

Farmer's E- Market

**A Project Report Submitted in Partial Fulfillment of the
Requirement for the Degree of**

**Bachelor of Technology
in
Information Technology**

by

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CHAPTER 1

INTRODUCTION

1.1 BRIEF INTRODUCTION

Farming is the Prime Occupation in India in spite of this, today the people involved in farming belongs to the lower class and is in deep poverty. The Advanced techniques and the Automated machines which are leading the world to new heights, is been lagging when it is concerned to farming, either the lack of awareness of the advanced facilities or the unavailability leads to the poverty in farming. Even after all the hard work and the production done by the farmers, in today's market the farmers are cheated by the Agents, leading to the poverty. Agro-marketing would make all the things automatic which make easier serving as a best solution to all the problems. Farmer's e-Market will serve as a way for the farmers to sell their products across the country just with some basic knowledge about how to use the website. The site will guide the farmers in all the aspects. Getting availed to the required information related to the markets and different products can be made possible through the SMS facility. Farmers e-Market is the web application that will help the farmers to perform the agro-marketing leading to achievesuccess and increase in their standard of living. TheMarketing facility would allow the farmers to have aview of the bills created and the related information intheir accounts. An Authorized-agent would serve as away for the farmers to sell their products in the market.The Centralized market committee will have control onthe Agents through business activities review. In rural area,the SMS facility would give the required market information where internet cannot be availed. Government will put forward the new schemes for the farmers. Compensation will be provided for thefarmers in case of any loss to the production due to some natural calamities. Unique interface will be provided for applying and viewing the schemes in the website.

1.2.MOTIVATION

Agricultural marketing still continues to be in a bad shape in rural India. In the absence of sound marketing facilities, the farmers have to depend upon local traders and middlemen for the disposal of their farm produce which is sold at throw-away price.

The status of farmers in India is such that they buys everything in retail and sells their produce in wholesale. With different Agricultural Product Market Committee (APMC) acts in different states, lack of clarity on the prices set by these agencies, high lobbying capacity of the middlemen has resulted in exploitation of farmers and crops not fetching the right price.

Due to short shelf life of fruits and vegetables and other products, there is a high requirement of cold storages and warehouses to have a stable price and quantity across the year. With very few and poorly managed warehouses, the government lacks the main tool for controlling inflation and also giving a fair price to the harvest. Such uncertainties discourage farming.

In current competitive scenario every business establishment needs quality processes to increase their efficiency as well as improve their productivity. It is of vital importance that manual, time consuming & monotonous operations are automated so as to streamline the working of an organization. Since, the existing system takes more time and manpower for processing. It is keeping in mind this business philosophy that we propose a Farmer's E-Market.

Considering the above scenario faced by farmers we have designed this web portal so that farmers will be able to market their product without the involvement of middlemen or any third party. Our system will deal with all aspects of farmer's products.

1.3 OUR MISSION

The Farmer's E-Market is created to help bring together all local vendors. We want to help make each stronger individually as a collective whole by providing simple lines of communication, logistics and support within the relationship of producers to buyers and producers to producers & essentially creating an online farmers market for that offers consistent connection between all producers and buyers. The main motive of the project is to sell local and buy local.

The main objective of developing **Farmer's e-Market** are given below:

- The central concept of the application is to allow the buyer to shop virtually using internet and allow customers to buy products of their own choice.
- Improve the services of buyers and producers eliminating the middlemen between them.
- Maintaining details of customer payments, product receipts, and also updation of the same.
- The information pertaining to the products are stored on RDBMS at the server side. The server process the customers and the items are shipped accordingly
- Capable of storing all the day to day transactions
- Since, all the data are stored in the database analysis of data can be done. The admin can keep record of what product is sold to which buyer from which farmer. Every data can be accessed and analysis can be done which will help in generation of reports for future use.

CHAPTER 2

SYSTEM ANALYSIS

2.1 INTRODUCTION

System analysis is the process of gathering and interpreting facts, diagnosing problems and using the information to recommend improvements on the system. System analysis is a problem solving activity that requires intensive communication between the system users and system developers.

System analysis or study is an important phase of any system development process. The system is studied to the minutest detail and analyzed. The system analyst plays the role of an interrogator and dwells deep into the working of the present system. The system is viewed as a whole and the inputs to the system are identified. The outputs from the organization are traced through the various processing that the inputs phase through in the organization. A detailed study of these processes must be made by various techniques like Interviews, Questionnaires etc. The data collected by these sources must be scrutinized to arrive to a conclusion. The conclusion is an understanding of how the system functions. This system is called the existing system. Now, the existing system is subjected to close study and the problem areas are identified. The designer now functions as a problem solver and tries to sort out the difficulties that the enterprise faces. The solutions are given as a proposal. The proposal is then weighed with the existing system analytically and the best one is selected. The proposal is presented to the user for an endorsement by the user. The proposal is reviewed on user request and suitable changes are made. This loop ends as soon as the user is satisfied with the proposal.

REQUIREMENT AND FEASIBILITY ANALYSIS

2.2 INTRODUCTION

Prior to stating whether the system we have to develop is feasible or not we believe that we should emphasize on what is implied by the word "Feasibility". Feasibility is the measure of how beneficial or practical the development of the system will be to the organization. It is a preliminary survey for the systems investigation. It aims to provide information to facilitate a later in-depth investigation. The report produced at the end of the feasibility study contains suggestions and reasoned arguments to help management decide whether to commit further resources to the proposed project.

If and when the objectives of the system are met and the new system is approved, then the more Specific details in the proposal should be considered and approved.

2.2.1 TYPES OF FEASIBILITY

There are various measures of feasibility that helps to decide whether a particular project is feasible or not . These measures include-

Operational Feasibility

Technical Feasibility

Economical and Financial Feasibility

OPERATIONAL FEASIBILITY:

A proposed system is beneficial only if it can be turned into an information system that will meet the operational requirements of an organization. A system often fails if it does not fit within existing operations and if users resist the change.

Important issues a systems developer must look into are:

Will the new system be used if implemented in an organization?

Are there major barriers to implementation or is proposed system accepted without destructive resistance?

The new system is more user-friendly, which enables the end-user to complete his/her work efficiently and accurately with interest. After taking the above fact into consideration we can state the operating of the proposed system within the organization is feasible.

In this phase of the feasibility study the following two main topics

Technical Performance Aspect

Acceptance within the organization

Technical performance aspect is explained in the technical feasibility report and there is no new information needed in this to explain it again, but as for the acceptance within the organization the following points are important and those are explained according to the topics

1. Whether the system provides right information to the right place.

In the current system, which is the semi computerized system the information may be lost in the process of sending from one place to another. This is mainly due to human interaction in the process of transferring information from one place to another.

2. Whether the new system affect the current users in the system.

SECURITY:

- Security is a vital aspect when it comes to developing a system. The system should ensure the facility of preventing unauthorized personnel from accessing the information and the data within the system.
- The system should provide total protection for each user's information so that the integrity of data is sustained and also prevent hackers from hacking the system.
- The proposed system ensures the security and the integrity of data. This is done by providing a password login system for each authorized users. And for example the System Administrator has access to all kinds of information.

ECONOMICAL AND FINANCIAL FEASIBILITY:

In making recommendations a study of the economics of the proposed system should be made. The proposed system must be justifiable in terms of cost and benefit, to ensure that the investment in a new/changed system provide a reasonable return.

According to the computerized system we propose, the costs can be broken down to two categories.

1. Costs associated with the development of the system.
2. Costs associated with operating the system.

2.3. EXISTING SYSTEM

- In the existing system all transactions, dealings of products, purchasing of products were done manually which is time consuming.
- Reports are prepared manually as and when needed. Maintaining of reports is tedious task

- To buy any product user has to collect information about it either by visiting the shop or by asking people which is better.
- There is no computer system for handling payments. All calculations are performed manually which may not always be accurate. Maintaining records is difficult.
- Any internet user can use this existing website to search for any kind of products, select particular product from wide range of products.
- Once they make up their mind to purchase any particular thing they can place an order and make payment through net banking.
- The existing Farmer's e-Market website is static which makes it less interactive. It has a database connectivity. The home page, farmer interface, admin interface and the user interface has been prepared.
- The system information updates according to the changes in technology and store products.
- Master maintenance is done by admin who is responsible for every updation required in the system.
- In this system, the producer can update , sell and check details about their products accordingly. They can put information about their products which are to be displayed in the website
- Buyer can avail benefits of the user friendly web based system in choosing products available and buying them. Moreover the buyer can contact admin in case of faulty products.
- Alerts and real time reporting through Emails(to both buyer and producer). Buyer as well as producer can contact admin for any information required.
- Management of wishlist is done where all items that are to be purchased can be reviewed after the item is brought from wishlist.

2.4 PROPOSED SYSTEM

Farmer's E-market is online shopping website where buyer can buy farm produce directly from farmers. Various types of farmer's products are available for purchase at reliable price. Farmer's E-market basically focuses on user friendly interfaces and promotes user to purchase the product faster.

It has registration facility and any information entered in registration table is very secure and no one can access the information. Security is given utmost importance while designing the website. If any user is not valid or involved in any kind of illegal work in the website is blocked by the admin. Even the user is not activated unless admin approves.

For any query buyer and producer both can contact admin through mail. They can use this facility any time

The entire system comprises of 3 users as mentioned below:

1. Admin:

2. Buyers:

- Local vendors(retailers)
- Hotel owners
- Schools / college canteens
- Caterers
- Restaurants

3. Producer:

- Farmer

One of the most important part, providing ‘TRANSPORTATION FACILITIES’ for delivery of finished produce is under process. We could not think of any alternative which is best suited for every individual user (from producers to buyers). But we have managed to think of simple alternative in which buyer can ask for transportation facility to admin or can avail the transportation all by himself. Since the information is stored by admin of all the transportation company so the admin can keep track of delivery of product to the buyer.

We have also implemented searching transportation company by city of Producers so that delivery of products will become much easier.

Note:

Implementation of payment gateway could not be achieved. Instead we designed the project in such a way so that transaction can be managed virtually where money is directly paid to producer after the purchase of product by buyer deducting the required amount from buyer’s account respectively.

Functionalities of the stalk holders:

1. Admin:

The Admin is the super user of the system. The Admin is responsible for maintaining and managing the website.

The Admin is responsible for checking every single transaction, from updation of produce by farmers to selling of produce to buyers.

Functionalities:

- Admin can change the status while registration of the producer after checking all his document , he can accordingly change the status to active , pending and block . The producer can only can access the website if his status is active henceforth making the website more secure .

- Registration of producers and buyers after verification of given documents, data checking, adding crops, adding transportation company and transaction.
- Updating the website details(back end) which includes updating information in the tables accordingly whenever there is change made.
- Fixing appropriate price of farm products accordingly.
- Updating programmes and schemes initiated by the Government for farmers.
- Stores details about buyers and producers for future reference.
- Admin add crops uploaded by farmers after proper verification.

2. Buyers:

Online farmers market helps you work with farms and food hubs all in one place. Maintain and manage existing relationships, discover and create new ones and bring the efficiency of an online system to your local food sourcing.

Functionalities:

- Robust product search and detailed product information.
- Produces profiles that include farm specialties and growing methods.
- Real time availability lists with price and inventory levels.
- Pay throughnet banking
- Place orders and access invoices and order history in your account
- Streamlined communications with products
- Automatic generation of receiving slips and invoices

3. Producers:

A profile page, robust tools for managing orders and customers, marketing farm, managing deliveries

Functionalities:

Manage orders and customers

- Accept orders online, keep track of past sales
- Work with existing buyers as well as new ones
- Automatically send buyers invoices and receipts

1. Marketing farm

- Increase online exposure
- Activate or deactivate items as season changes

2. Manage deliveries:

- Connect with third party for transportation facility provided by admin

3. Manage financials:

- Implementation of net banking
- Keep track of buyers payments and past sales

2.5 FEATURES OF SOFTWARE

2.5.1 ASP.NET - FRONT END

ASP.NET is not just a simple upgrade or the latest version of ASP. ASP.NET combines unprecedented developer productivity with performance, reliability, and deployment. ASP.NET redesigns the whole process. It's still easy to grasp for new comers but it provides many new ways of managing projects. Below are the features of ASP.NET:-

(A). Easy programming model:

ASP.NET makes building real world Web applications dramatically easier. ASP.NET server controls enable an HTML-like style of declarative programming that let you build great pages with far less code than with classic ASP. Displaying data, validating user input, and uploading files are all amazingly easy. Best of all, ASP.NET pages work in all browsers including Netscape, Opera, AOL, and Internet Explorer.

(B). Flexible Language Options:

ASP.NET lets you leverage your current programming language skills. Unlike classic ASP, which supports only interpreted VBScript and J Script, ASP.NET now supports more than 25 .NET languages (built-in support for VB.NET, C#, and JScript.NET), giving us unprecedented flexibility in the choice of language.

(C). Great Tool Support:

We can harness the full power of ASP.NET using any text editor, even Notepad. But Visual Studio .NET adds the productivity of Visual Basic-style development to the Web. Now we can visually design ASP.NET Web Forms using familiar drag-drop-double click techniques, and

enjoy full-fledged code support including statement completion and color-coding. VS.NET also provides integrated support for debugging and deploying ASP.NET Web applications. The Enterprise versions of Visual Studio .NET deliver life-cycle features to help organizations plan, analyze, design, build, test, and coordinate teams that develop ASP.NET Web applications. These include UML class modeling, database modeling (conceptual, logical, and physical models), testing tools (functional, performance and scalability), and enterprise frameworks and templates, all available within the integrated Visual Studio .NET environment.

(D). Rich Class Framework:

Application features that used to be hard to implement, or required a 3rd-party component, can now be added in just a few lines of code using the .NET Framework. The .NET Framework offers over 4500 classes that encapsulate rich functionality like XML, data access, file upload, regular expressions, image generation, performance monitoring and logging, transactions, message queuing, SMTP mail, and much more. With Improved Performance and Scalability ASP.NET lets us serve more users with the same hardware.

(E). Compiled execution:

ASP.NET is much faster than classic ASP, while preserving the "just hit save" update model of ASP. However, no explicit compile step is required. ASP.NET will automatically detect any changes, dynamically compile the files if needed, and store the compiled results to reuse for subsequent requests. Dynamic compilation ensures that the application is always up to date, and compiled execution makes it fast. Most applications migrated from classic ASP see a 3x to 5x increase in pages served.

(F). Rich output caching:

ASP.NET output caching can dramatically improve the performance and scalability of the application. When output caching is enabled on a page, ASP.NET executes the page just once, and saves the result in memory in addition to sending it to the user. When another user requests the same page, ASP.NET serves the cached result from memory without re-executing the page.

Output caching is configurable, and can be used to cache individual regions or an entire page. Output caching can dramatically improve the performance of data-driven pages by eliminating the need to query the database on every request.

(G). Enhanced Reliability:

ASP.NET ensures that the application is always available to the users.

(H). Memory Leak, Dead Lock and Crash Protection:

ASP.NET automatically detects and recovers from errors like deadlocks and memory leaks to ensure our application is always available to our users. For example, say that our application has a small memory leak, and that after a week the leak has tied up a significant percentage of our server's virtual memory. ASP.NET will detect this condition, automatically start up another copy of the ASP.NET worker process, and direct all new requests to the new process. Once the old process has finished processing its pending requests, it is gracefully disposed and the leaked memory is released. Automatically, without administrator intervention or any interruption of service, ASP.NET has recovered from the error.

(I). Easy Deployment:

ASP.NET takes the pain out of deploying server applications. "No touch" application deployment. ASP.NET dramatically simplifies installation of our application. With ASP.NET, we can deploy an entire application as easily as an HTML page, just copy it to the server. No need to run regsvr32 to register any components, and configuration settings are stored in an XML file within the application.

(J). Dynamic update of running application:

ASP.NET now lets us update compiled components without restarting the web server. In the past with classic COM components, the developer would have to restart the web server each time he deployed an update. With ASP.NET, we simply copy the component over the existing DLL, ASP.NET will automatically detect the change and start using the new code.

2.5.2 C#.NET - MIDDLE END:

In brief, C#.NET a next generation of ASP (Active Server Pages) introduced by Microsoft. Similar to previous server-side scripting technologies, C#.NET allows us to build powerful, reliable, and scalable distributed applications. C#.NET is based on the Microsoft .NET framework and uses the .NET features and tools to develop Web applications and Web services. Even though C#.NET sounds like ASP and syntaxes are compatible with ASP but C#.NET is much more than that. It provides many features and tools, which let you develop more reliable and scalable, Web applications and Web services in less time and resources. Since C#.NET is a compiled, NET-based environment; we can use any .NET supported languages, including VB.NET, C#, JScript.NET, and VBScript.NET to develop C#.NET applications.

2.5.3 SQL SERVER 2000 - BACK END

Microsoft SQL Server is a [relational database management system](#) developed by [Microsoft](#). As a [database server](#), it is a [software product](#) with the primary function of storing and retrieving data as requested by other [software applications](#) which may run either on the same computer or on another computer across a network (including the Internet).

Microsoft markets at least a dozen different editions of Microsoft SQL Server, aimed at different audiences and for workloads ranging from small single-machine applications to large Internet-facing applications with many [concurrent users](#).

SQL Server uses as its primary [query languages](#) T-SQL and [ANSI SQL](#)

2.5.4 ADO.NET - DATABASE CONNECTIVITY:

Most applications need data access at one point of time making it a crucial component when working with applications. Data access is making the application interact with a database, where all the data is stored. Different applications have different requirements for database access. ASP.NET uses ADO .NET (Active X Data Object) as its data access and manipulation protocol which also enables us to work with data on the Internet

ADO.NET Data Architecture:

Data Access in ADO.NET relies on two components: DataSet and Data Provider:

1. DataSet:

The dataset is a disconnected, in-memory representation of data. It can be considered as a local copy of the relevant portions of the database. The DataSet is persisted in memory and the data in it can be manipulated and updated independent of the database. When the use of this DataSet is finished, changes can be made back to the central database for updating. The data in DataSet can be loaded from any valid data source like Microsoft SQL server database, an Oracle database or from a Microsoft Access database.

2. Data Provider:

The Data Provider is responsible for providing and maintaining the connection to the database. A DataProvider is a set of related components that work together to provide data in an efficient and performance driven manner. The .NET Framework currently comes with two DataProviders: the SQL Data Provider which is designed only to work with Microsoft's SQL Server 7.0 or later and the OleDbDataProvider which allows us to connect to other types of databases like Access and Oracle. Each DataProvider consists of the following component classes: The Connection object which provides a connection to the database. The Command object which is used to execute a command. The DataReader object which provides a forward-only, read only,

connected recordset. The DataAdapter object which populates a disconnected DataSet with data and performs update.

2.6. SOFTWARE REQUIREMENTS

Specifications	
Operatig System	Windows 7/8/8.1
Browser	Internet Explorer/Google Chrome
Database	Microsoft SQL server
Technology	asp.net,vb.net,c#.net

2.7. HARDWARE REQUIREMENTS

Specifications	
Hard Disk Drive	500GB
Processor	1.8GHz
RAM	4GB

CHAPTER 3

SYSTEM DESIGN

3.1 INTRODUCTION

System design is the solution to the creation of a new system. This phase is composed of several systems. This phase focuses on the detailed implementation of the feasible system. It emphasizes on translating design specifications to performance specification. System design has two phases of development logical and physical design.

During logical design phase the analyst describes inputs (sources), outputs (destinations), databases (data stores) and procedures (data flows) all in a format that meets the user requirements. The analyst also specifies the user needs and at a level that virtually determines the information flow in and out of the system and the data resources. Here the logical design is done through data flow diagrams and database design.

The physical design is followed by physical design or coding. Physical design produces the working system by defining the design specifications, which tell the programmers exactly what the candidate system must do. The programmers write the necessary programs that accept input from the user, perform necessary processing on accepted data through call and produce the required report on a hard copy or display it on the screen.

3.2 DATA FLOW DIAGRAM

A data flow diagram (DFD) is a graphical representation of the "flow" of data through an [information system](#), modelling its *process* aspects. A DFD is often used as a preliminary step to create an overview of the system, which can later be elaborated. DFDs can also be used for the [visualization of data processing](#) (structured design).

A DFD shows what kind of information will be input to and output from the system, where the data will come from and go to, and where the data will be stored. It does not show information about the timing of process or information about whether processes will operate in sequence or in parallel.

3.3 DATABASE DESIGN:

The overall objective in the development of database technology has been to treat data as an organizational resource and as an integrated whole. DBMS allow data to be protected and organized separately from other resources. Database is an integrated collection of data. The most significant form of data as seen by the programmers is data as stored on the direct access storage devices. This is the difference between logical and physical data.

Database files are the key source of information into the system. It is the process of designing database files, which are the key source of information to the system. The files should be properly designed and planned for collection, accumulation, editing and retrieving the required information.

The organization of data in database aims to achieve three major objectives: -

- (a). Data integration.
- (b). Data integrity.
- (c). Data independence.

The proposed system stores the information relevant for processing in the MS SQL SERVER database. This database contains tables, where each table corresponds to one particular type of information. Each piece of information in table is called a field or column. A table also contains records, which is a set of fields. All records in a table have the same set of fields with different information. There are primary key fields that uniquely identify a record in a table. There are also fields that contain primary key from another table called foreign keys.

3.3.1 NORMALIZATION

Normalization is a technique of separating redundant fields and breaking up a large table into smaller ones. It is also used to avoid insertion, deletion and updating anomalies. All the tables have been normalized up to the third normal form. In short the rules for each of the three normal forms are as below.

(a). First normal form:

A relation is said to be in 1NF if all the underlying domain of attributes contain simple individual values.

(b).Second normal form:

The 2NF is based on the concept of full functional dependency. A relation said to be in 2NF if and only if it is in 1NF and every non-key attribute is fully functionally dependent on candidate key of the table.

(c).Third normal form:

The 3NF is based on the concept of transitive dependency. A relation in 2NF is said to be in 3NF if every non-key attribute is non-transitively.

3.5. ENTITY RELATIONSHIP DIAGRAM :

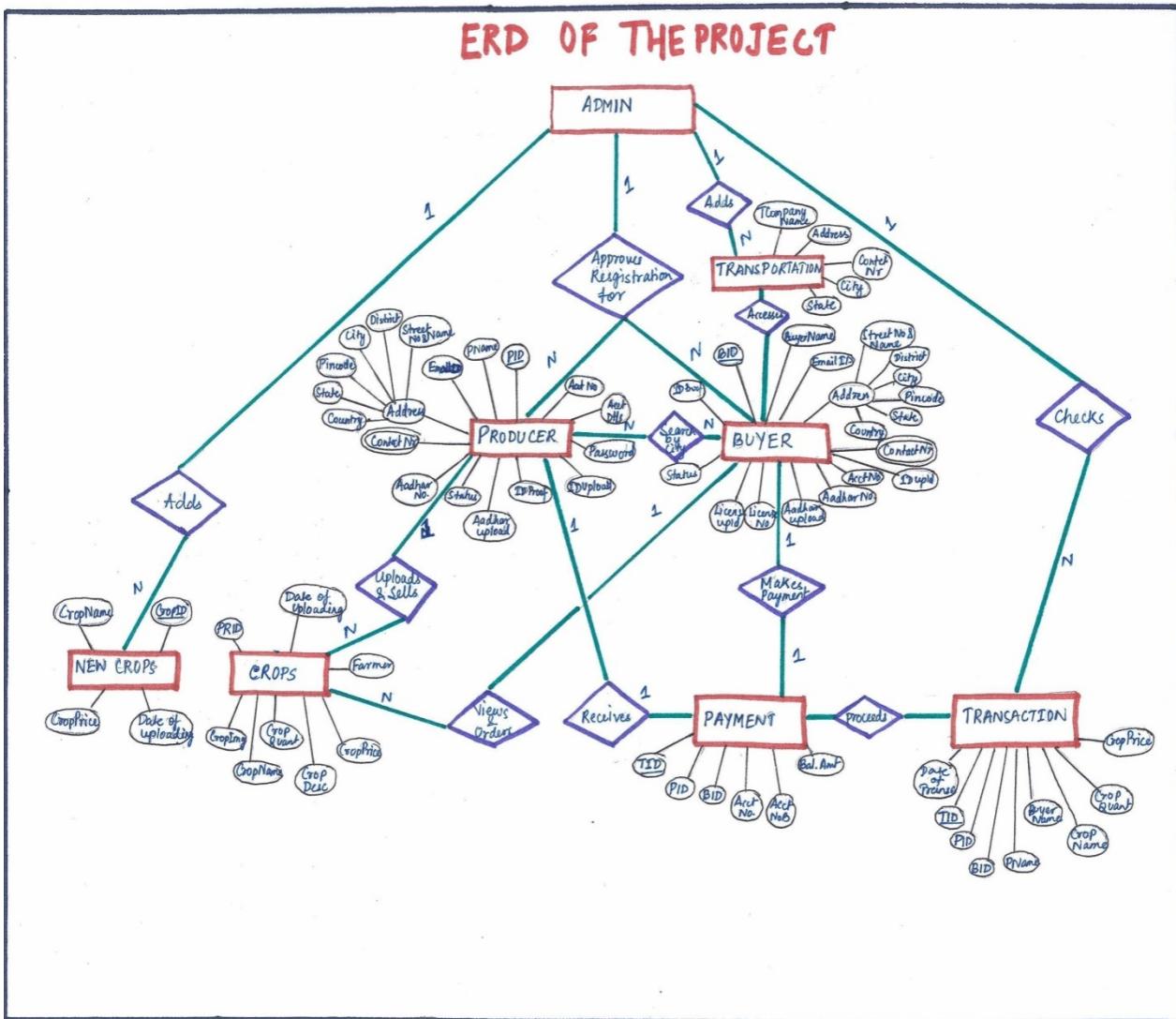


Fig. 3.1: Entity Relationship Diagram

3.5. Data Flow Diagram (DFD) OF THE PROJECT:

1. Context Analysis Diagram (CAD) or level 0 DFD

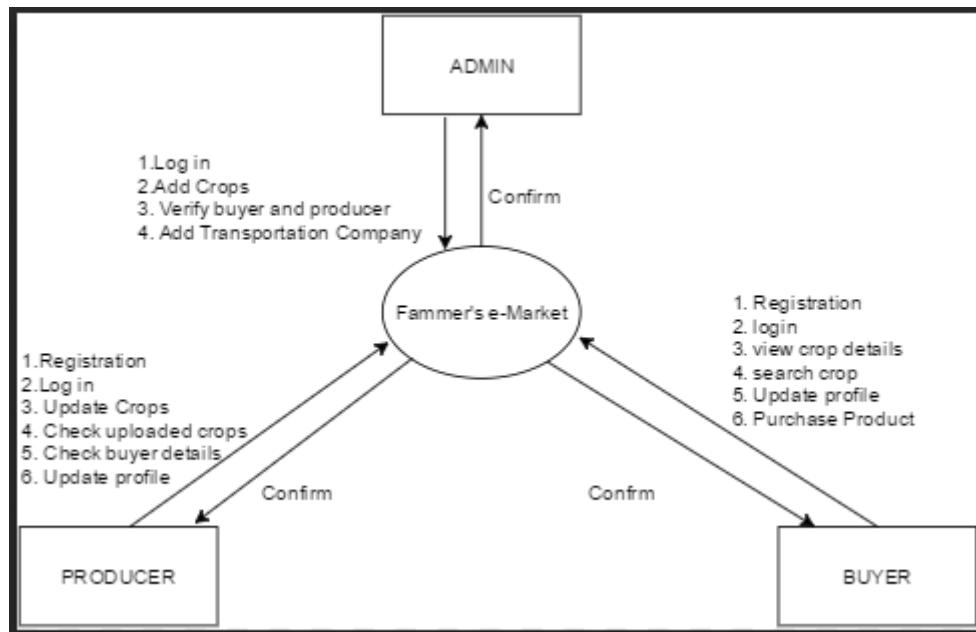


Fig. 3.2: Context Analysis Diagram (CAD) or level 0 DFD

2. Data Flow Diagram (DFD)(Level 1)

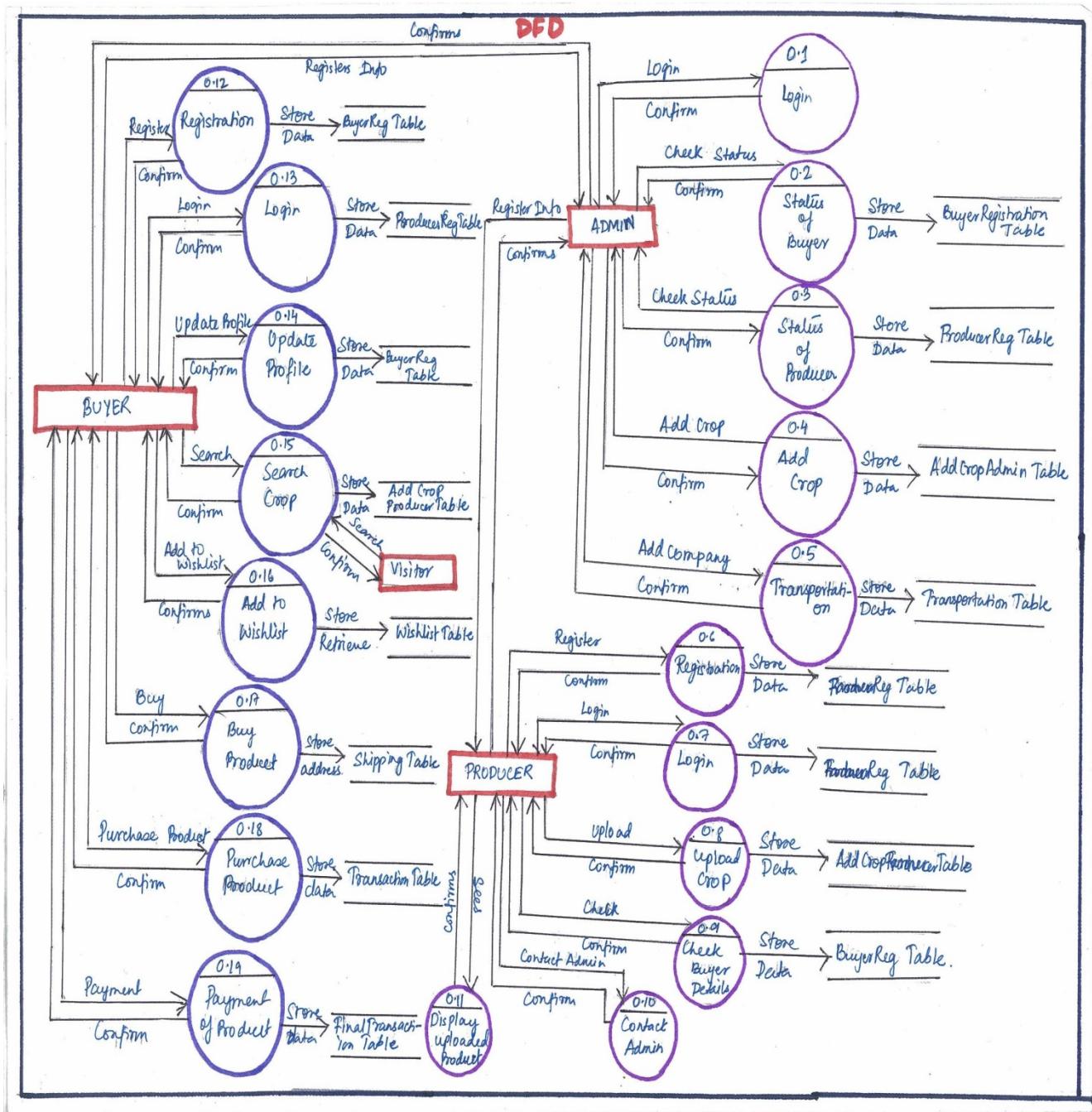


Fig. 3.3: Data flow diagram (level 1)

3. Data Flow Diagram (DFD)(Level 2)

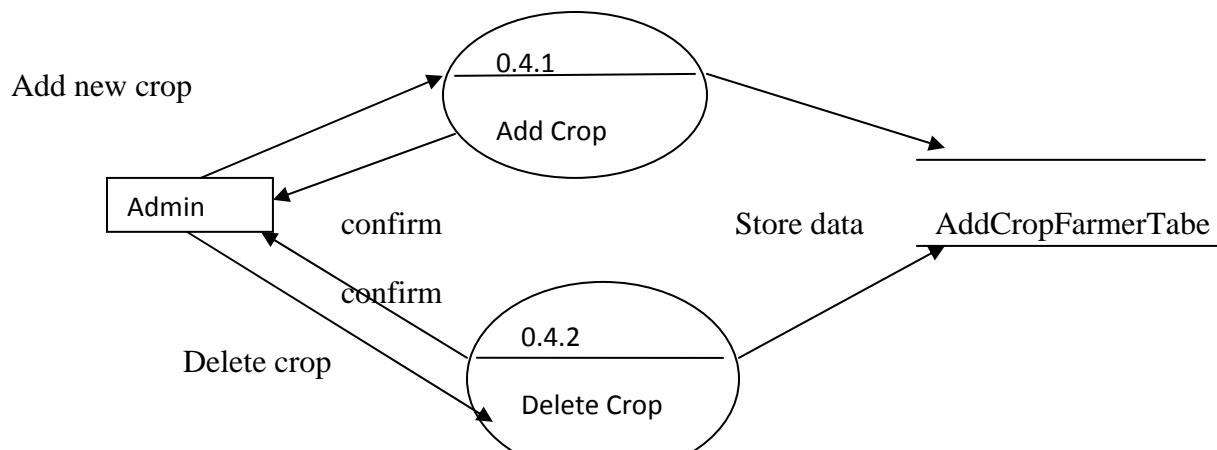


Fig. 3.4: level 2 DFD of Admin

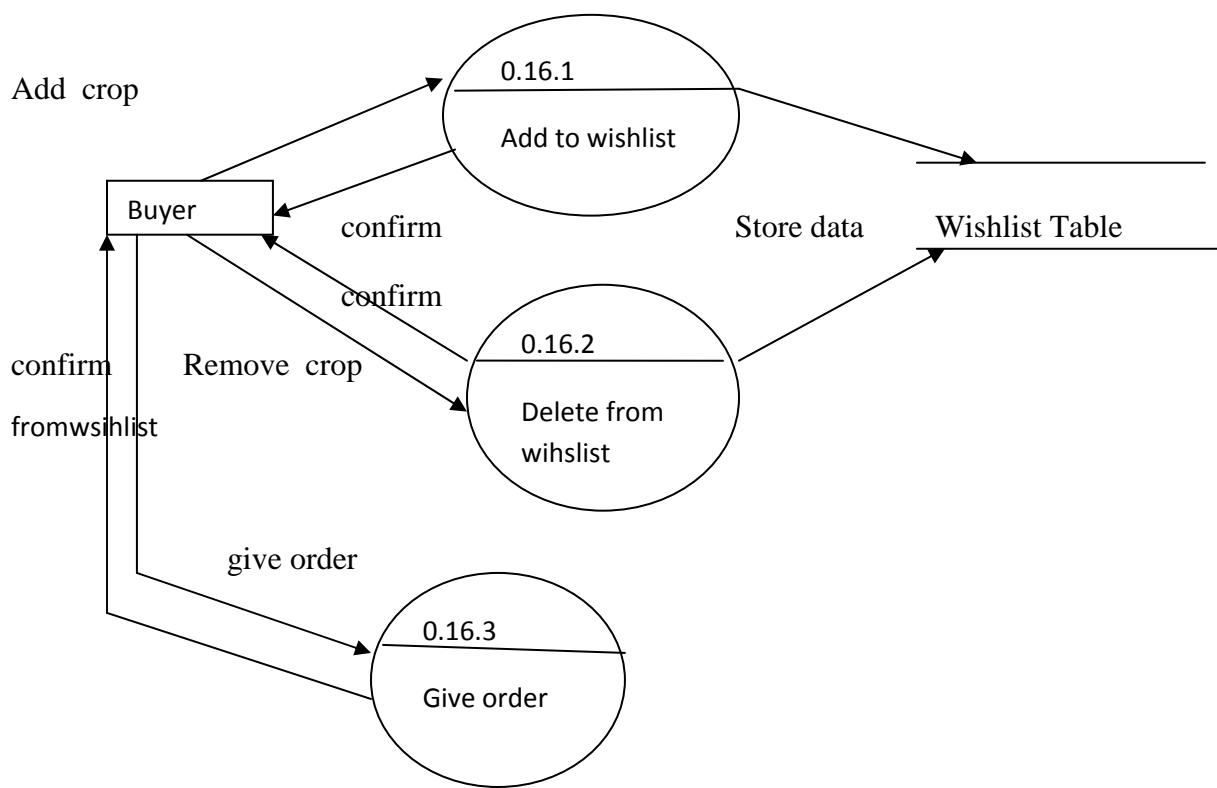


Fig. 3.5: level 2 DFD for Buyer (Order)

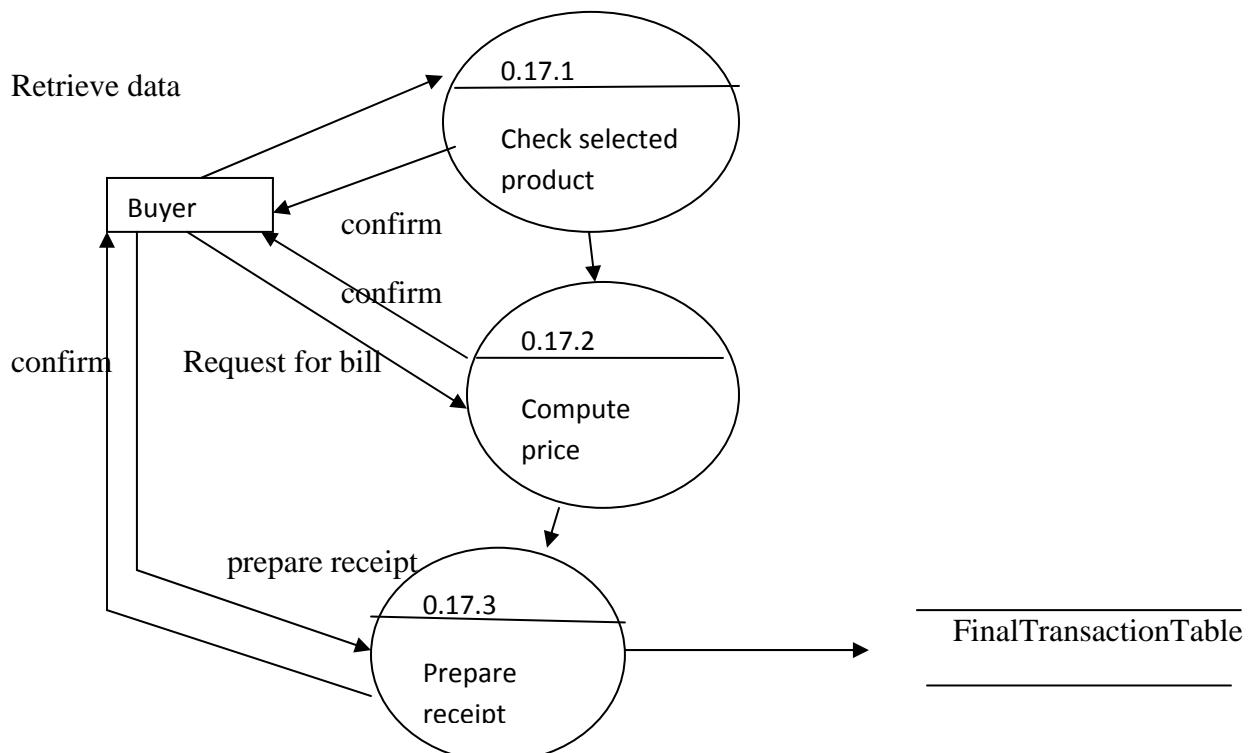


Fig. 3.6 level 2 DFD for Buyer (Payment)

4. Data Flow Diagram (DFD) (Level 3)

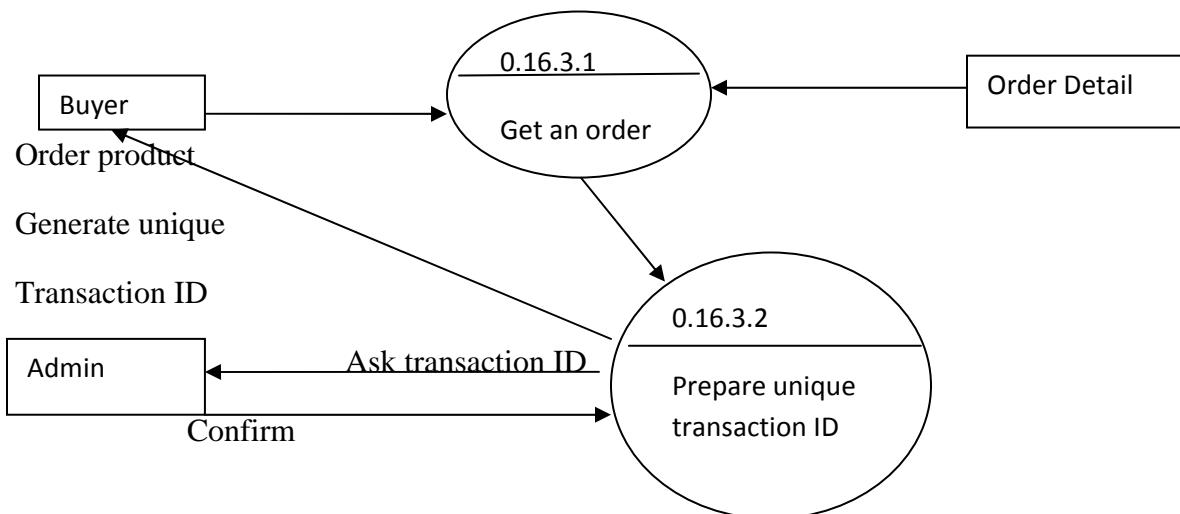


Fig. 3.7 level 3 DFD

3.6 TABLE DESIGN:

There are mainly 9 inter-related tables through which the data is flowing. The description of tables are given below:

1. BUYER REGISTRATION TABLE:

All the details of the buyer such as name, address, email-id, contact number, account number, aadhar number, and license number would be available in this table. In this Table BID is the primary key. All the fields and data type of this table is shown below:

	Name	Data Type	Allow Nulls	Default
	BID	varchar(50)	<input checked="" type="checkbox"/>	
	UserName	varchar(50)	<input checked="" type="checkbox"/>	
	EmailId	varchar(50)	<input type="checkbox"/>	
	Address	varchar(50)	<input checked="" type="checkbox"/>	
	District	varchar(50)	<input checked="" type="checkbox"/>	
	City	varchar(50)	<input checked="" type="checkbox"/>	
	Pincode	int	<input checked="" type="checkbox"/>	
	State	varchar(50)	<input checked="" type="checkbox"/>	
	ContactNo	int	<input checked="" type="checkbox"/>	
	AccountNoB	bigint	<input checked="" type="checkbox"/>	
	AadharNo	bigint	<input checked="" type="checkbox"/>	
	AadharUpload	varchar(50)	<input checked="" type="checkbox"/>	
	LicenseType	varchar(50)	<input checked="" type="checkbox"/>	

Fig. 3.8: Buyer Registration Table

2. PRODUCER REGISTRATION TABLE:

All the details of the Producer such as name, address, email-id, contact number, account number, aadhar number, and KCC number would be available in this table. In this Table PID is the primary key. All the fields and data type of this table is shown below:

	Name	Data Type	Allow Nulls	Default
	PID	varchar(50)	<input checked="" type="checkbox"/>	
	Pname	varchar(50)	<input checked="" type="checkbox"/>	
	EmailID	varchar(50)	<input checked="" type="checkbox"/>	
	Address	varchar(MAX)	<input checked="" type="checkbox"/>	
	District	varchar(50)	<input checked="" type="checkbox"/>	
	City	varchar(50)	<input checked="" type="checkbox"/>	
	State	varchar(50)	<input checked="" type="checkbox"/>	
	pincode	int	<input checked="" type="checkbox"/>	
	contactnr	int	<input checked="" type="checkbox"/>	
	AccountNo	bigint	<input checked="" type="checkbox"/>	
	AccountDetails	varchar(MAX)	<input checked="" type="checkbox"/>	
	AadharNo	bigint	<input checked="" type="checkbox"/>	
	Aadharupload	varchar(50)	<input checked="" type="checkbox"/>	

Fig 3.9: Producer's Registration Table

3. TRANSACTION TABLE:

Transaction table stores information about account number of buyer and producer with their unique id which is used for transferring money from buyer's account to producer's account after successful transaction. All the fields and data type of this table is shown below:

	Name	Data Type	Allow Nulls	Default
	PID	varchar(50)	<input checked="" type="checkbox"/>	
	BID	varchar(50)	<input checked="" type="checkbox"/>	
	AccountNo	bigint	<input checked="" type="checkbox"/>	
	AccountNoB	bigint	<input checked="" type="checkbox"/>	
	BalanceAmt	bigint	<input checked="" type="checkbox"/>	((25000))

Fig 3.10: Transaction Table

4. ADD CROP (ADMIN) TABLE:

All the details of adding crop by farmer such as date of adding, crop id, crop name, and range of crop price would be available in this table. In this table, CropID is the primary key. All the fields and data type of this table is shown below:

	Name	Data Type	Allow Nulls	Default
	Date	varchar(50)	<input checked="" type="checkbox"/>	
	CropID	varchar(50)	<input checked="" type="checkbox"/>	
	CropName	varchar(50)	<input checked="" type="checkbox"/>	
	CropPrice	varchar(50)	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Fig 3.11: Add Crop Table

5. UPDATE CROP TABLE (Producer) :

All the Crop details updated by farmer such as PRID, Date of updating, Farmer name, crop name, crop quant, crop description, crop price and crop image would be available in this table. In this Table PRID is the primary key. All the fields and data type of this table is shown below:

	Name	Data Type	Allow Nulls	Default
	PRID	varchar(50)	<input checked="" type="checkbox"/>	
	Date	varchar(50)	<input checked="" type="checkbox"/>	
	FarmerName	varchar(50)	<input checked="" type="checkbox"/>	
	CropName	varchar(50)	<input checked="" type="checkbox"/>	
	CropQuant	int	<input checked="" type="checkbox"/>	
	CropDesc	varchar(MAX)	<input checked="" type="checkbox"/>	
	CropImg	varchar(50)	<input checked="" type="checkbox"/>	
	CropPrice	int	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Fig 3.12: Update Crop Table

6. SHIPPING TABLE :

All the details of shipping the product such as PRID, User name (Buyer), farmer name (Producer), crop details, date of buying, date of shipping and shipping address would be available in this table. In this Table PRID is the primary key. All the fields and data type of this table is shown below:

Name	Data Type	Allow Nulls	Default
PRID	varchar(50)	<input checked="" type="checkbox"/>	
Username	varchar(50)	<input checked="" type="checkbox"/>	
FarmerName	varchar(50)	<input checked="" type="checkbox"/>	
CropName	varchar(50)	<input checked="" type="checkbox"/>	
CropDesc	varchar(MAX)	<input checked="" type="checkbox"/>	
CropQuantity	int	<input checked="" type="checkbox"/>	
CropPrice	int	<input checked="" type="checkbox"/>	
dob	varchar(50)	<input checked="" type="checkbox"/>	
dos	varchar(50)	<input checked="" type="checkbox"/>	
ShippingAddress	varchar(MAX)	<input checked="" type="checkbox"/>	

Fig 3.13: Shipping Table

7. WISHLIST TABLE:

All the crop details added to wishlist by buyer such as PRID, User name (Buyer), farmer name (Producer) and crop details would be available in this table. In this Table PRID is the primary key. All the fields and data type of this table is shown below:

Name	Data Type	Allow Nulls	Default
PRID	varchar(50)	<input checked="" type="checkbox"/>	
Username	varchar(50)	<input checked="" type="checkbox"/>	
FarmerName	varchar(50)	<input checked="" type="checkbox"/>	
CropName	varchar(50)	<input checked="" type="checkbox"/>	
CropDesc	varchar(MAX)	<input checked="" type="checkbox"/>	
CropQuantity	int	<input checked="" type="checkbox"/>	
CropPrice	int	<input checked="" type="checkbox"/>	

Fig 3.14: Wishlist Table

8. FINAL TRANSACTION TABLE:

All the details of Final Transaction such as TID, Date of transaction, PRID, Crop details, BID, User name (Buyer), PID, and farmer name (Producer), would be available in this table. In this Table TID is the primary key. All the fields and data type of this table is shown below:

	Name	Data Type	Allow Nulls	Default
	TID	varchar(50)	<input checked="" type="checkbox"/>	
	Date of Transaction	varchar(50)	<input checked="" type="checkbox"/>	
	PRID	varchar(50)	<input checked="" type="checkbox"/>	
	CropName	varchar(50)	<input checked="" type="checkbox"/>	
	CropQuant	int	<input checked="" type="checkbox"/>	
	CrpPrice	int	<input checked="" type="checkbox"/>	
	PID	varchar(50)	<input checked="" type="checkbox"/>	
	PName	varchar(50)	<input checked="" type="checkbox"/>	
	BID	varchar(50)	<input checked="" type="checkbox"/>	
	UserName	varchar(50)	<input checked="" type="checkbox"/>	

Fig 3.15: Final transaction table

9. TRANSPORTATION TABLE:

All the details of transportation company updated by admin such as company name, address, contact number and city would be available in this table. All the fields and data type of this table is shown below:

	Name	Data Type	Allow Nulls	Default
	CName	varchar(50)	<input type="checkbox"/>	
	Address	varchar(50)	<input checked="" type="checkbox"/>	
	Contactnr	bigint	<input checked="" type="checkbox"/>	
	City	varchar(50)	<input checked="" type="checkbox"/>	
			<input type="checkbox"/>	

Fig 3.16: Transportation table

3.6 WEBPAGES DESIGN

SCREEN SHOTS:

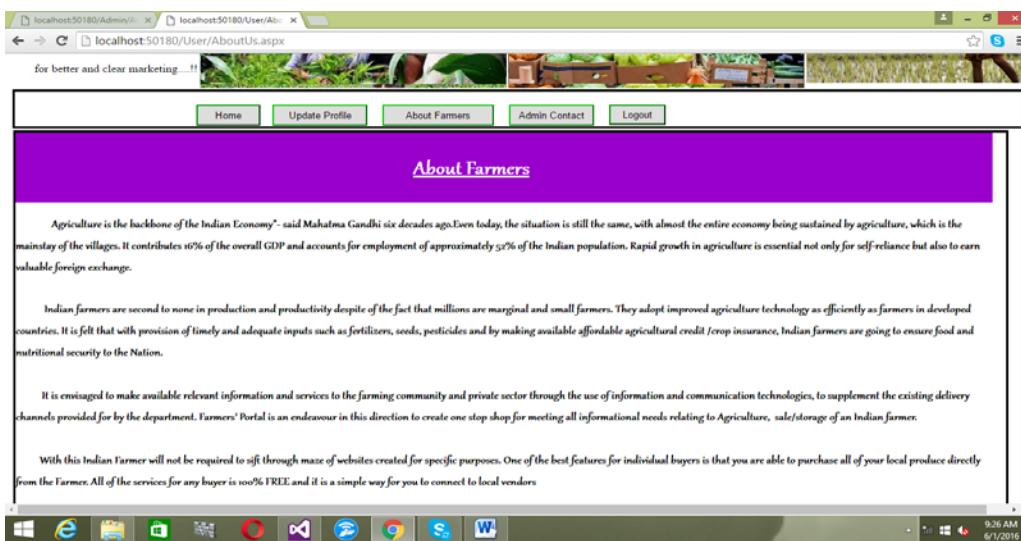
HOME PAGE:

Home page is the start page of this project. From here, user can navigate to any other page.



ABOUT FARMERS:

About farmers page highlights the details of farmers and the importance of agriculture in india.



PROGRAMMES AND SCHEMES:

This page provides information about all the latest schemes initiated by government of India.

The screenshot shows a web browser window with the URL localhost:50180/SchemesForFarmers.aspx. The page has a green header bar with links for Home, About Farmers, Programmes and Schemes, and Crops Information. Below the header is a navigation bar with 'New User?' and 'Registered User?' buttons, and 'JOIN US' and 'Login' links. A black banner in the center contains the red text 'Programmes And Schemes Initiated By Government Of India'. The main content area displays a paragraph about agriculture risks and schemes, followed by a section titled 'Pradhan Mantri Fasal Bima Yojna' with a detailed description. At the bottom, there is a link to 'Previous Schemes' and a list item '1. Comprehensive Crop Insurance Scheme'. The status bar at the bottom right shows the date as 6/1/2016 and the time as 2:25 AM.

CROPS GENERAL INFORMATION:

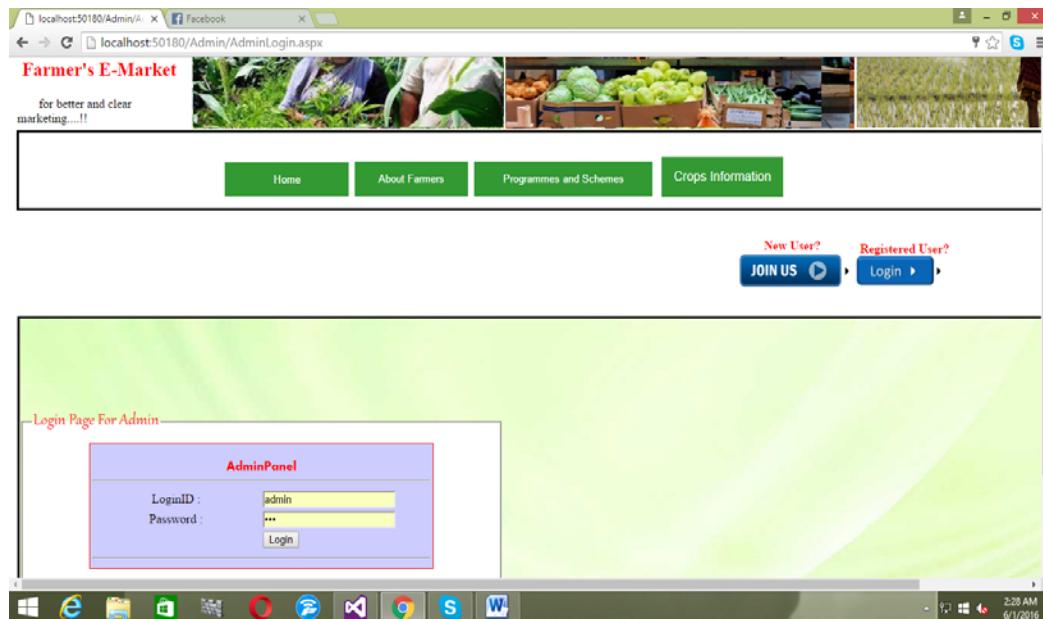
This page provides buyer with general information related to crops produced by farmers.

The screenshot shows a web browser window with the URL localhost:50180/PulsesGeneralInfo.aspx. The page has a green header bar with links for Home, About Farmers, Programmes and Schemes, and Crops Information. Below the header is a navigation bar with 'New User?' and 'Registered User?' buttons, and 'JOIN US' and 'Login' links. A purple banner in the center contains the red text 'Pulses'. The main content area displays a section titled 'About Pulses' with a detailed description of pulse properties and uses. It also includes a section titled 'Important Major Pulses Growing Zones / States in India' with a detailed description of the Varietal Development programme. The status bar at the bottom right shows the date as 6/1/2016 and the time as 2:26 AM.

ADMIN WEBPAGES:

ADMIN LOGIN PAGE:

Admin login page from where admin can navigate to any other page and check details.



ADD CROP:

Admin can add crop in this page which will be available to buyer for purchase.



PRODUCER'S INFORMATION:

This page stores all the information on farmers who have registered and uploaded their products.

The screenshot shows a Windows desktop environment with a web browser window titled "localhost:50180/Admin/P...". The main title of the page is "Farmer's E-Market" with the subtitle "For Better And Clear Marketing". Below the title is a decorative graphic of five globes connected by a network of blue lines and icons. A horizontal menu bar contains green buttons for "Add Crops", "Producer Details", "Buyer Detail", "Display Product Details", "Transaction", "Transportation", and "LOG OUT". The main content area displays a table with the following columns: PID, Pname, EmailID, Address, District, City, State, pincode, contactnr, AccountNo, AccountDetails, AadharNo, Aadharupload, IDProof, and IDupload. Two rows of data are shown:

PID	Pname	EmailID	Address	District	City	State	pincode	contactnr	AccountNo	AccountDetails	AadharNo	Aadharupload	IDProof	IDupload
Select P001	Shalini	sahu.shalini@gmail.com	Jadavpur	24 Parganas	Kolkata	West Bengal	700032	9163739962	145782145687	hgjhkjhhkhk	1247854123658			
Select P002	Shubham	shubham@gmail.com	sonarpur	24 Parganas	Kolkata	West Bengal	700150	8981370171	45781265478	bvngjhmhkhk	784512365894			

BUYER'S INFORMATION:

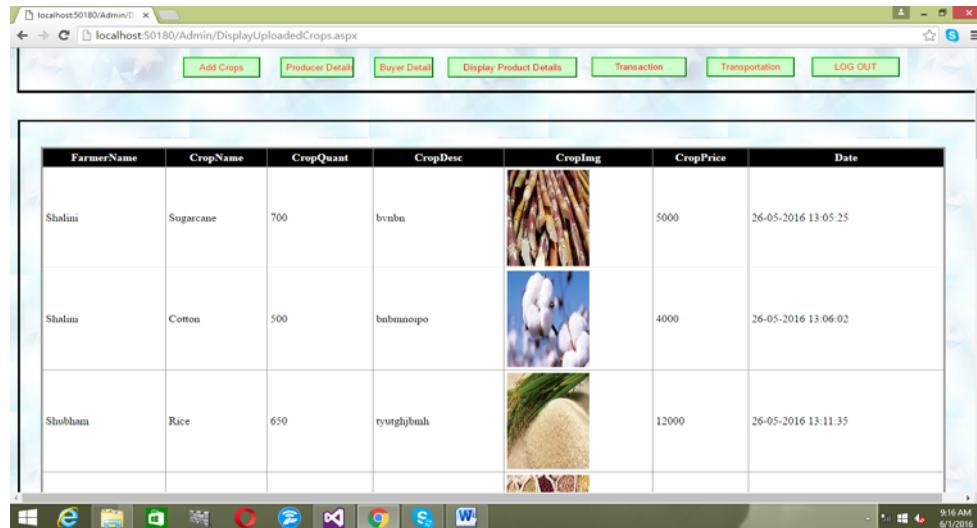
This page stores all the information on farmers who have registered and uploaded their products.

The screenshot shows a Windows desktop environment with a web browser window titled "localhost:50180/Admin/B...". The main title of the page is "Farmer's E-Market" with the subtitle "For Better And Clear Marketing". Below the title is a decorative graphic of five globes connected by a network of blue lines and icons. A horizontal menu bar contains green buttons for "Add Crops", "Producer Details", "Buyer Detail", "Display Product Details", "Transaction", "Transportation", and "LOG OUT". The main content area displays a table with the following columns: BID, UserName, EmailId, Address, District, City, Pincode, State, ContactNo, AadharNo, AadharUpload, LicenseType, LicenseNo, and Licenseupload. One row of data is shown:

BID	UserName	EmailId	Address	District	City	Pincode	State	ContactNo	AadharNo	AadharUpload	LicenseType	LicenseNo	Licenseupload
Select B001	John	john@gmail.com	park street	24 Parganas	Kolkata	700150	West Bengal	8756329875	4589712365789		45879654124	45879654124	

DISPLAY PRODUCT DETAILS:

This page gives all the detailed information about the crops uploaded by farmers which admin can check



The screenshot shows a web application window titled "localhost:50180/Admin/DisplayUploadedCrops.aspx". The page features a top navigation bar with buttons for "Add Crops", "Producer Detail", "Buyer Detail", "Display Product Details" (which is highlighted in green), "Transaction", "Transportation", and "LOG OUT". Below the navigation bar is a large table with the following columns: FarmerName, CropName, CropQuant, CropDesc, CropImg, CropPrice, and Date. The table contains three rows of data:

FarmerName	CropName	CropQuant	CropDesc	CropImg	CropPrice	Date
Shalini	Sugarcane	700	bvnbn		5000	26-05-2016 13:05:25
Shalini	Cotton	500	bnbmnospo		4000	26-05-2016 13:06:02
Shubham	Rice	650	tyutghbjmh		12000	26-05-2016 13:11:35

TRANSACTION DETAILS:

This page stores all the detailed information about transaction which admin can check and keep track of all the transaction occurring.

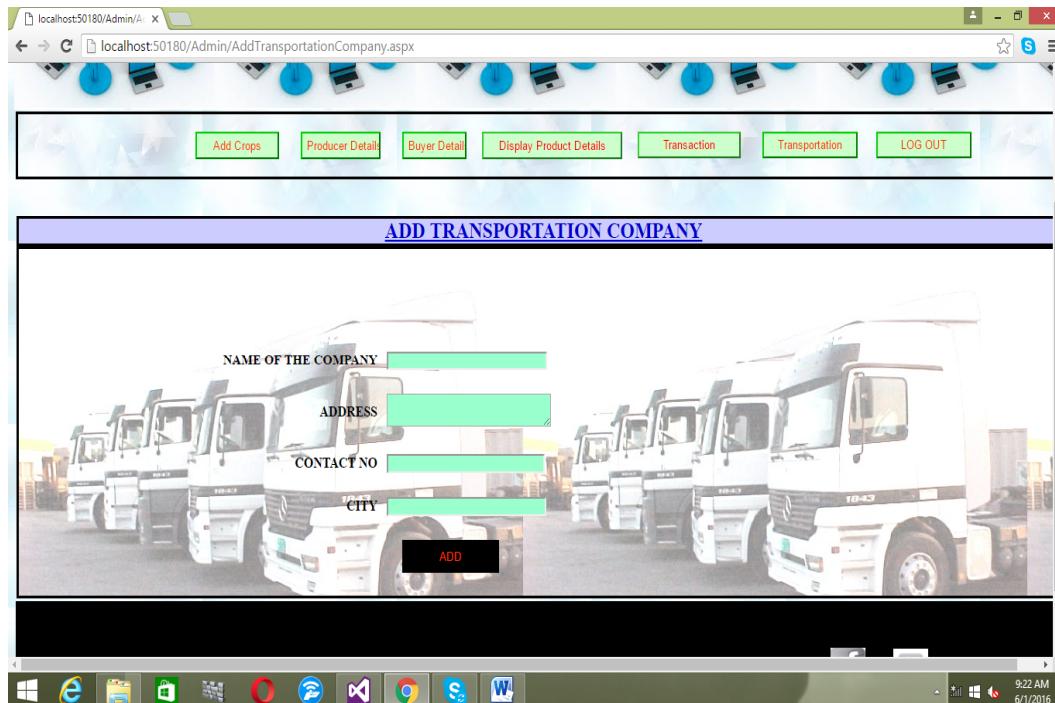


The screenshot shows a web application window titled "localhost:50180/Admin/TransactionDetails.aspx". The page features a top navigation bar with buttons for "Add Crops", "Producer Detail", "Buyer Detail", "Display Product Details", "Transaction" (which is highlighted in green), "Transportation", and "LOG OUT". Below the navigation bar is a large table with the following columns: PRID, Date of Transaction, TID, PName, UserName, PID, BID, CropName, CropQuant, and CrpPrice. The table contains several rows of data, with some entries highlighted in yellow. The background of the page features a decorative pattern of stylized globes and network connections.

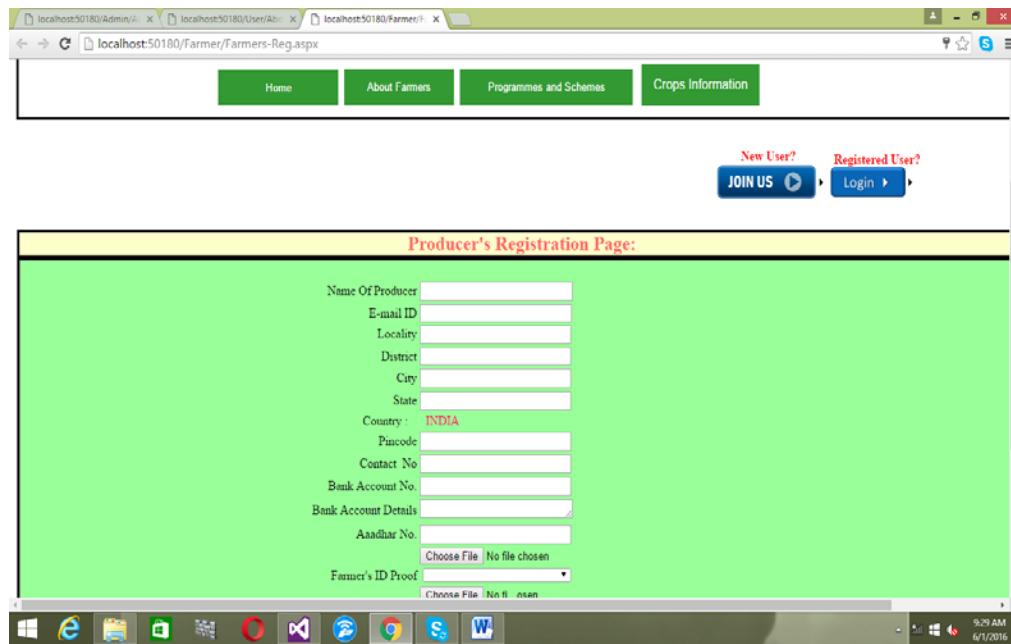
PRID	Date of Transaction	TID	PName	UserName	PID	BID	CropName	CropQuant	CrpPrice
PR007	28-May-16 11:46:55 PM	T002	Ganesh	John@gmail.com	P006	B001	Wheat	630	7500
PR0012	31-May-16 12:16:13 AM	T003	sweta	john@gmail.com	P0011	B001	Sugarcane	800	1900
PR009	31-May-16 3:02:19 PM	T004	Suresh	john@gmail.com	P007	B001	Sugarcane	460	6500
PR0021	31-May-16 5:32:07 PM	T005	Hira	john@gmail.com	P0010	B001	Bajra	620	6300
PR0021	31-May-16 5:35:32 PM	T006	Hira	john@gmail.com	P0010	B001	Bajra	620	6300
PR0021	31-May-16 5:36:14 PM	T007	Hira	john@gmail.com	P0010	B001	Bajra	620	6300
PR0021	31-May-16 5:36:47 PM	T008	Hira	john@gmail.com	P0010	B001	Bajra	620	6300
PR0010	26-05-2016 14:23:14	T0016	Suresh	John	P007	B001	Wheat	150	8600
PR0017	6/1/2016 2:07:31 AM	T009	Hira	john@gmail.com	P0010	B001	Wheat	500	6230

ADD TRANSPORTATION COMPANY:

Admin can add transportation company through this page for further process after transaction is made by buyer. Admin can mail the name of transpotation company according to the requirement of buyer .

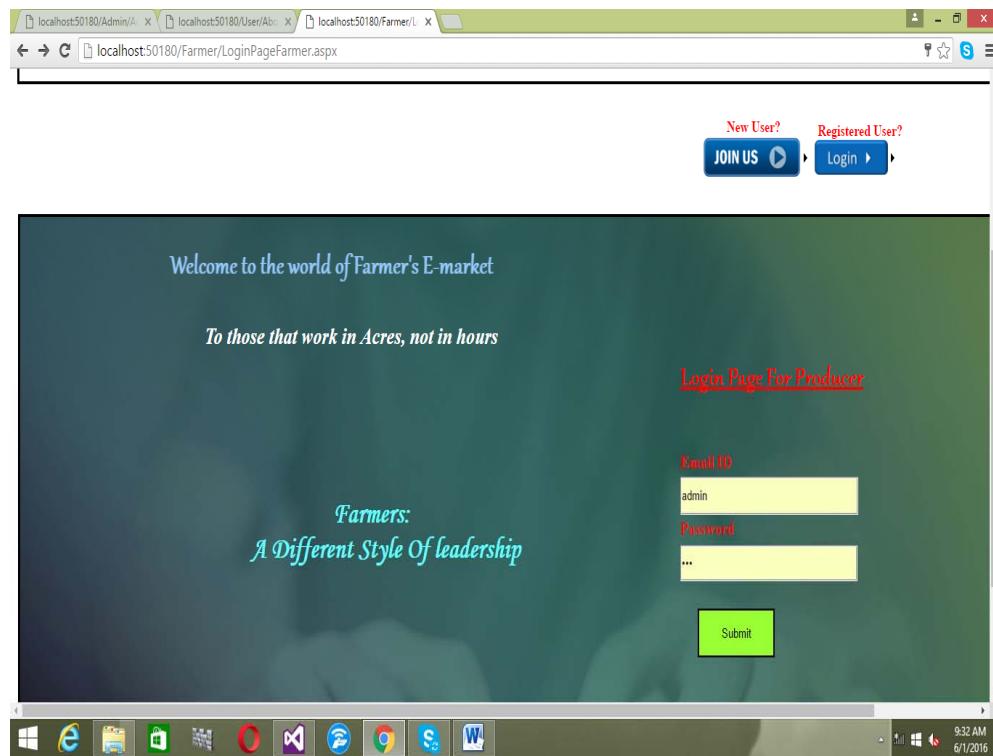
**PRODUCER'S WEBPAGE****PRODUCER'S REGISTRATION PAGE:**

Registration page stores all the detailed information of producer's and registration is successful only after verification of admin. If the user is blocked in any case then the registration of the producer fails.



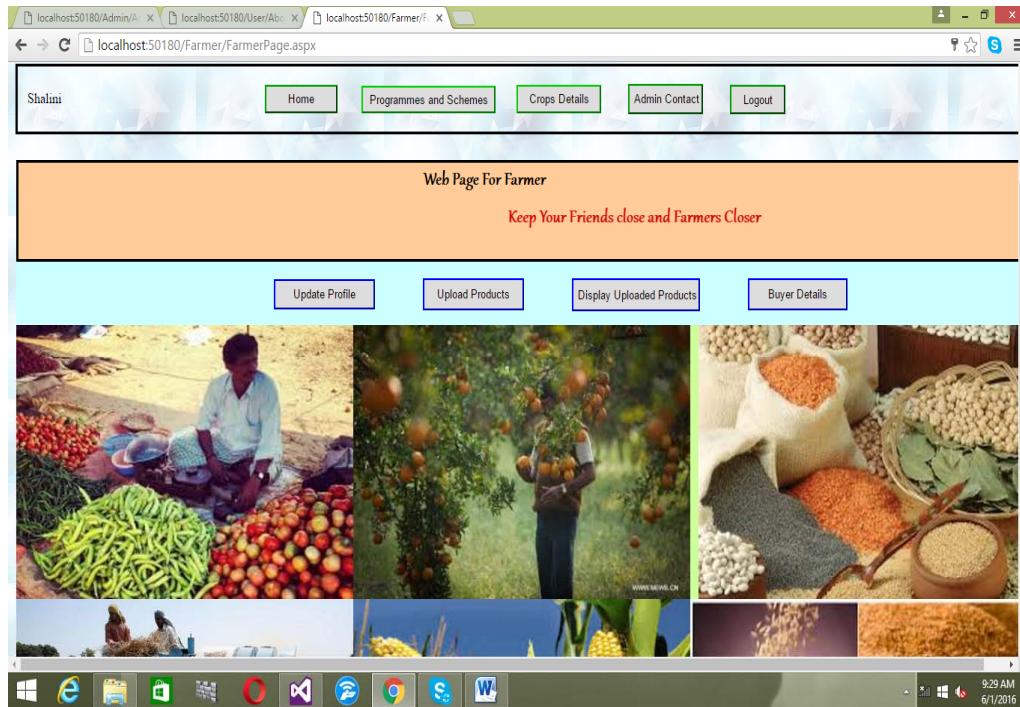
PRODUCER'S LOGIN PAGE:

Producer can login through this page. Login is successful only after verification done by admin.



PRODUCER'S PAGE:

The producer's page is the main page which the producer will enter after successful login. From here, producer can navigate to any other page.



UPDATE PROFILE PAGE:

In this page, producer can change password, contact number and account number.



UPLOAD PRODUCT:

In this page, producer can update crops that he wants to sell through this web portal.

Date and Time : 6/1/2016 9:34:14 AM
 Name : Shalini
 City : Kolkata
 Crop Name : Maize

Crop Quantity(Quintal):

Crop Description :

Crop Image : No file chosen

Crop Price (Rs/Quintal):

DISPLAY UPLOADED PRODUCTS:

In this page, producer can check what all crops he has uploaded and modification can be done accordingly.

PRID	Date	FarmerName	City	CropName	CropQuant(quintal)	CropDesc	CropImg	CropPrice(Rs/quintal)	Modify
Select PR001	26-05-2016 13:05:25	Shalini	Kolkata	Sugarcane	700	bvnbn		5000	<input type="button" value="Modify"/>
Select PR002	26-05-2016 13:06:02	Shalini	Kolkata	Cotton	500	bubumnoipo		4000	<input type="button" value="Modify"/>
Select PR0022	31-May-16 4:07:08 PM	Shalini	Kolkata	Bajra	20	ghhbnummk		5600	<input type="button" value="Modify"/>
Select PR0023	31-May-16 4:08:07 PM	Shalini	Kolkata	Rice	20	ghhbnummk		5600	<input type="button" value="Modify"/>

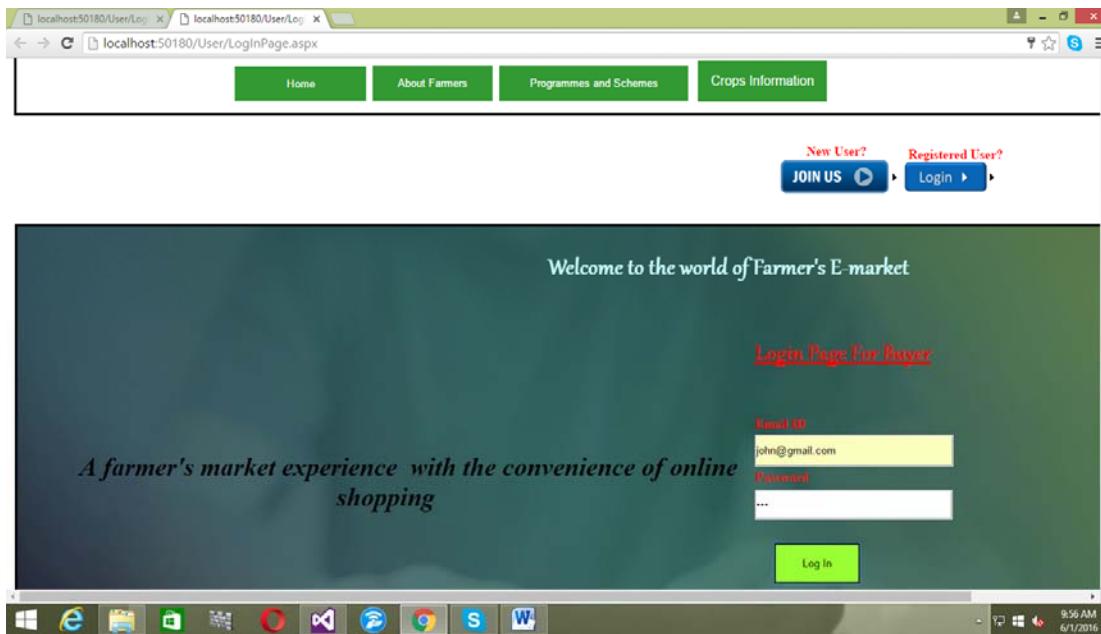
BUYER'S WEBPAGES**BUYER'S REGISTRATION PAGE:**

Registration page stores all the detailed information of producer's and registration is successful only after verification of admin. If the user is blocked in any case then the registration of the producer fails.

The screenshot shows a web browser window titled "localhost:50180/User/User's%20Reg.aspx". The top navigation bar includes links for "Home", "About Farmers", "Programmes and Schemes", and "Crops Information". Below the navigation bar, there are two buttons: "New User?" and "Registered User?". Under "New User?", there is a "JOIN US" button with a play icon and a "Login" button with a right-pointing arrow. The main content area is titled "Buyer's Registration Page". It contains various input fields for registration details: Name Of Buyer, E-mail Id, Locality/Street Name, District, City, Pincode, State, Contact No., Bank Account No., Aadhar No., a file upload field labeled "Choose File" (No file chosen), a dropdown menu for License Type, a license number input field, an upload field for "Upload License" (Choose File, No file chosen), and a password input field. The status bar at the bottom of the browser window shows the date and time as 9:58 AM, 6/1/2016.

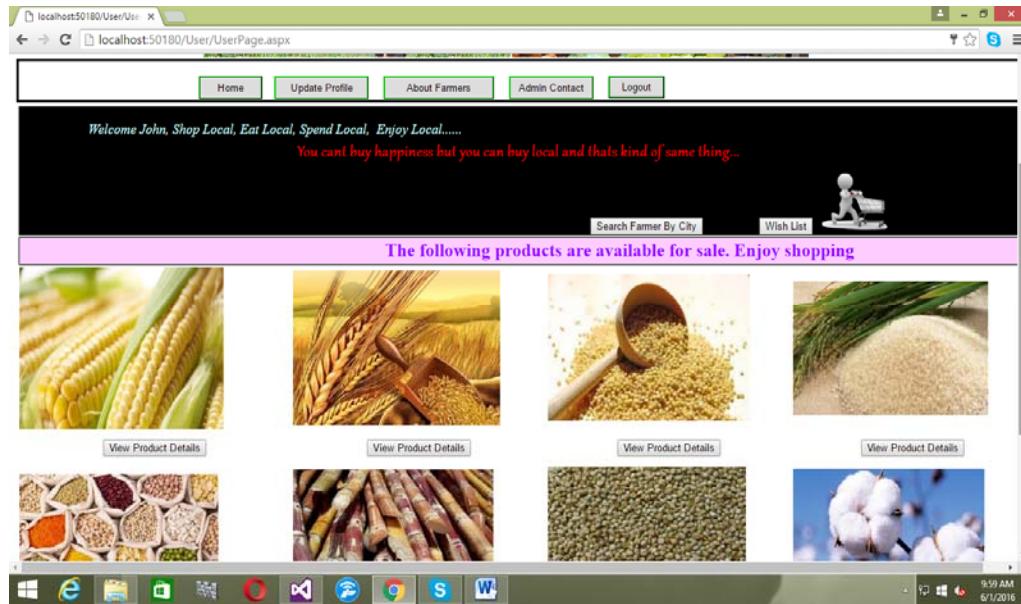
BUYER'S LOGIN PAGE:

Buyer can login through this page. Login is successful only after verification done by admin.



BUYER'S PAGE :

The buyer's page is the main page which the producer will enter after successful login. From here, producer can navigate to any other page.



VIEW PRODUCT DETAILS :

In this page, user can view details of the selected product that the buyer wants to purchase. Buyer can add the desired product to the wishlist.

The screenshot shows a web browser window with the URL localhost:50180/User/Millets.aspx. The page title is "Millets". At the top, there is a navigation bar with links: Home, Update Profile, About Farmers, Admin Contact, and Logout. Below the navigation bar is a banner with the text "for better and clear marketing....!!" and several small images of agricultural scenes. The main content area is a table listing three millet products:

PRID	Date	FarmerName	City	CropName	CropQuant(Quintal)	CropDesc	CropImg	CropPrice(Rs/quintal)	Add To WishList
PR006	26-05-2016 13:17:51	Shyam	Kolkata	Millets	350	tuiyiuouuu		8500	Add To WishList
PR0070	26-05-2016 13:44:35	Harish	Rangalor	Millets	520	nsjka		4900	Add To WishList
PR022	26-05-2016 13:50:02	Suresh	Jalandhar	Millets	510	hskabm a		830	Add To WishList

At the bottom of the page, there is a footer with the text "Copy Right 2015.Farmer's E-Mart", social media links for Facebook and Twitter, and contact information: "Contact Us | Privacy" and "admin@gmail.com". The system status bar at the bottom right shows "10:02 AM 6/1/2016".

WISHLIST PAGE:

In this page, the buyer can see products that he has kept in his wishlist. From here buyer can purchase the product he wants.

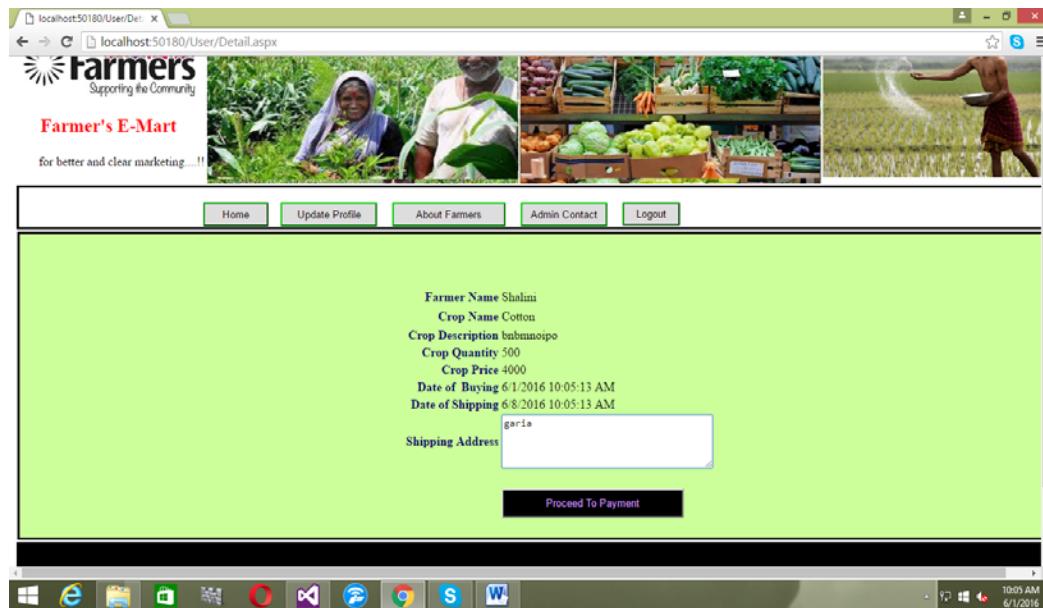
The screenshot shows a web browser window with the URL localhost:50180/User/Wishlist.aspx. The page title is "Wishlist". At the top, there is a navigation bar with links: Home, Update Profile, About Farmers, Admin Contact, and Logout. Below the navigation bar is a banner with the text "for better and clear marketing....!!" and several small images of agricultural scenes. The main content area is a table listing products in the wishlist:

Select	Buy	PRID	Username	FarmerName	CropName	CropDesc	CropQuantity	CropPrice
Select	Buy	PR002	John	Shalini	Cotton	bubumanopo	500	4000
Select	Buy	PR0016	John	Kartik	Maize	mythgays	710	8000
Select	Buy	PR0014	John	swarna	Rice	vhmvgvhvohan	430	3500
Select	Buy	PR006	John	Shyam	Millets	tuiyiuouuu	350	8500
Select	Buy	PR0024	John	Shalini	Wheat	adxfld	1	1200
Select	Buy	PR0020	John	Harish	Millets	nsjka	520	4900
Select	Buy	PR003	John	Shubham	Rice	tyutghjbnih	650	12000
Select	Buy	PR0015	John	Kartik	Pulses	pulses	730	8720

At the bottom of the page, there is a footer with the text "Copy Right 2015.Farmer's E-Mart", social media links for Facebook and Twitter, and contact information: "Contact Us | Privacy" and "admin@gmail.com". The system status bar at the bottom right shows "10:04 AM 6/1/2016".

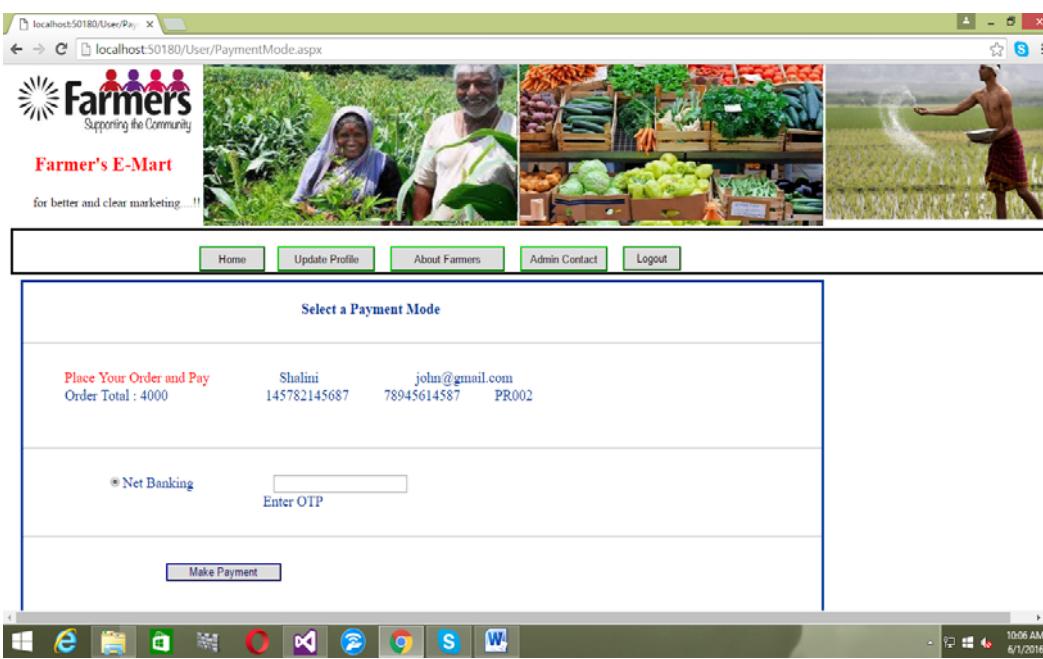
ORDER PAGE:

Final purchase of buyer can be done in this page after the buyer has entered shipping address.



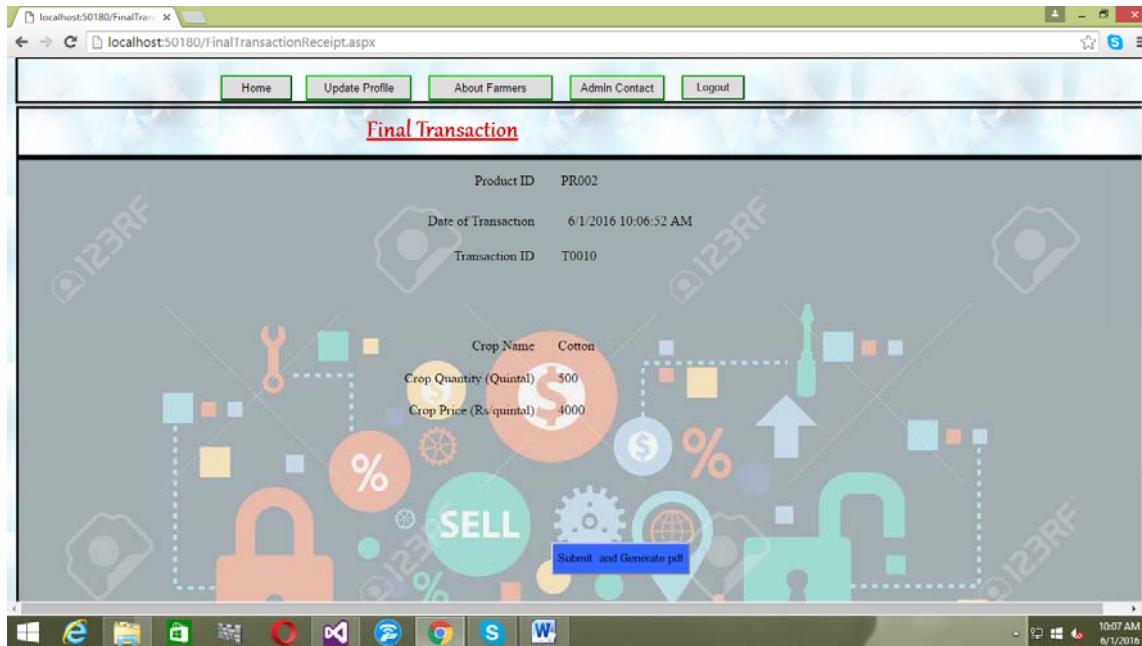
PAYMENT PAGE:

Payment through net banking can be done through this page and data is stored in the table.



FINAL TRANSACTION PAGE :

This page confirms the purchase of product by buyer and receipt can be produced after final submission.

**TRANSPORTATION PAGE:**

In this page, buyer can select any of the two ways for transportation. He can either ask admin or arrange by himself.



CHAPTER 4

CODING

4.1. FEATURES OF LANGUAGE

(a).Microsoft Visual Studio .Net:

Visual Studio .NET is a complete set of development tools for building ASP Web applications, XML Web services, desktop applications, and mobile applications. Visual Basic .NET, Visual C++ .NET, and Visual C# .NET all use the same integrated development environment (IDE), which allows them to share tools and facilitates in the creation of mixed-language solutions. In addition, these languages leverage the functionality of the .NET Framework, which provides access to key technologies that simplify the development of ASP Web applications and XML Web services.

(b).The .NET Framework:

The .NET Framework is a multi-language environment for building, deploying, and running XML Web services and applications. It consists of two main parts:

(1). Common Language Runtime:

Despite its name, the runtime actually has a role in both a component's runtime and development time experiences. While the component is running, the runtime is responsible for managing

memory allocation, starting up and stopping threads and processes, and enforcing security policy, as well as satisfying any dependencies that the component might have on other components. At development time, the runtime's role changes slightly; because it automates so much (for example, memory management); the runtime makes the developer's experience very simple, especially when compared to COM as it is today. In particular, features such as reflection dramatically reduce the amount of code a developer must write in order to turn business logic into a reusable component.

(2). Unified programming classes:

The framework provides developers with a unified, object-oriented, hierarchical, and extensible set of class libraries (APIs). Currently, C++ developers use the Microsoft Foundation Classes and Java developers use the Windows Foundation Classes. The framework unifies these disparate models and gives C#.net and JScript programmer's access to class libraries as well. By creating a common set of APIs across all programming languages, the common language runtime enables cross-language inheritance, error handling, and debugging. All programming languages, from JScript to C++, have similar access to the framework and developers are free to choose the language that they want to use.

(c). Introduction to C#.NET:

In brief, C#.NET a next generation of ASP (Active Server Pages) introduced by Microsoft. Similar to previous server-side scripting technologies, C#.NET allows us to build powerful, reliable, and scalable distributed applications. C#.NET is based on the Microsoft .NET framework and uses the .NET features and tools to develop Web applications and Web services. Even though C#.NET sounds like ASP and syntaxes are compatible with ASP but C#.NET is much more than that. It provides many features and tools, which let we develop more reliable and scalable, Web applications and Web services in less time and resources. Since C#.NET is a compiled, .NET-based environment; we can use any .NET supported languages, including VB.NET, C#, JScript.NET, and VBScript.NET to develop C#.NET applications.

CHAPTER 5

TESTING

5.1.SYSTEM TESTING

Testing is a set activity that can be planned and conducted systematically. Testing begins at the module level and work towards the integration of entire computers based system. Nothing is complete without testing, as it is vital success of the system.

A. Testing Objectives:

There are several rules that can serve as testing objectives, they are

1. Testing is a process of executing a program with the intent of finding an error
2. A good test case is one that has high probability of finding an undiscovered error.
3. A successful test is one that uncovers an undiscovered error.

If testing is conducted successfully according to the objectives as stated above, it would uncover errors in the software. Also testing demonstrates that software functions appear to be working according to the specification, that performance requirements appear to have been met.

There are three ways to test a program:

1. For Correctness
2. For Implementation efficiency
3. For Computational Complexity.

Tests for correctness are supposed to verify that a program does exactly what it was designed to do. This is much more difficult than it may at first appear, especially for large programs. Tests for implementation efficiency attempt to find ways to make a correct program faster or use

less storage. It is a code-refining process, which re-examines the implementation phase of algorithm development.

Tests for computational complexity amount to an experimental analysis of the complexity of an algorithm or an experimental comparison of two or more algorithms, which solve the same problem.

Testing Correctness

The following ideas should be a part of any testing plan:

1. Preventive Measures
2. Spot checks
3. Testing all parts of the program
4. Test Data
5. Looking for trouble
6. Time for testing
7. Re Testing

The data is entered in all forms separately and whenever an error occurred, it is corrected immediately. A quality team deputed by the management verified all the necessary documents and tested the Software while entering the data at all levels. The entire testing process can be divided into 3 phases

1. Unit Testing
2. Integrated Testing
3. Final/ System testing

5.2 TESTING REQUIREMENTS

Testing can be done based on test cases. Test case has components that describes an input, action or event and an expected response, to determine if a feature of an application is working correctly

For this project the application must generate the following,

- Valid user name
- Valid password

The input given by the user must be checked from the database.

Login ID={Valid login ID, Invalid login ID}

Password= {Valid password, Invalid password, Empty}

Steps formatting to carry out the test for Login Page-

- Valid Login page
- Enter Email ID
- Enter password
- Click Login

5.3 UNIT TESTING

As this system was partially GUI based WINDOWS application, the following were tested in this phase

1. Tab Order
2. Reverse Tab Order
3. Field length
4. Front end validations

In our system, Unit testing has been successfully handled. The test data was given to each and every module in all respects and got the desired output. Each module has been tested found working properly.

5.4. INTEGRATION TESTING

Test data should be prepared carefully since the data only determines the efficiency and accuracy of the system. Artificial data are prepared solely for testing. Every program validates the input data.

5.5. VALIDATION TESTING

In this, all the Code Modules were tested individually one after the other. The following were tested in all the modules

1. Loop testing
2. Boundary Value analysis
3. Equivalence Partitioning Testing

In our case all the modules were combined and given the test data. The combined module works successfully without any side effect on other programs. Everything was found fine working.

5.6. OUTPUT TESTING

This is the final step in testing. In this the entire system was tested as a whole with all forms, code, modules and class modules. This form of testing is popularly known as Black Box testing or system testing.

Black Box testing methods focus on the functional requirement of the software. That is, Black Box testing enables the software engineer to derive sets of input conditions that will fully exercise all functional requirements for a program. Black Box testing attempts to find errors in the following categories; incorrect or missing functions, interface errors, errors in data structures or external database access, performance errors and initialization errors and termination errors.

5.7. TEST CASES

5.7.1 Buyer

Module No.	Module Name	Expected Behaviour	Experimental Behaviour	Status
1.	Registration	This is for our new user where they can give their entire details	New user can give inputs here, which are stored into the database	Passed
2.	Login	This is the verification page of users. Only a valid user can login	This inputs given by the users are checked from the database	Passed
3.	Search product	This is for searching the product user want to buy after viewing the details	Here details about the product is stored in database. When the user search for their product the data is retrieved from the database.	Passed
4.	Purchase product	This is for purchasing the product which user has kept in his wishlist	Here buyer can keep the product he wants to buy in wishlist which is stored in database. After final purchase the product is deleted accordingly	Passed
5.	Avail transport	This is for the delivery for purchased product	Here the user can ask admin for transport after searching the nearest farmer or avail the transport by himself.	Passed

Fig 5.1: Test case for buyer

5.7.2 Producer

Module No.	Module Name	Expected Behaviour	Experimental Behaviour	Status
1.	Registration	This is for our new user where they can give their entire details	New user can give inputs here, which are stored into the database	Passed
2.	Login	This is the verification page of users. Only a valid user can login	This inputs given by the users are checked from the database	Passed
3.	Upload product (crop)	This is for updating the product by farmer which he wants to sell. The farmer can remove or modify the details of the product when required.	Here details about the product is stored in database. The farmer can check the product he uploaded whenever he wants.	Passed
4.	View buyer details	This is for viewing the details of buyer where the producer can check to whom the product is sold.	Buyer details is stored in the database and producer can check buyer details	Passed
5.	Final Transaction	After final transaction the money of the product sold out is transferred in producer's account via virtual transaction	Details about the transaction is stored in the database and admin can check all the details and generate reports accordingly.	Passed

5.2: Test case for producer

CHAPTER 6

PROJECT DEVELOPMENT ANALYSIS

7.1 ESTIMATION

The following project attributes have to be estimated

- Cost: How much is it going to cost to develop the software?
- Duration: How long is it going to take to develop the product?
- Effort: How much effort is required to develop the product?

7.2 COCOMO MODEL

COCOMO (COnstructiveCOst estimation MOdel)was proposed by Boehm [1981].

Boehm postulated that any software development project can be classified into one of the following categories based on the development complexity: organic, semidetached, and embedded. In order to classify a product into identified categories, Boehm not only considered the characteristics of the product but also those of the development team and development environment.

Boehm's definition of organic, semidetached, and embedded systems are elaborated below:

1. Organic Mode:

- Relatively Small, Simple Software projects.
- Small teams with good application experience work to a set of less than rigid requirements.
- Similar to previously developed projects.
- Relatively small and require little innovation.

2.Semidetached Mode:

- Intermediate (in size and complexity) software projects in which teams with mixed experience levels must meet a mix of rigid and less than rigid requirements.

3 Embedded mode

- Software projects that must be developed within set of tight hardware, software and operational Constraints

7.3 BASIC COCOMO MODEL:

Basic COCMO Model is good for quick, early, rough order of magnitude estimate of software cost. It does not account for differences in hardware constraints, personal Quality and experience, use of modern tools and techniques, and other project attribute known to have a significant influence on software cost, which limits its accuracy. It gives an approximate estimate of the project parameters. The basic COCOMO estimation model is given by the following expressions:

$$\text{Effort} = a_1 \times (\text{KLOC})^{a_2} \text{PM}$$

$$T_{\text{dev}} = b_1 \times (\text{Effort})^{b_2} \text{ Months}$$

Where,

- KLOC is the estimated size of the software product expressed in Kilo Lines of Code,
- a_1, a_2, b_1, b_2 are constants for each category of software products,
- T_{dev} is the estimated time to develop the software, expressed in months,
- Effort is the total effort required to develop the software product, expressed in person months (PMs).

Estimation of development effort:

For the three classes of software products, the formulas for estimating the effort based on the code size are shown below:

Organic: Effort = $2.4(\text{KLOC})^{1.05}$ PM

Semi-Detached: Effort = $3.0(\text{KLOC})^{1.12}$ PM

Embedded: Effort = $3.6(\text{KLOC})^{1.20}$ PM

PM: Person Months

Estimation of development time:

For the three classes of software products, the formulas for estimating the development time based on the effort are given below:

Organic: $T_{\text{dev}} = 2.5(\text{Effort})^{0.38}$ Months

Semi-detached: $T_{\text{dev}} = 2.5(\text{Effort})^{0.35}$ Months

Embedded: $T_{\text{dev}} = 2.5(\text{Effort})^{0.32}$ Months

Calculation

This project falls under the organic category. Applying the basic form of COCOMO, we compute the attributes of the project as follows:

Efforts: $E = a_1(\text{KLOC})^{a_2}$ [KLOC=& a₁, b₁, c₁, d₁ are basic COCOMO constraints.]

$$=2.4*(32)^{1.05}$$

$$=92 \text{ person-month (almost)}$$

Duration: $D=b_1(E)^{c_1}$

$$=2.5 * (92)^{0.38}$$

$$=14 \text{ months (almost)}$$

Persons deployed: $P=E/D$

$$=92/14$$

$$=6 \text{ (almost)}$$

If the average salary of software developer is Rs. 25,000/month, then total cost to developing the project is = $(92*25000) = 2300000$

CHAPTER 7

FUTURE SCOPE

1.Partial Payment:

Partial payment will help user as well as farmer to buy and sell the product required by user accordingly. If the product is more with farmer then farmer can update his left over product for further purchasing.

2.Payment Gateway:

In this project we have designed false transaction which will show only that transaction is successful, similar to virtual transaction for better understanding. Since the implementation of payment gateway is not possible right now, it will be implemented in future.

3.Implementation of Debit/Credit payment modes:

In this website we have worked upon implementation of net banking only. Debit and credit will be implemented in future.

4.Mandatory charges:

Application of charges at the time of registration will be implemented considering the need of the user as well as farmer.

5.Multiple Purchase of Products:

Buyer can buy more than one product at a time from the created wishlist

6. Data analysis:

With all the information stored in database Admin can generate reports. The report will include all the information about the transaction and also what all products are sold by which farmers. This analysis will be very useful for future use.

CHAPTER 8

CONCLUSION

The project report entitled " Farmer's E-Market" is still under construction. The work on the project is under progress. The part of our system has been developed with much care that it is free of errors and at the same time it is efficient and less time consuming. The important thing is that the system is robust. We have tried our level best to make the site as dynamic as possible. Also provision is provided for future developments in the system. The entire system is secured. This online system is made keeping in mind all pros and cons.

The internet has become major source in modern business, thus electronic shopping has gained significance not only from the entrepreneur's but also from the customer's point of view. For the entrepreneur, electronic shopping generate new business opportunities and for the customer, it makes comparative shopping possible. As per the survey, most consumers of online stores are impulsive and usually make a decision to stay on a site within the first few seconds. We have designed the project to provide the user with easy navigation, retrieval of data and necessary feedback as much possible. A good design must be accompanied with a user friendly application logic. It should be convenient for the customer to view the contents of their page and to be able to update information in their interface. The features are designed for the customer to make them more comfortable.

This project helps in understanding the creation of an interactive web page and the technologies used to implement it. The building of the project has given us the idea and a precise knowledge about how the application can be developed , how it connects to the database and how the data and web pages are modified as required.

The main motive for the project was to provide dynamic online farmers's management system to help farmers in every possible way and provide them a stable platform where they can perform every transaction with ease.

CHAPTER 9

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