UNIVERSITY OF MUMBAI

A PROJECT REPORT ON

"E-Farming"

SUBMITTED BY

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Under the guidance of

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Late Shri. Vishnu Waman Thakur Charitable Trust's ${\color{blue} VIVA\ SCHOOL\ OF\ MCA}$

Shirgaon, Virar(East) 2020-21

Late Shri. Vishnu Waman Thakur Charitable Trust's VIVA SCHOOL OF MCA

Shirgaon, Virar(East)



CERTIFICATE

This is to certify that

Ms. Samiksha Vijay Kini

Has satisfactorily completed the project entitled

E-Farming

Towards the partial fulfillment of the MASTER OF COMPUTER APPLICATION (MCA) As laid by University of Mumbai.

Principal	External Examiner	Internal Guide

D+d-

ACKNOWLEGEMENT

With immense we are presenting "E-Farming" Project report as part of the curriculum of 'Masters of Computer Applications (MCA)'. We wish to thanks all the people who gave us unending support.

I express my honor and gratitude to Prof. Chandani A. Patel In-charge Principal of VIVA SCHOOL OF M.C.A for providing the necessary facilities and encouragement for completing my project work.

I wish to express my deep sense of gratitude and honor toward my internal guide Prof. Chandani A. Patel committed their devotion, dedication and encouragement with full faith on me for completing my project work successfully.

I am very much thankful to our classmates and other respected teachers and staff members for their valuable guide for our project

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1. Introduction

1. Introduction of the project

India is fourth largest agriculture sector in the world. Agriculture sector provides employment to over two third population of the country. This project is aimed at solving some of the major problems related to farmers. The web interface has been designed completely user friendly, to facilitate the access even to an illiterate farmer. Electronic Farming (also known as e-farming) is a term encompassing several different types of farming activities like price details and buying/selling different products. Remote e-Farming where Farmer or Customer are directly communicate with each other. The main objective of this project is building a website which will help farmers from Indian villages too sell their products in different cities to different customers.

2. Problem definition

Problem with the existing system is farmers need to go to the market and then they have to sell their vegetables to vendors and also, they don't get the enough profit from it. Many of the farmers doesn't know about the actual price of the vegetables. Many times, because of the long distance from the market they could not reach at the market, by providing this platform we are trying to help to get the enough profit which they deserve. The main objective of this project is building a website which will help farmers from Indian villages too sell their products in different cities to different customers.

In the existing system buying and selling a product is done manually. All the details of the product to be sold or purchased is maintained manually. This project is aimed at solving this major problems related to farmers.

3. Objective of Project

The main objective of this project is building a website which will help farmers from Indian villages too sell their products in different cities to different customers.

It is a computerized approach for better and clear marketing. Farmers will get unique interface where they can avail everything right from learning to the market information they can perform marketing, get the current rates of market, and apply as well as check status of application. This website will act as unique and secure way to perform agromarketing.

4. Scope of Project

This Project will thus pave the way for an efficient means to carry out the buying and selling of the products. Farmers will earn money as per the work they have done and will not suffer losses. This system is proposed to replace the existing system where the farmer has to suffer between the manufacturers and the traders. Also the main advantage of this project is that it uses Information Technology. The User only needs basic products like a Computer and an internet connection.

2. System Study

1. Existing System

- Existing System was manual.
- Time consuming as data entry which include calculations took lot of time.
- People tend to make errors like data entry and others.
- Manual entry is also huge time consuming.
- Consume large volume of paper work
- The proposed system is expected to be faster than the existing system

2. Disadvantages of Existing system

- 1. Time consuming
- 2. Less accurate
- 3. Less efficient
- 4. Lots of paper work
- 5. Slow data processing
- 6. Not user friendly environment
- 7. Difficult to keep old records

3. Proposed System

- Simplicity in controlling system.
- Leaving all manual control totally.
- Security and quality management.
- Reducing human errors.

In this project we are describing the Farmer/Customer as an entity that's attributed will be stored and maintained by a Data-store. When the Farmer/Customer registers for an account he will be provided by a user id and password with which he can access the account any time anywhere. At the time of the registration the Customer/Farmer will have to provide details such as: Username, Name, Email-id, and Password.

These entire fields will be validated and then only they will be recorded by the Data store. At the time of Registration the values in the data store will be checked for whether a similar account is being created. If found then the registration process will be suspended. Data store Administrator can also be able to look into the various records entered into the Data store. In turn, the manufacturers and traders would also be able to make transactions online to their clients in any part of the country. E-farming is online shopping website where customer can buy farm product directly from farmers. Various type of farmer's products are available for purchase at reliable price. E-farming basically focuses on user friendly interfaces and promotes user to purchase the product faster.

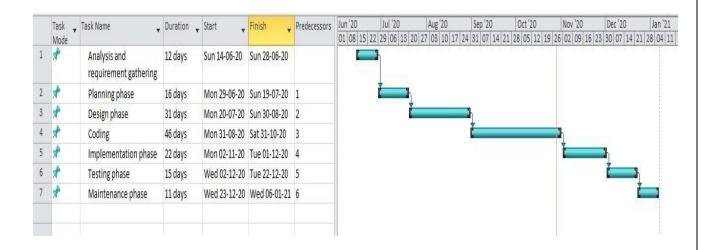
3. Analysis & Design

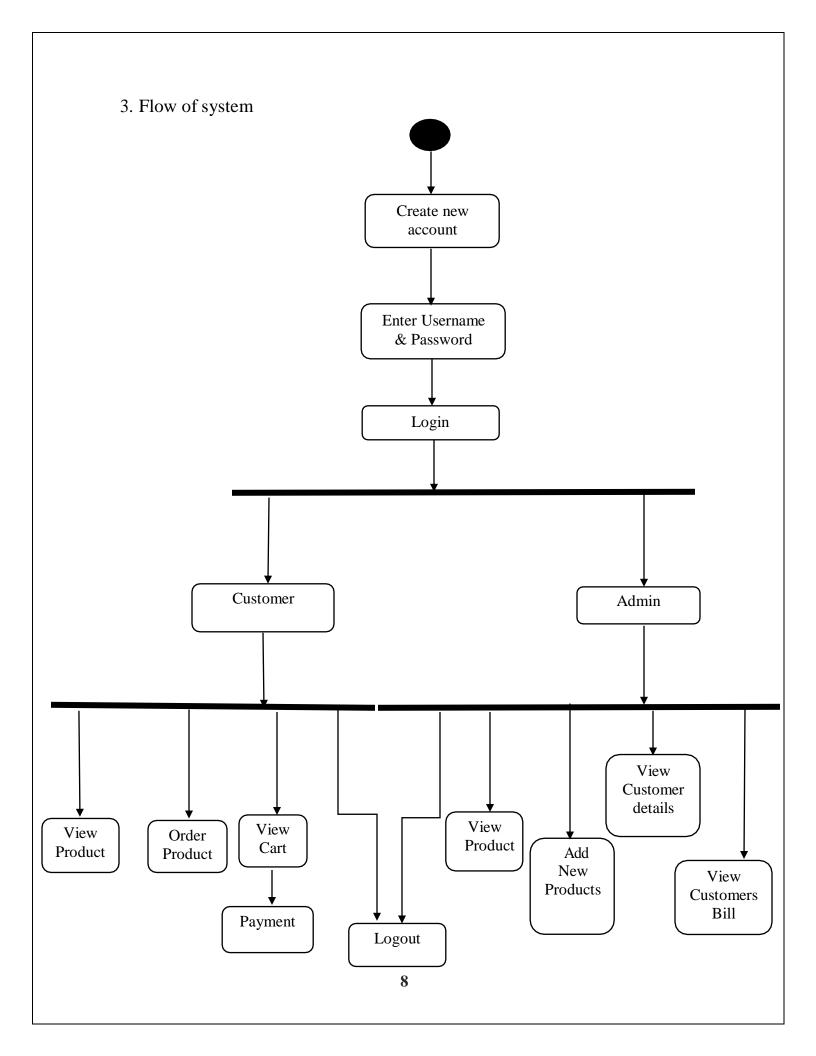
- 1. Software/hardware Requirement Specification $_{\circ}$ Software requirement
- > MYSQL
- > HTML, CSS, PHP, JavaScript, Jquery
- ➤ WAMP SERVER

o Hardware requirement

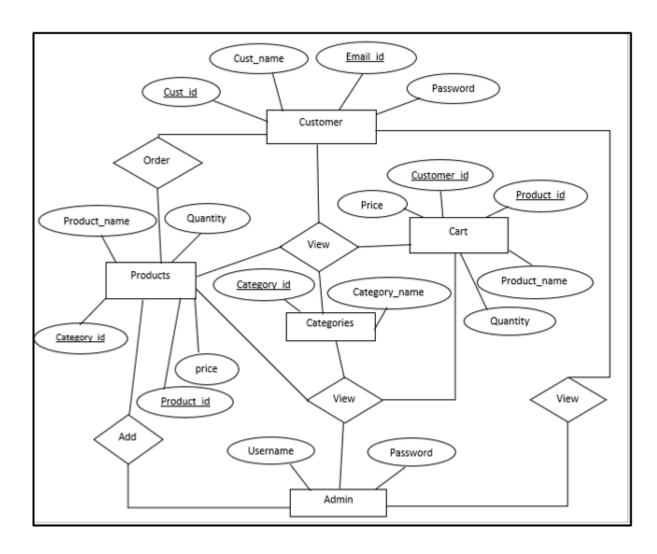
- ➤ Windows 10
- ➤ Processor Intel® Core i3
- ➤ Memory (RAM) 4.00 GB
- ➤ Hard Disk 500GB

2. GANTT Chart

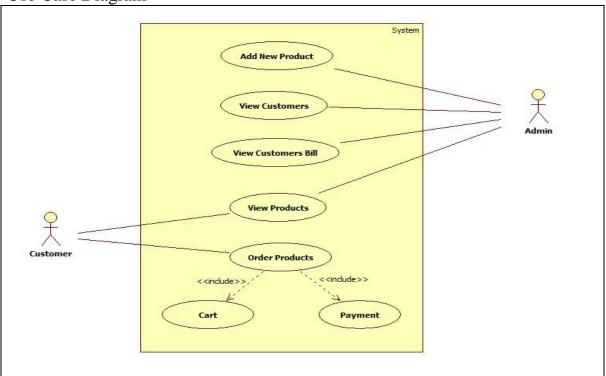




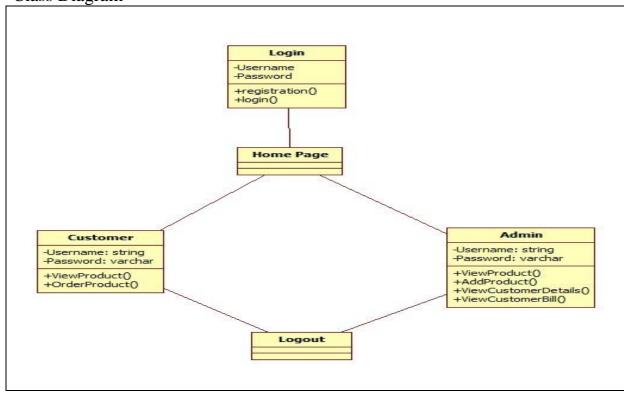
ER Diagram



Use Case Diagram

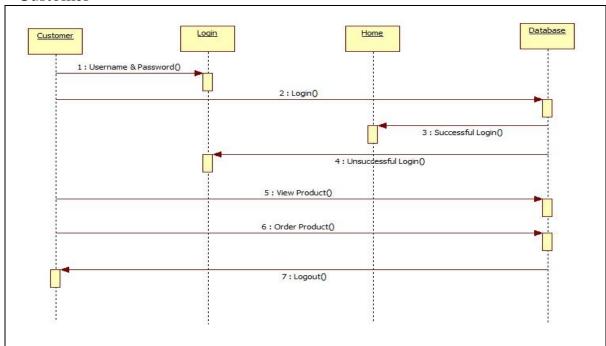


Class Diagram

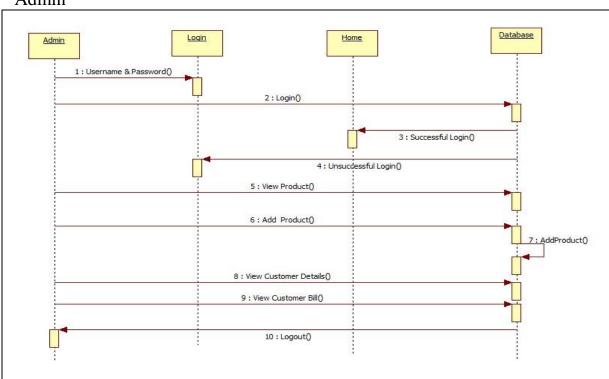


Sequence Diagram

Customer



Admin



4. Module design and organization

1. Create new account

Every customer has to register into this application and use the same credentials for login. Once they login they get an option of different features to use inside the mobile application as well as through web

2. Login page

Customer and admin has to login into their account using there username and password. Once they login they get an option of different features to use inside the mobile application as well as through web

3. Administrator

- View product Details
- Add Product Details by accessing them category-wise.
- View Customer Details.
- View all customers bill.

4. Customer

- View products category-wise
- Order Product category-wise
- View Cart details
 - 5. Payment

4. Testing & Validation

1. Test cases and Report (based on manual & automation testing)

Unit Testing

This type of testing is the testing of individual software components. It is typically done by the programmer and not by the testers. It requires details information and knowledge about the internal program design and code to perform this. During unit testing, we carried out various testing task such as the reflection of the unit data on database and its interface. Various types of bugs associated with the component were identified and fixed. We use various functional keys to test our software. In our software unit testing is concerned with the retrieval of customer, product and sales records and also their updation and deletion. Also, the validation of each detail is looked into.

The module interface is tested to ensure that information properly flows into and out of the program unit under test. The unit testing is normally considered as an adjunct step to coding step. Because modules are not a standalone program, drivers and/or stubs software must be developed for each unit. A driver is nothing more than a "main program" that accepts test cases data and passes it to the module. A stub serves to replace the modules that are subordinate to the modules to be tested. A stub may do minimal data manipulation, prints verification of entry and returns.

Approaches used for Unit Testing were:

- i) Functional Test: Each part of the code was tested individually and the panels were tested individually on all platforms to see if they are working properly.
- **ii) Performance Test:** These determined the amount of execution time spent on various parts of units and the resulting throughput, response time given by the module.
- **Stress Test:** A lot of test files were made to work at the same time in order to check how much workloads can the unit bear.
- **iv**) **Structure Test:** These tests were made to check the internal logic of the program and traversing particular execution paths.

Admin login form:

Test case ID	Test case name	Test case description	Input Data	Expected Result	Actual Result	Result
Ef_AF _ 01	To test the entire" admin login form"	1. On the wampp server 2. Go to localhost and type the url "http://localhost/E-farmingloginp age.php" the homepage will open there login page is already displayed 3. Enter the credentials and to verify the user	Valid: Username: admin Password: Admin Invalid: Username: XYz Password: abc	The Admin dashboar d will open It will show an error as" userid or passwor d is incorrect	Username and Password is accepted and the admins dashboard will get opened Error message is displayed as "userid or password is incorrect"	Pass

View products:

Test case ID	Test case name	Test case description	Input Data	Expected Result	Actual Result	Result
Vp_01	To test the entire view products form	After successful login the home page of admin will get open Click on the view products	Click on the view products	It will display the products categorie s and their names	It displays the product categories and their names	Pass
Vp_02	To test the view products form	Enter the valid category to display the particular product of that category	Valid category: 1 2 3	It will display the category wise products	Products are displayed with the respective category	Pass
			Invalid category: 4 5 etc	It will show an error message "specifie d category does not exist"	Error is displayed "specified category does not exist"	Pass

Add new products form

Test case ID	Test case name	Test case description	Input Data	Expected Result	Actual Result	Result
Adp_01	To test the add new product form	To check whether add new product form get displayed or not	Click on the add new product tab	It will display add new product form	Form is displayed	Pass
Adp_02	To Test the entire "add new products form"	To verify the all the data entered in fields are valid or not	Valid: Product name: Banana Category ID:1 Price:50 Quantity:2kg	The product will be added successfully and it will show us	Pop up message is showed "product added"	Pass

			Invalid: Product name: banana Category ID: 9 Price: 60 Quantity:2kg	an pop up message as" product added" It will show an error as "categor y does not exist"	Error message is displayed "category does not exist"	Pass
--	--	--	---	---	---	------

Available customers & Customers Bill & logout of admin:

Test case ID	Test case name	Test case description	Input Data	Expected Result	Actual Result	Result
Ac_01	To test the view custome rs	To check whether all the customers will get displayed or not	Click on the customer tab	It will display all the available customer s	Customers list is displayed	Pass
CB_02	To test the Bill of the custome rs	To check whether the bill get displayed to admin or not	Click on the customer's bill tab	It will display the Bill of the customer s	Bill is displayed	Pass
Lo_03	To test the logout module of admin	To check the whether admin will get successfully logged out from his homepage or not	Click on the logout Button	Admin will logout from his homepag e and the dashboar d will get open	Dashboard is opened	Pass

Customers Module Create new account form and Login form of customer:

Test case ID	Test case name	Test case description	Input Data	Expected Result	Actual Result	Result
CAN_ 0 1	To test entire "create new account form" of custome r	To Check whether username field should not accept the blank values	Valid: Username: sne Name: snehal Email-id: snehaldesai98@g amil.com Password: sne@123 confirm password: sne@123	All the data will get accepted and the account will get created successfully	Account is created	Pass
			Invalid: Username: Name: snehal Email-id: snehaldesai98@g amil.com Password: sne@123 confirm password: sne@123	The error message will get displaye d as "Userna me should not be empty"	Error message is displayed	Pass
CAN_ 0 2	To test entire "create new	To verify the email id of the user it must contain "@" symbol	Valid: <u>Snehaldesai98@g</u> <u>mail.com</u>	Email id will get accepted	Email id is accepted	Pass
	account form" of custome r		Invalid: abcdgmail.com	Email id will not get accepted	Email id is not accepted	Pass
CAN_ 0 3	To Test the usernam e (must	After creation of new account, the person cannot create new account with the same	Valid for first attempt: Username: Sne	Usernam e will get accepted	Username is accepted	Pass
	be unique)	username	Invalid for second attempt Username:	Usernam e will not get accepted	Error messages is displayed"	Pass

			sne	again It will show an error message as" usernam e is already taken"	as "username already taken!"	
LF_01	To test the entire Login form of custome r	To verify whether the customer will get successfully logged in into the system or not	Valid: Username: Sne Password: Sne123	Data will get accepted and home page of customer will get open	Home page of customer is opened	Pass
			Invalid: Username: Xyz Password: Abc123	Data will not get accepted it will show an error message as" User account does not exist	It shows an error message as" User account does not exist"	Pass

Order module & Cart module:

Test case ID	Test case name	Test case description	Input Data	Expected Result	Actual Result	Result
OM_01	To Test the entire order module	To verify whether the category entered by user is valid or not	Valid category: 1 2 3	Category will get accepted and available products will get displaye d to the	Products are displayed	Pass

				customer		
			Invalid Category: 4 5 6etc.	Error message will get displaye d as "Categor y does not exist"	Error is displayed as "category does not exist"	Pass
OM_02	To Test the entire "order module"	To check whether the product will get added to the cart or not	Input: Product ID: 33 Quantity: 12	Pop up message will get displaye d as "Added to cart"	Pop up message is displayed	Pass
CM_03	To Test the entire "cart module"	To verify the cart will get opened and the products are added into the cart or not	Click on the cart tab	Cart will get displaye d with the products	Cart is displayed	Pass
CM_04	To test the entire "cart module"	To verify whether the remove button removes the added products of cart or not	Click on the remove button	Product will get removed from the cart	Product is removed	Pass
CM_05	To test the entire "cart module"	To verify the continue button of cart to display the further details of the form to take the order of the customer	Click on the Continue Button	It will display the order details form	Form is displayed	Pass
CM- ODF_0 6	To test the "Order details form"	To verify the address and phone no entered by the customer	Valid: Address: Virar Phone: 9890549741	Address and phone no will get accepted	Address and phone no are accepted	Pass
			Invalid: Address: virar Phone:7868	Phone no will not get accepted	Error message is displayed "Phone no	Pass

CM_OD	To test	To Check the	Click on the Place	It will display an error message as" Phone should contain 10 digits" The Pop-	should contain 10 digits"	Pass
F_7	the order details form	functionality of Buy the products Button	order Button	Up message will get displaye d as" Order placed The product will be delivere d"	message is displayed "Order placed the product will be delivered"	1 455

Integration Testing

"If they all work individually, they should work when we put them together." The problem of course is "putting them together". This can be done in two ways:

- i) Top down integration: Modules are integrated by moving downwards through the control hierarchy, beginning with main control module are incorporated into the structure in either a depth first or breadth first manner.
- Bottom up integration: It begins with construction and testing with atomic modules i.e. modules at the lowest level of the program structure. Because modules are integrated from the bottom up, processing required for the modules subordinate to a given level is always available and the need of stubs is eliminated.

Test	Test case	Test case description	Input Data	Expected	Actual	Result
case ID	name			Result	Result	

IT_EF _ 01	To check the integrity between login of admin and homepag e of admin	After entering Valid username and password of admin click on the login button	Username: admin Password: Admin Click on the login button	It should display the home page of admin	Admin's home page is displayed	Pass
IT_EF _ 02	To check the integrity between create account page and the dashboa rd	After entering all the valid credentials of new account page click on the create account	Click on the create account button	It should redirect back to the dashboar d	Dashboard is displayed With the login page	Pass
IT_EF _ 03	To Check the integrity between the custome r login and homepag rd of custome r	After filling all the credentials of the login page click on the login button	Click on the login button	It should open the homepag e of customer /user	Homepage is displayed	Pass
IT_EF _ 04	To Check the integrity Between logout Button of custome r and admin module and the Dashboa rd	After doing all the necessary work customer and admin will click on the logout button	Click on the logout button	It should redirect to the Dashboa rd page	Dashboard is displayed	Pass

5. User Manual

1. Explanation of key functions

Customer:

On home page there will be a login form... Login & create new account these two buttons will be shown on navigation bar.

Customer will have to create account for that they have to use a unique Username if he use username as it's already had been created by someone else then the validation message will be shown.

After creating an account a message will be shown that your account is successfully created.

Then using there Username and password they would be login in there account...

After login the dashboard will be open in that customer can see what is available and then they can order products.

While customer is ordering product or viewing product they have to put Category I'd then after if they want any product they have to put product ID and product quantity and then click on the add Cart button ..If quantity is not much available as the customer Entered then the validation message will be shown.

After the Products will be added in the cart the customer could have to go in cart and check whether the products are right or not...after that they have to click on Continue button and proceed for Payment options...For payment they have to fill there address and mobile no and select the payment method whether Online or cash on delivery Then they have to click on Ok button... after clicking on ok button they will receive a message saying that you will get your order very soon..

Then they Can logout there account...

Admin:

After Login by Admin the dashboard will be shown in that Admin can View or Add products as well as admin can view the details and bill of customer.

By putting Category I'd admin can view product.

For adding product admin will have to click on add product then enter the name and in which category admin will have to add off that category ID , price and quantity need to enter and then click on add button...after clicking on add button a message will be shown saying product added.

If category id doesn't match then the validation message will be shown saying specified category doesn't match..

Then admin can logout there account

2. Method of Implementation

Forms

1. Create new account

Every customer has to register into this application and use the same credentials for login. Once they login they get an option of different features to use inside the mobile application as well as through web

2. Login page

Customer and admin has to login into their account using there username and password. Once they login they get an option of different features to use inside the mobile application as well as through web

3. Administrator

- View product Details
- Add Product Details by accessing them category-wise.
- View Customer Details.
- View all customers bill.

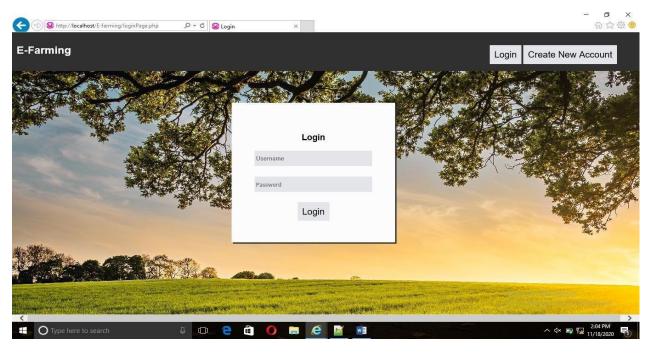
4. Customer

- View products category-wise
- Order Product category-wise
- View Cart details

5. Payment

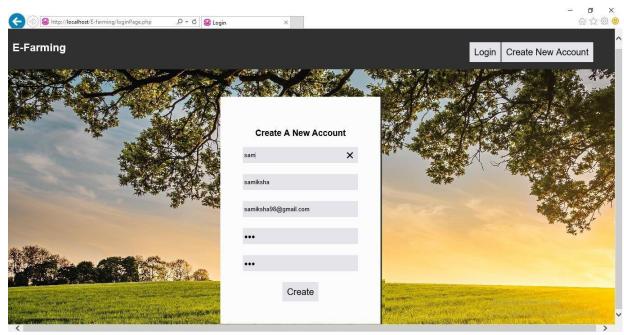
• Output Screens

Home Page:



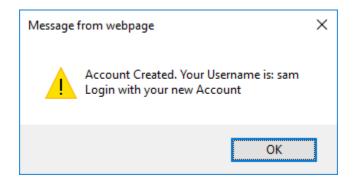
This is the Home page of the project, in the navigation bar login and create new account buttons will be shown.

Create New Account:

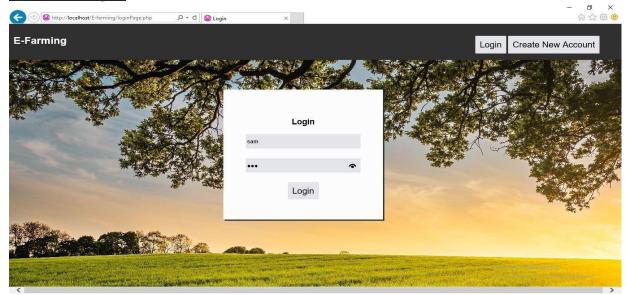


Customer has to fill this form to create a new account.

Popup Message:

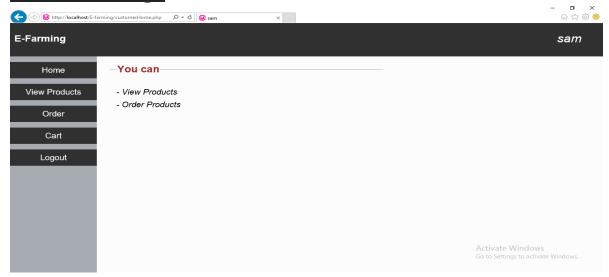


Customer Login:



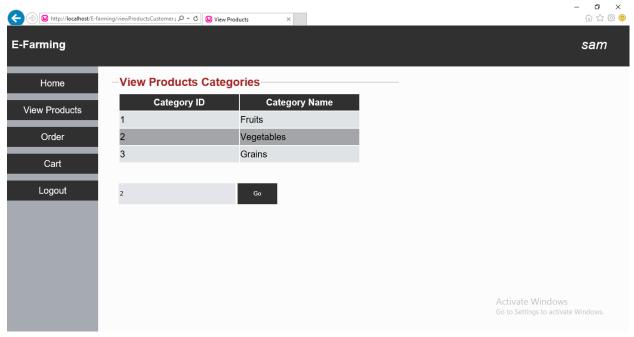
Customer has to login into their account using there username and password.

Customer Home Page:

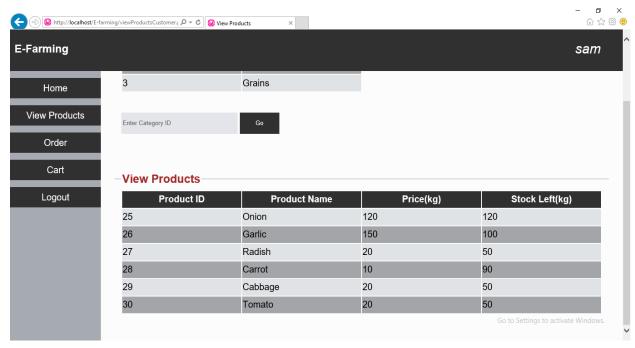


After the successfully login, this home page will be appear, in that customer have many options like view product, order product.

View Product:

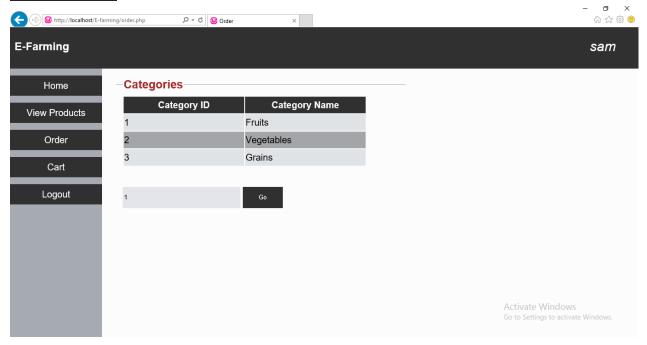


Customer has to choose whatever they want from categories list by typing ID.

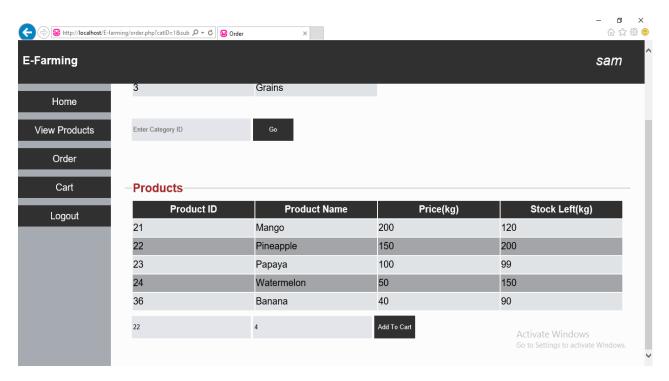


Whatever the ID is typed by the customer the list of that product category will be appear here.

Order Product:

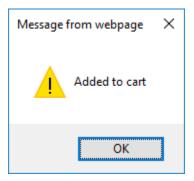


Whichever the product has to order just type its ID and order it.

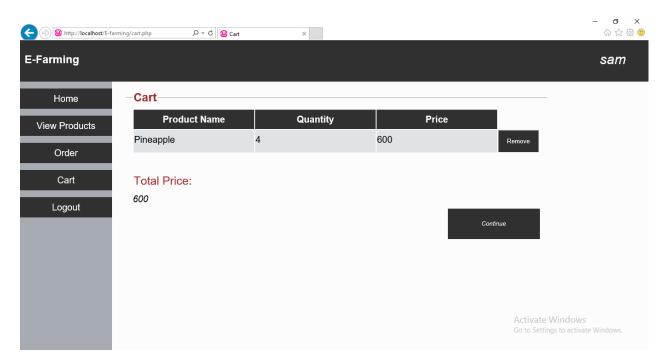


According to the id typed by the customer the list of that product id will appear here. After that whichever the products want just type there ID and Quantity and click on the Add to bill button.

Popup Message:

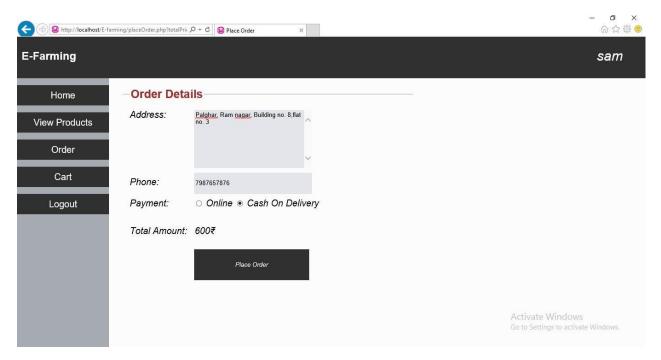


Cart:



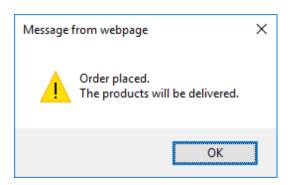
This is the cart where items will be added which were selected by the customer.

Bill:

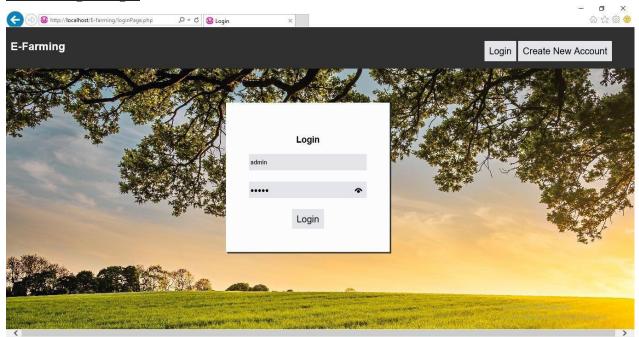


After selecting items the customer will have to fill some information such as Address and Mobile Number and then pay through either by online method or by cash on delivery method.

Popup Message:

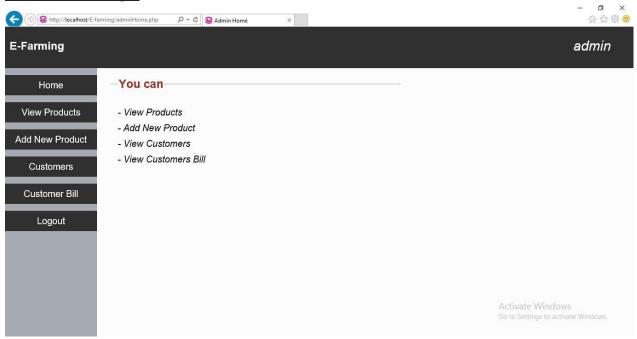


Admin Login Page:



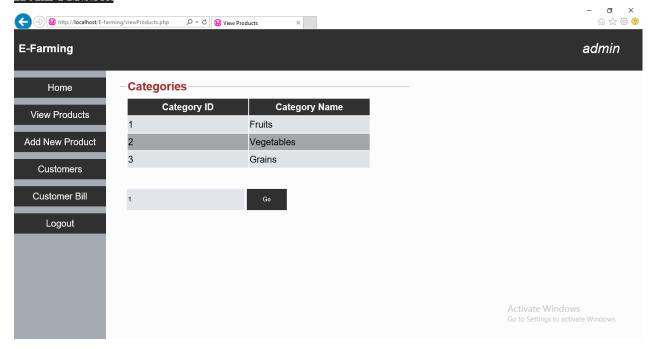
Admin will login there account using there Username and Password.

Admin Home Page:

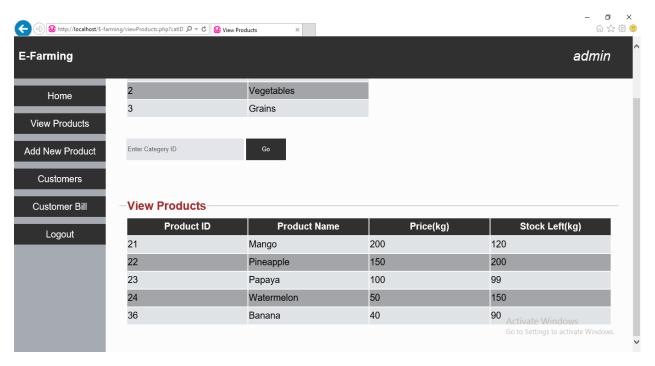


After the successfully login, this home page will be appear, in that admin have many options like view product, add product, customer details, customer bill.

View Product:

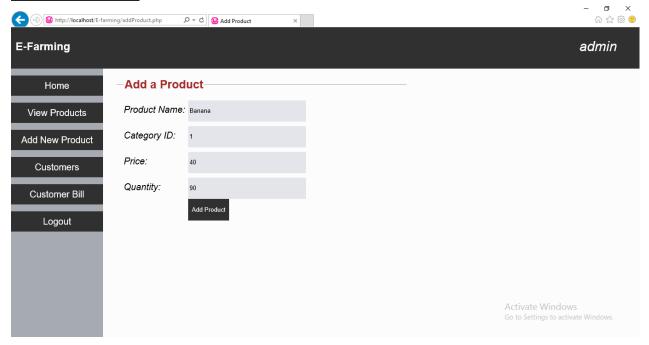


Whatever the ID is typed by the admin the list of that product category will be appear here.



Whatever the ID is typed by the admin the list of that product category will be appear here.

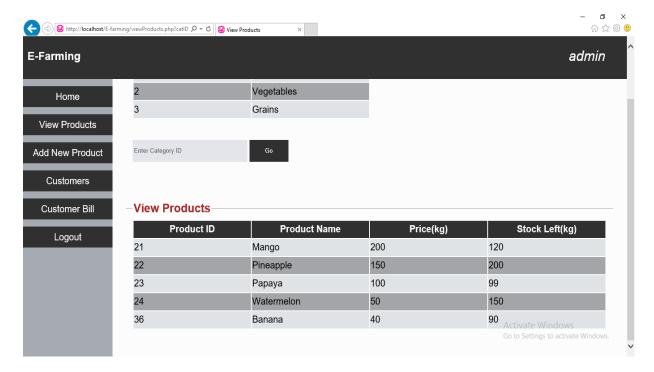
Add New Product:



Admin will add any products by clicking on add new button. What the products admin wanted to add by typing Product Name, Category id, Product Price, and Product Quantity.

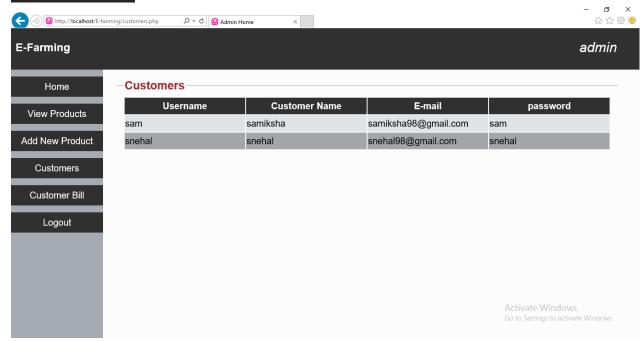
Popup Message:





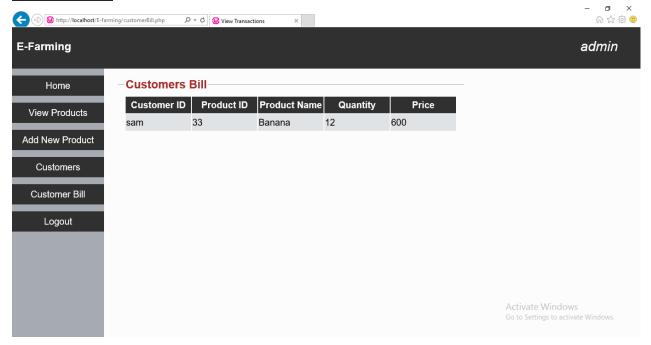
Added Product will be shown here.

Customer Details:



Admin shall see Customer information using clicking on Customers Option.

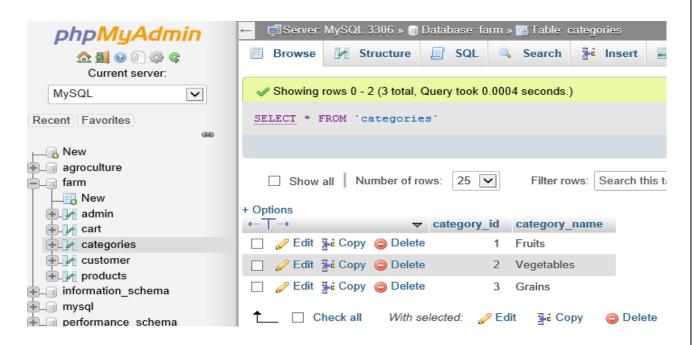
Customer Bill:



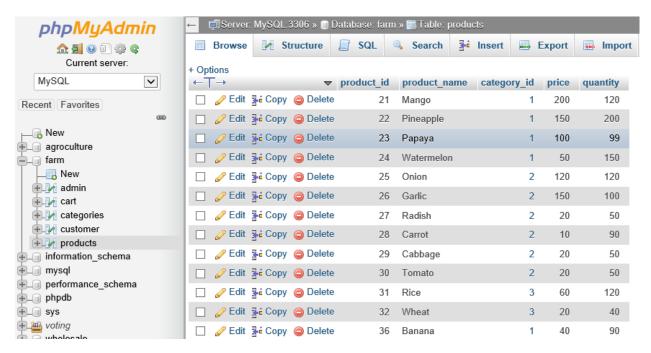
Admin shall see Customer Bill.

Admin shall see whatever the things ordered by the customer.

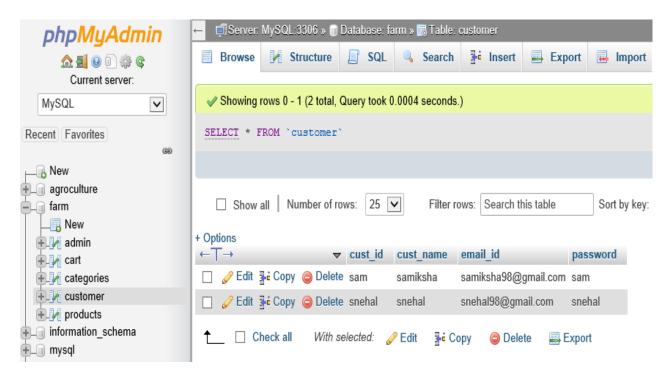
Categories Table:



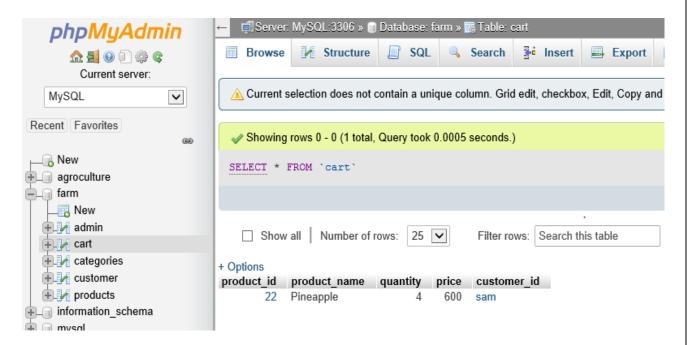
Product Table:



Customer Table:



Cart Table:



6. Conclusion

This Project will thus pave the way for an efficient means to carry out the buying and selling of the products. Farmers will earn money as per the work they have done and will not suffer losses.

This system is proposed to replace the existing system where the farmer has to suffer between the manufacturers and the traders. Also the main advantage of this project is that it uses Information Technology. The User only needs basic products like a Computer and an internet connection. Our project helps Buyers and sellers in saving a lot of time and money.

7. Future Enhancement

- We can give more advance software for E-farming including more facilities.
- Online payment system can be added.
- Making the system flexible in any type.
- Interactive user interface design.
- Sales and purchase return system will be added in order to make return of products.