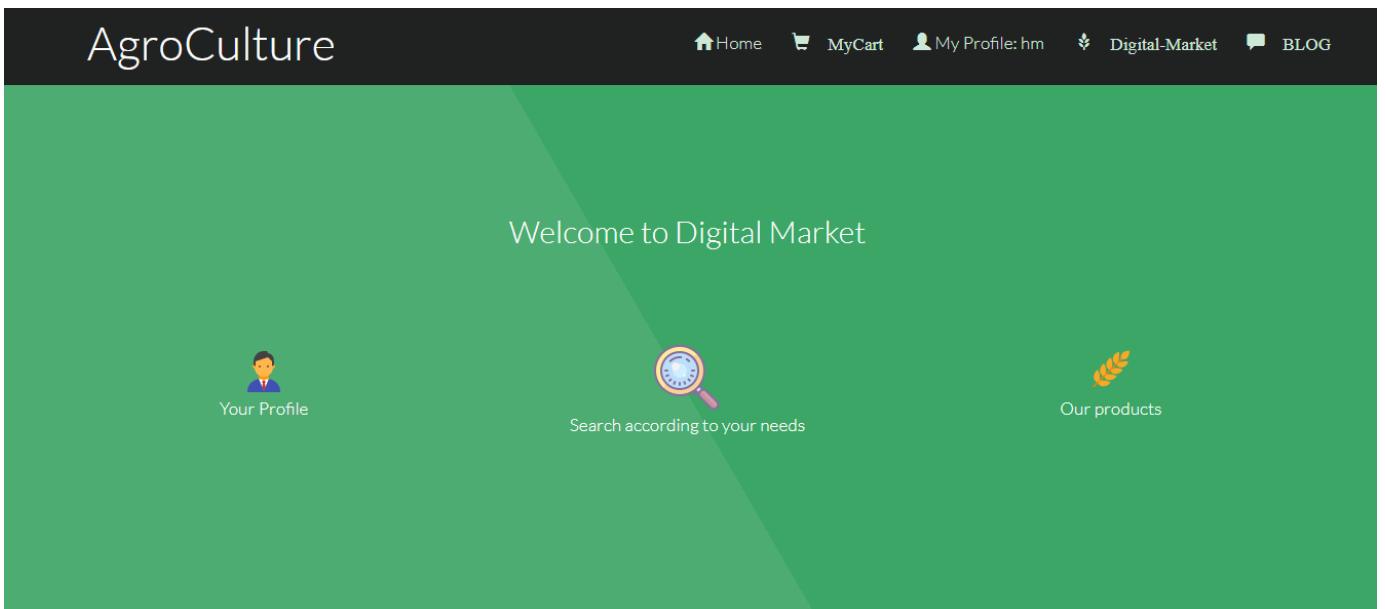


Fig.5.1.4 F-product page



Fig.5.1.5 Product Purchase Page

Transaction Details

A form titled "Transaction Details" containing fields for Name, City, Mobile Number, Email, Pincode, and Address. A "Confirm Order" button is at the bottom.

Fig.5.1.6 Transaction Details Page

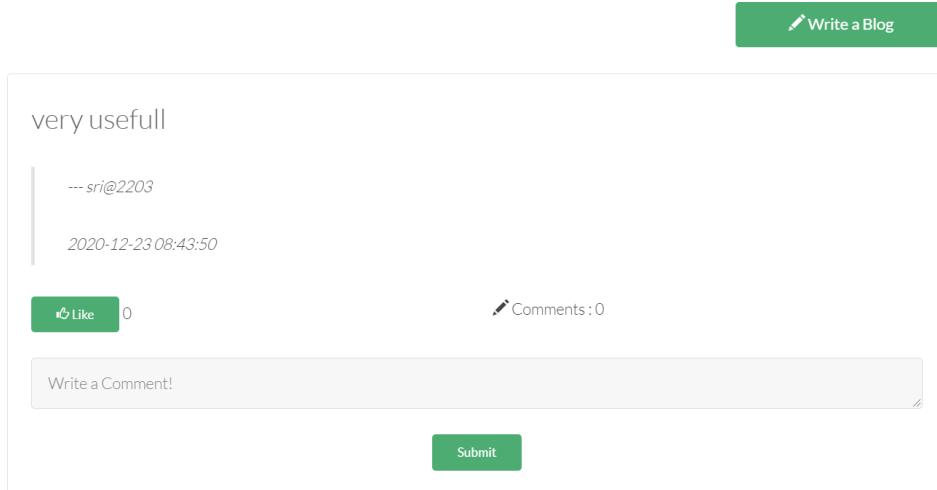


Fig.5.1.7 Blog page

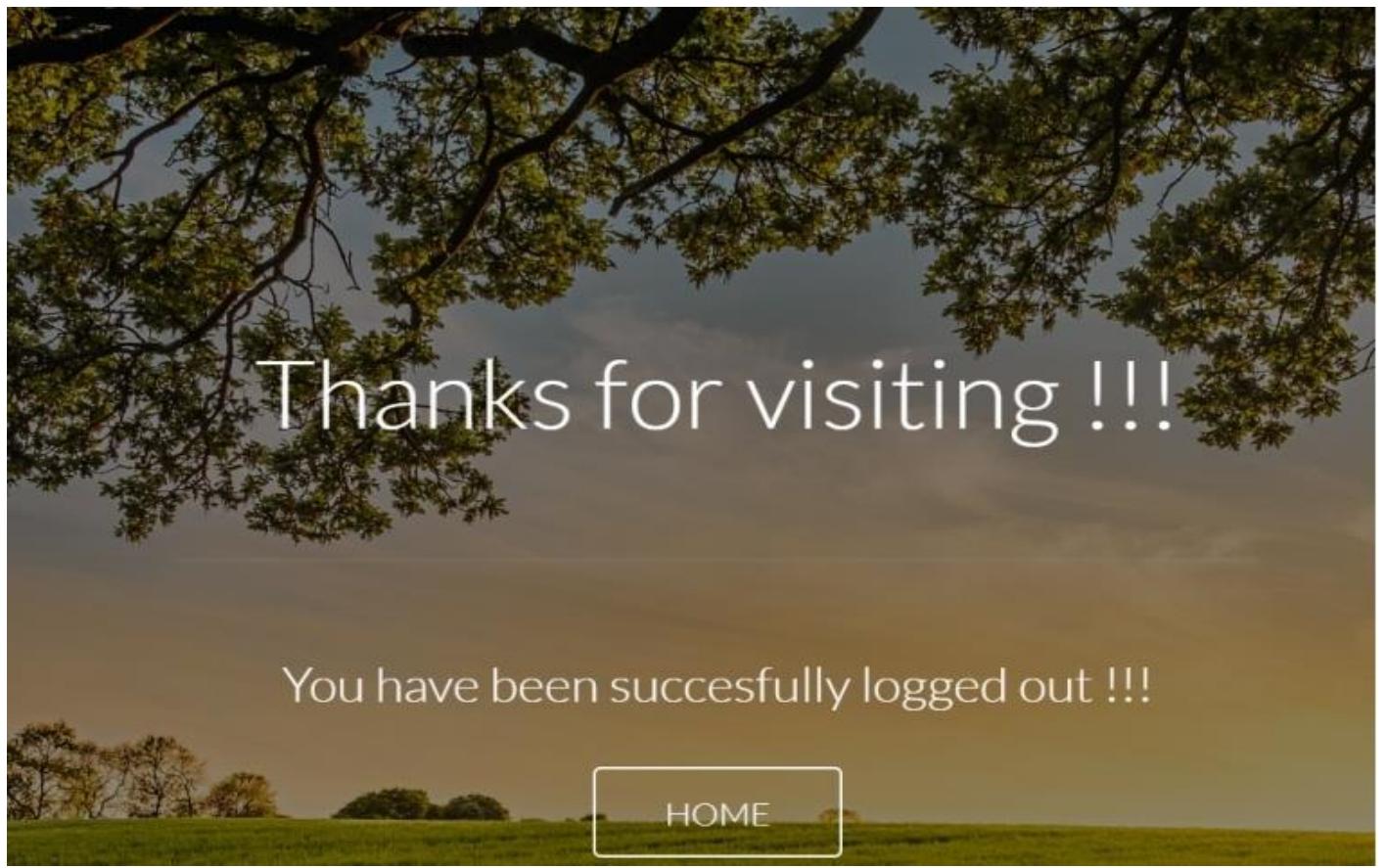


Fig.5.1.8 Member log out page

CONCLUSION

AgroCulture System will make better connection among Farmers and Buyers ensure quality food. Standardize and increase efficiency of Agroculture process. We drive agriculture transactions through our digital platform. In combination with our server partnership network . Agro market place accommodates online payments between buyers and farmers , product quality check options and end to end logistic services. Agro marketplace Accommodates direct transactions between buyers and farmers. all the intermediate supply chain stages are covered by agro mp and our partnership network.

REFERENCES

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