FARM HUB

Hassan Bilal, F16-1449
Ali Hassan, F16-1108
Imra Rafique, F16-1423

July 2020

Department of Computer Science
Lahore Leads University
Lahore – PAKISTAN

Submission Form for Final-Year

PROJECT REPORT

PROJECT ID		**MEMBERS**	
TITLE			

SUPERVISOR NAME	
Msm	

MEMBER NAME	REG. NO.	EMAIL ADDRESS

CHECKLIST:

Number of pages in this report	
I/We have enclosed the soft-copy of this document along-with the codes and scripts created by myself/ourselves	**YES / NO**
My/Our supervisor has attested the attached document	**YES / NO**
I/We confirm to state that this project is free from any type of plagiarism and misuse of copyrighted material	**YES / NO**

MEMBERS' SIGNATURES	
	Supervisor's Signature

Note 1: This paper must be signed by your supervisor

Note 2: The soft-copies of your project report, source codes, schematics, and executables should be delivered in a CD/DVD

This work, entitled Farm Hub has been approved for the award of

Bachelors of Science in Computer Science

Date

External Examiner:

FYP Coordinator:

Head of Department:

Department of Computer Science

LAHORE LEADS UNIVERSITY

LAHORE – PAKISTAN

Declaration

"No portion of the work referred to in the dissertation has been submitted in support of an application for another degree or qualification of this or any other university/institute or other institution of learning".

MEMBERS' SIGNATURES

_____

_____

_____

Acknowledgements

It is usual to thank those individuals who have provided particularly useful assistance, technical or otherwise, during your project. Your supervisor will obviously be pleased to be acknowledged as he or she will have invested quite a lot of time overseeing your progress.

In the name of God, the most kind and most merciful

I would like to thank Mr. Hussain Awan, Mr. Naoman Khan, Mr. Faizan who kept backing me up in all the times, both financially and morally…

I would also like to thank Dr. Rizwan and Ms. Hina for his guidance and encouraging me to ork hard and smart. I have found him very helpful while discussing the optimization issues in this dissertation work. His critical comments on my work have certainly made me think of new ideas and techniques in the fields of optimization and software simulation.

I am grateful to the God Almighty who provides all the resources of every kind to us, so that we make their proper use for the benefit of mankind. May He keep providing us with all the resources, and the guidance to keep helping the humanity.

Abstract

Farmers live a hard life, they face many problems in their life which can be eased up using technology, and that's what we are trying to do. We will be developing an application that will provide some major and useful tricks for the farmers.

Our application will consist the functionalities including an agriculture blog, to provide up to date information about different aspects of farming. Whether forecast to provide every new about the upcoming weather, so farmers can adapt according to the weather. Many farmers face difficulties in farming, to help them even more we will allow the feature to connect with an expert, our system will have expert section which include experts all around Pakistan. We will allow the farmer to sell his products on our application as well as but products like seeds, sprays and other fertilizers. Not only that our system will also allow the user to register his harvesting and other machines on our plate form, so that other can avail their services. The user can search different machines and can hire them to use. We are also providing mandi rates, so that the farmer will know when to bid and when to sell his product for better business.

Table of contents

List of Figures

List of Tables

Chapter 1

1. Introduction

Agriculture is the science and art of cultivating plants and livestock. Agriculture was the key to the rise of the dull human civilization, under which the cultivation of the breeding species created foodstuffs, which made people live in cities. The history of agriculture began thousands of years ago. After collecting wild cereals that started at least 105,000 years ago, newborn farmers began planting them about 11,500 years ago. [4]

Modern agriculture, plant growth, agricultural chemicals such as pesticides and fertilizers, and technological advances have increased production rapidly, while extensive environmental and environmental damage has occurred.

As technology developed many advance methods to increase the production, it is also very difficult to understand them and hard to get hands on them. Many farmers aren't that educated so they can understand the process completely. Many farmers don't know the right procedure to use a fertilizer or a machine. They don't get benefits form the technology as they should.

Our farmers have lack of access to advance agricultural technology, insufficient infrastructure, old methods of agriculture and insufficient knowledge about fertilizers.

Another problem that effect the farming is the unbalanced rates for the products, farmers spend many hours in the fields to grow their crops and sell them to live a happy life. But often they don't receive the rate they deserve. And same goes with the consumer. Consumers also get these crops on very high prices. Then main reason behind this are the dealers, they are the links between the farmer and consumer and they kept a big amount of profit for themselves. It will be a big success if we can remove could remove dealers form them.

Many farmers strategies without the knowledge of upcoming weather, this is another problem that effect many framers. Many times, their prepared crops get ruined because of the weather and they have to suffer from heavy loses. Our farmers also don't have access to the experts of the field, someone who know everything about every aspect. Farmers keep using those old tools and techniques for farming.

Machineries play an important role in agriculture these days, they can perform the task in just few hours instead of days. But unfortunately, these machines are very expensive and hard to get your hand on, so farmer not often use them.

With all the following problems another problem that many farmers face is the cheap quality seeds and other products as fertilizers and sprays. These products play an important role in the growth of any crop. Farmer can sow the seeds and pour the bad quality fertilizer, which will not only destroy the crop but also will waist all the time and efforts made by the farmer.

All these discussed problems play very keen role in any farmer's life, we just want to help these farmers by building an application which will solve these problems for a farmer. Our application will allow any user to view and purchase different fertilizer and other products. Farmers can sell their products on our application so that farmer and consumer both can benefit from this. Farmer can hire any machine he wants and can contact with the experts available on application. He can also view the weather forecast information of upcoming days. All these features will help the farmer to grow better crops and will ease up his life.

In the end, we briefly present the conclusions from this project and also the possible future improvements and additions for better design/implementation and investigation of Farm Hub.

2. Background

These kind of projects are already being in the market but all these projects are having specific feature in particular application. So, despite getting the facility of all the features form different platform the user will be able to get all those features including many new features in the same application /platform without any inconvenience.

3. Problem Statements

Farmer face many problems in farming and selling their products, they don't get the right price for their product. Some farmers don't have access to the expensive machinery to reduce the burden of farming. And some buyers also face the same problem of over pricing due to the dealers in between the consumer and farmer. Farmers don't have proper knowledge of whether which increases the complications even more.

4. Aims and Objectives

Our application is to help farmers to best of our abilities. Farmers can buy and sell their products. they will also get up to date agriculture and market information. User can post and hire different machineries. We want to established communication between formers and expertise through this application. All these functionalities are provided to help farmers.

5. Scope of Project

The purpose of this application is to help farmers to buy agriculture products from their homes. Farmers can buy different agriculture products from the application and connect with business vendor also can share a different type of information and resources as well. Farmers can buy different seeds, pesticides from anywhere through internet connectivity. Customers will get them registered in this application and then will be able to access the application by logging into the system. They can view/search the list of items based on their categories. User can connect to the experts register on the system, and can get any kind of information form experts. Farmers can post their products for others to buy. Farmer can also post or hire machineries related to farming.

Admin can log in to the admin panel and will be able to add/delete the list of categories such as seeds, pesticides, fertilizers etc. Admin can add the list of the item of each category based on their names, price and company name and mention their expiry as well. Furthermore, the admin will be able to view customer profile and block any user.

Chapter 2

Literature Review

2.1 Research Paper

Title: E-Farm Mandi

Year: November 25, 2019

Author: Alok Kumar Kumar, Aman Kashyap

Details:

E-Farm Mandi is an online marketplace for organic agriculture products. It offers an online platform connecting producers and buyers ensuring the delivery of products at fair prices. Also provides information on organic farming practices and supports them in the marketing of the products.

2.2 Research Paper

Title: Applications of Smartphone-Based Sensors in Agriculture

Year: July 2015

Author: SupornPongnumkul**,** PimwadeeChaovalit, NavapornSurasvadi

Details:

Smartphones have become a useful tool in agriculture because their mobility matches the nature of farming, the cost of the device is highly accessible, and their computing power allows a variety of practical applications to be created. Moreover, smartphones are nowadays equipped with various types of physical sensors which make them a promising tool to assist diverse farming tasks.

2.3 Research Paper

Title: Studying Mobile Apps for Agriculture

Year: December 2016

Author: ConstantinaCostopoulou, Maria Ntaliani, Sotiris Karetsos

Details:

Given that nowadays agricultural stakeholders have to manage heterogeneous and complex information ranging from cultivation techniques to product prices, this study investigates the potential of mobile apps to support them by providing access to information, markets and services. This study uncovers the current status of mobile agricultural apps in the global mobile ecosystem. It also studies agricultural stakeholders' interest and willingness to use mobile apps in their daily agricultural activities in Greece. The empirical research shows that a very small number of apps is available in relation to the significance of agriculture worldwide. Finally, the study proposes that the development of mobile apps should support agricultural activities by providing accurate, certified and validated content and services that would take into account the peculiarities of geographical areas. Also, the successful spread of mobile apps requires the active involvement of public agencies and ministries.

.

Chapter 3

Requirements specification

On the bases of working the specifications are divided into different groups and sub groups according to their working and their category before getting started with the development of the program.

3 Functional requirements

User account (FR-01)

This functional requirement is concerned with the user account of the user. It will contain a process of logging the user into their account so that they can access the facilities and can manage their work online by making their won data base online on the application that will remain save in their account for the future use. Also the user will be able to access the facility that the application is providing.

3.2 Purchase (FR-02)

This is also a functional requirement concerned with the products in the application. On the basis of categories, we have divided this functional requirement into different parts which are mentioned below:

3.2.1 Seeds (FR-02-001)

In this category the user can post a product seed. The user will add some details about the seed i.e the nature of seed, characteristics of seeds and all the basic information that a buyer should know about the seed will be mentioned by the seller in the details about product section.

3.2.2 Machine (FR-02-002)

In this category the user will be posting the machinery that one wants to post for the availability and the user will be adding all the required details about the machinery that a user should know before the bookings.

3.2.3 Animals (FR-02-003)

It is also a functional requirement. The user will be choosing this category in order to deal with this category of the Items. The seller will be able to upload the post of the animal one wants to sale also will add the detail descriptions regarding to the animal that a buyer should know before buying the animal.

3.2.4 Fertilizers (FR-02-004)

In this functional requirement the concerned product is fertilizers. The user will be choosing this category in order to deal with this category of the Items. The seller will be able to upload the post of the fertilizer one wants to sale also will add the detail descriptions regarding to the fertilizer that a buyer should know before buying the fertilizer.

3.2.5 Labor (FR-02-005)

In this functional requirement the concern is with the labor needed for the agriculture. The labor can be of any category regarding to the agriculture field. The user will be able to upload the post and adding the related information like what expertise the person have and what hours of the day he is available and work.

3.3 Experts (FR-03)

This is another group of functional requirements. In this group the user will be able to contact with the experts for the information regarding anything in the agriculture field.

3.3.1 View Profile (FR-03-001)

In this section there will be the a profile of the expert that will be including the details about the expert and the other necessary information in the about section.

3.3.2 Contact (FR-03-002)

It is another functional requirement. User will get the information regarding to the expert and will be able to contact by the given contact number.

3.4 Machine Booking (FR-04)

This is another group of functional requirement. The user will be able to book the machinery they want to book or will be able to upload a post to add a machinery ad in the system for the availability of the machinery in this section.

3.4.1 Add (FR-04-001)

In the add the user will be able to add the machinery ad by posting the post regarding to the machinery while giving the description in the details section.

3.4.2 Search (FR-04-002)

In the search the user will be able to search for the machinery they need and want to book according to their requirement.

3.4.3 View (FR-04-003)

In view the user will be able to view a post for the booking or just to see the content of the post i.e machinery and the details of the machinery.

3.4.4 Book (FR-04-004)

In the booking the user will be able to book a machinery that they ant as per their need by contacting the owner.

3.5 Visit Website (FR-05)

The user can visit website for the more information. And they will be able to ask for the questions regarding anything agriculture field or the system.

3.6 Blog (FR-06)

In this section the user can access the blogs of the public that will be containing the information regarding the agriculture field that can help the other knowledge seekers.

3.6.1 Search info (FR-06-001)

In this section the user will search for the information they want information about and can get it after the result being displayed on the screen according to the search characters in the search.

3.7 Weather updates (FR-07)

It is also a functional requirement. The user will be able to get the weather updates in this section. User will also be able to get the weather updates of any region they want to search.

3.8 Mundi rates (FR-08)

The mundi rates will be having the mundi rates that are current in the mundi so the user will be kept updated with the current rate list in the mundi regarding different products.

3.8.1 Search (FR-08-001)

In the search the user will be able to search for the product they want to know the rate about.

3.8.2 View (FR-08-002)

In view the user will be able to view a product and its rates.

3.2 Non-functional requirements

3.2.1 System Response (NR-01)

The system response to the user must be reasonable.

3.2.2 User Interface (NR-02)

The Application will have an easy to use interface.

3.2.3 Search Response (NR-03)

The application should view all that products that contain the searched alphabet.

3.2.4 Security (NR-04)

User data should be protected and shouldn’t be accessible by an unauthorized person.

3.2.5 User Interface (NR-05)

The response time should be very efficient to avoid inconvenience to the user.

3.2.6 Frame work (NR-06)

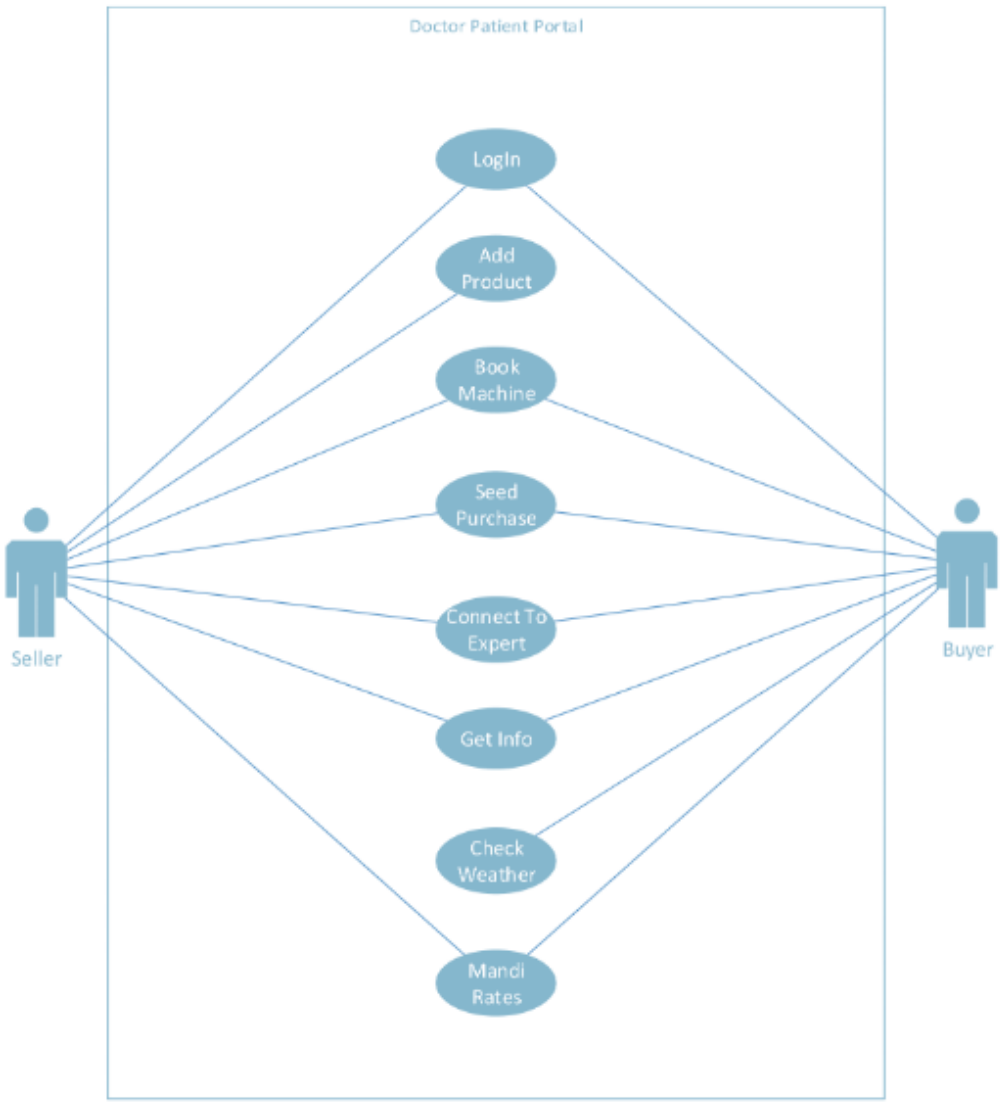
The framework ought to be accessible constantly, just limited by the downtime of the server on which the framework runs.

Chapter 4

4 Project Design

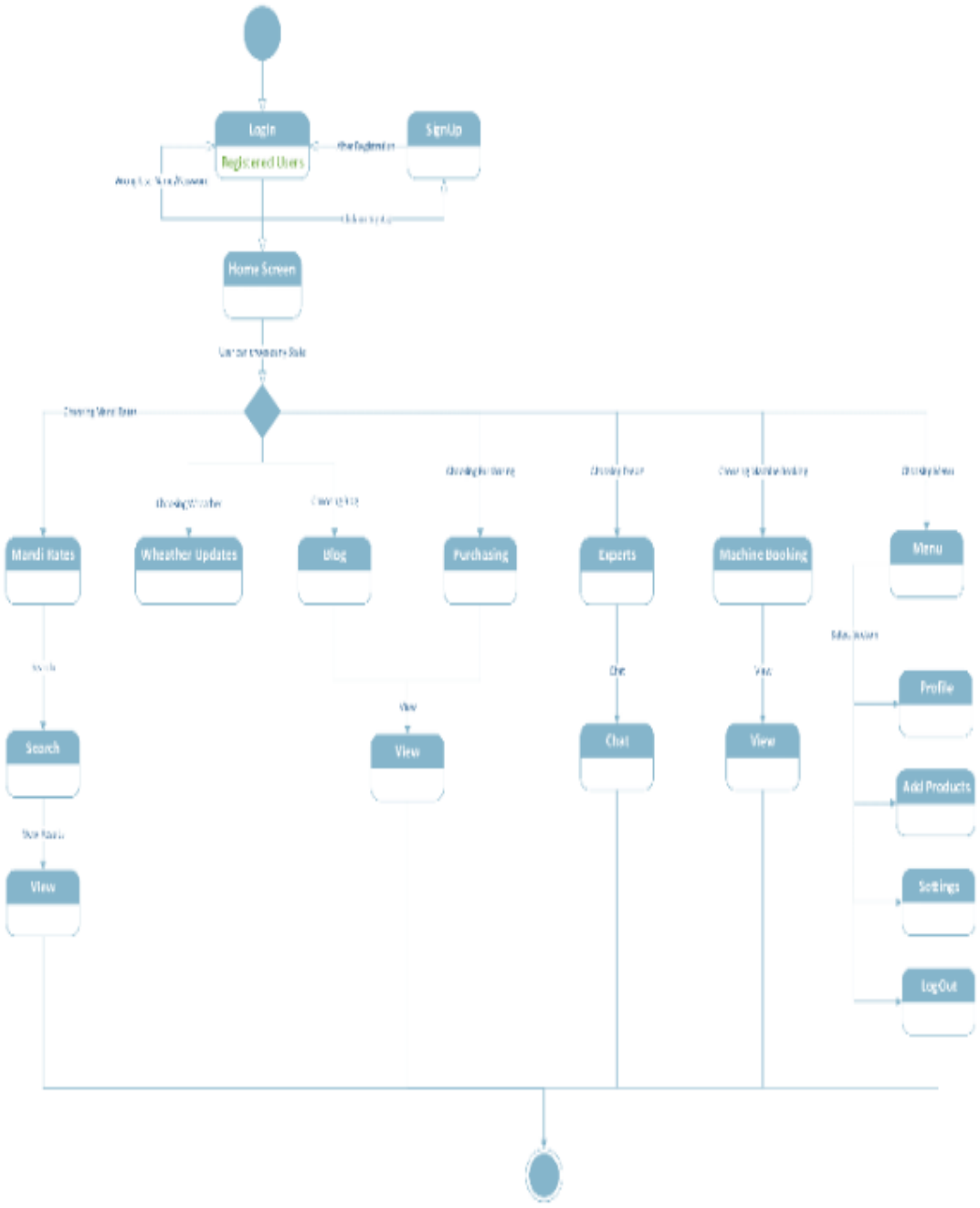
4.1 Use cases Diagrams

You can see in this diagram. We are showing eight modules and their interaction with two different type of user's seller and buyer. Seller and buyer can interact with all modules butt buyer cannot add product.



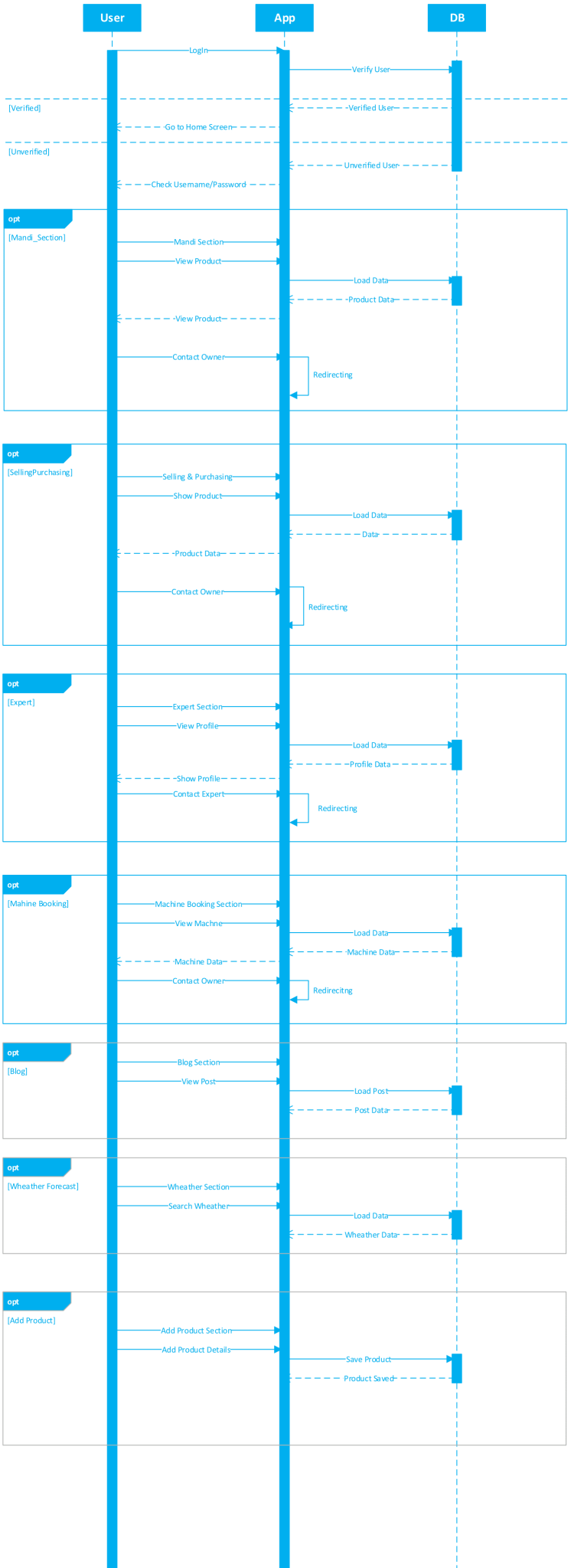
4.2 State Diagrams

In this state diagram we are showing different state in our application, and the different actions which will result in shifting from one state to another. It starts from the starting point and guiding you through the application structure to the end point.



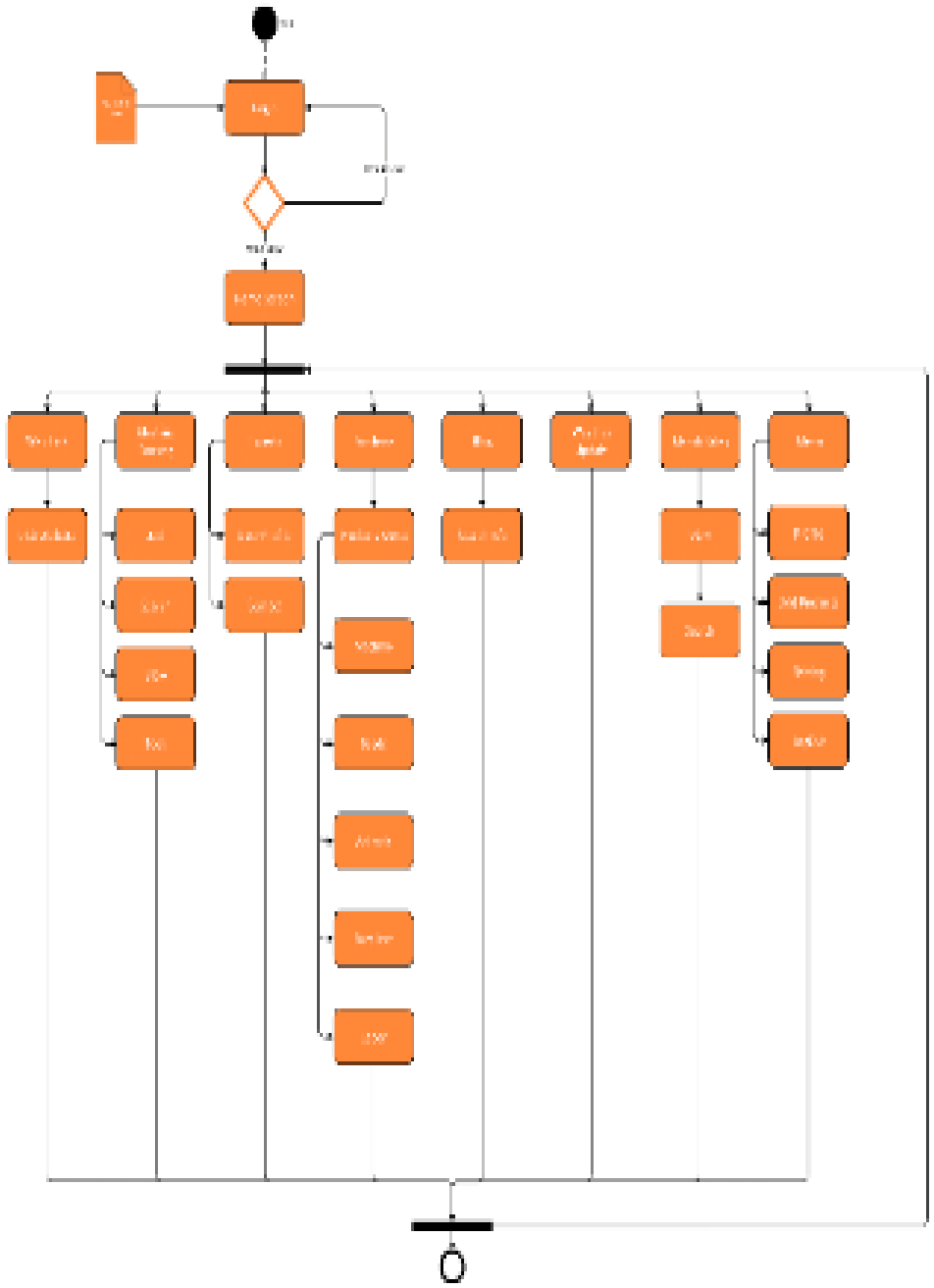
4.3 Sequence Diagrams

In this sequence diagram we are showing the sequence of steps and interactions between user, application and database. This diagram show the entire process of communication, requests and responses to the requests.


User
App
DB
LogIn
Verify User
[Verified]
Verified User
Go to Home Screen
[Unverified]
Unverified User
Check Username/Password
opt
[Mandi_Section]
Mandi Section
View Product
Load Data
Product Data
View Product
Contact Owner
Redirecting
opt
[SellingPurchasing]
Selling & Purchasing
Show Product
Load Data
Data
Product Data
Contact Owner
Redirecting
opt
[Expert]
Expert Section
View Profile
Load Data
Profile Data
Show Profile
Contact Expert
Redirecting
opt
[Mahine Booking]
Machine Booking Section
View Machne
Load Data
Machine Data
Machine Data
Contact Owner
Redirecitng
opt
[Blog]
Blog Section
View Post
Load Post
Post Data
opt
[Wheather Forecast]
Wheather Section
Search Wheather
Load Data
Wheather Data
opt
[Add Product]
Add Product Section
Add Product Details
Save Product
Product Saved

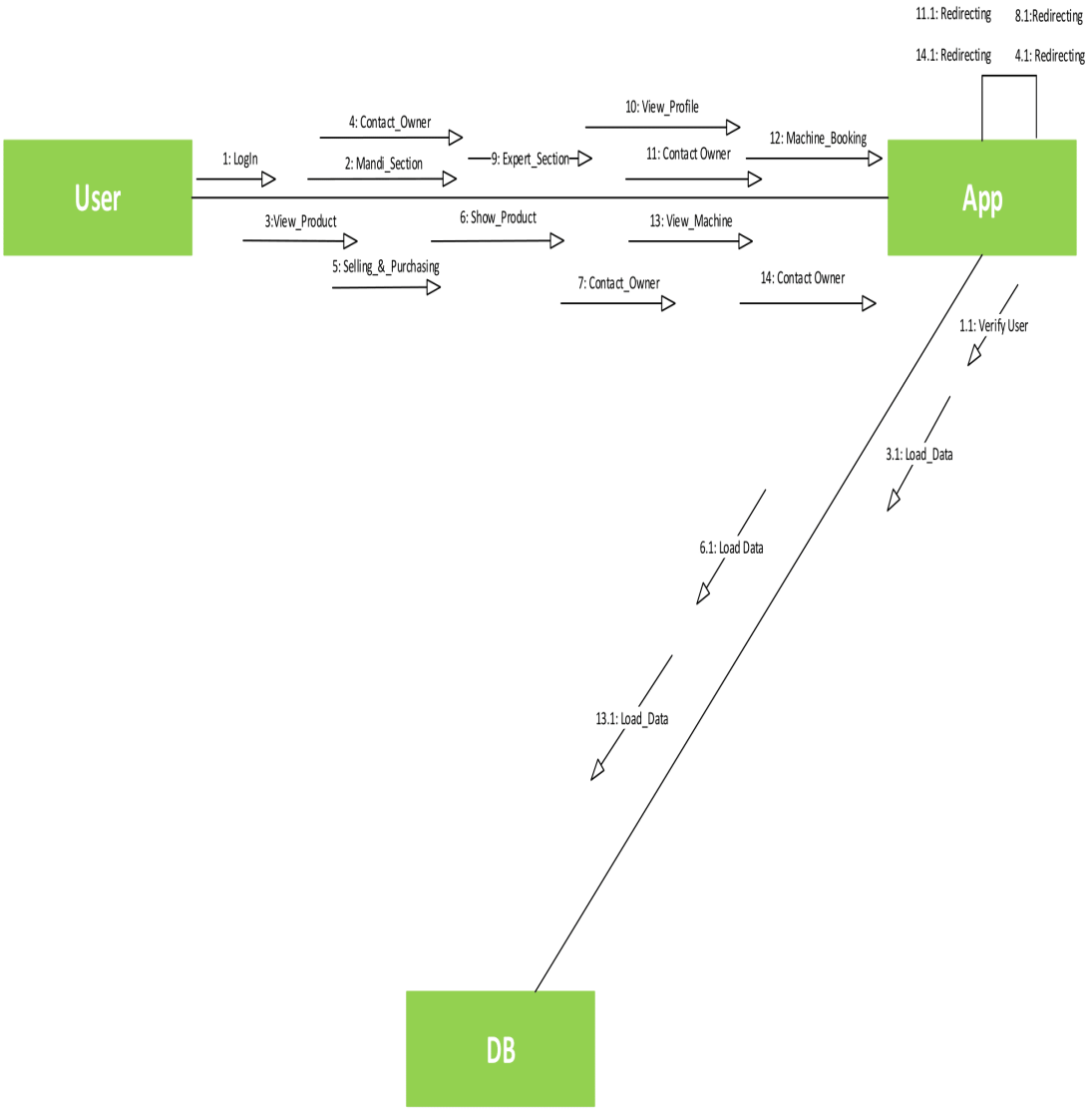
4.4 Activity Diagrams

In this diagram we are showing the activities which will take place in the application, moving to multiple activities from a single activity, and from one activity to multiple activities



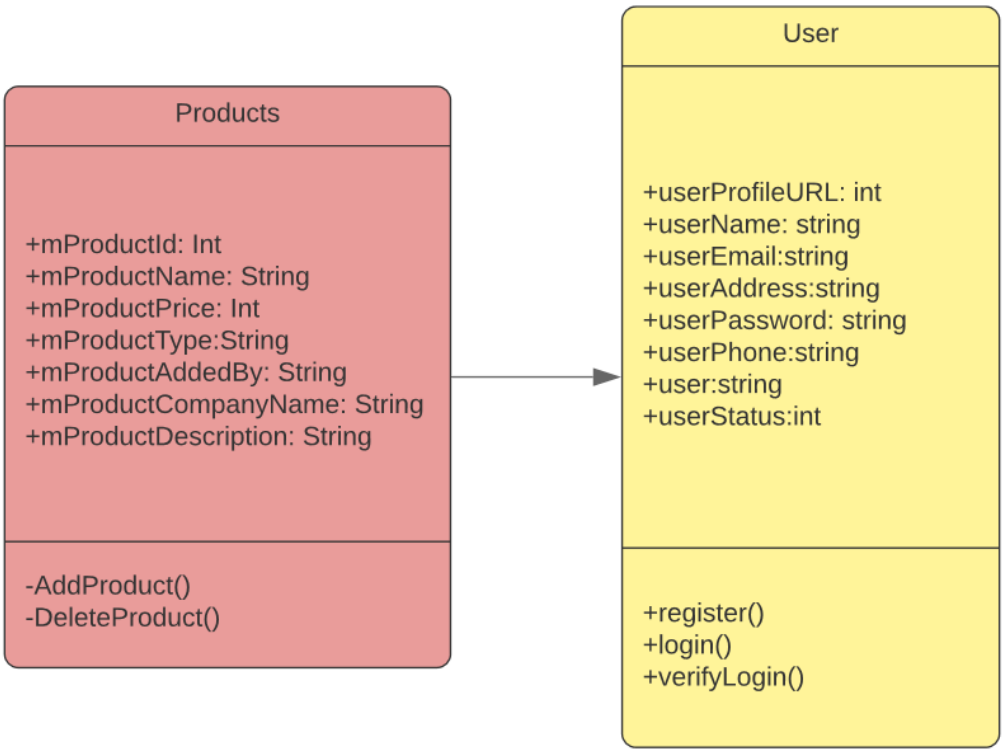
4.5 Collaborative Diagrams

A collaboration diagram is used to interactions between the objects of a software or application. In the following Collaborative Diagram, we have shown three objects named as User, Application & Database and the communication between them.



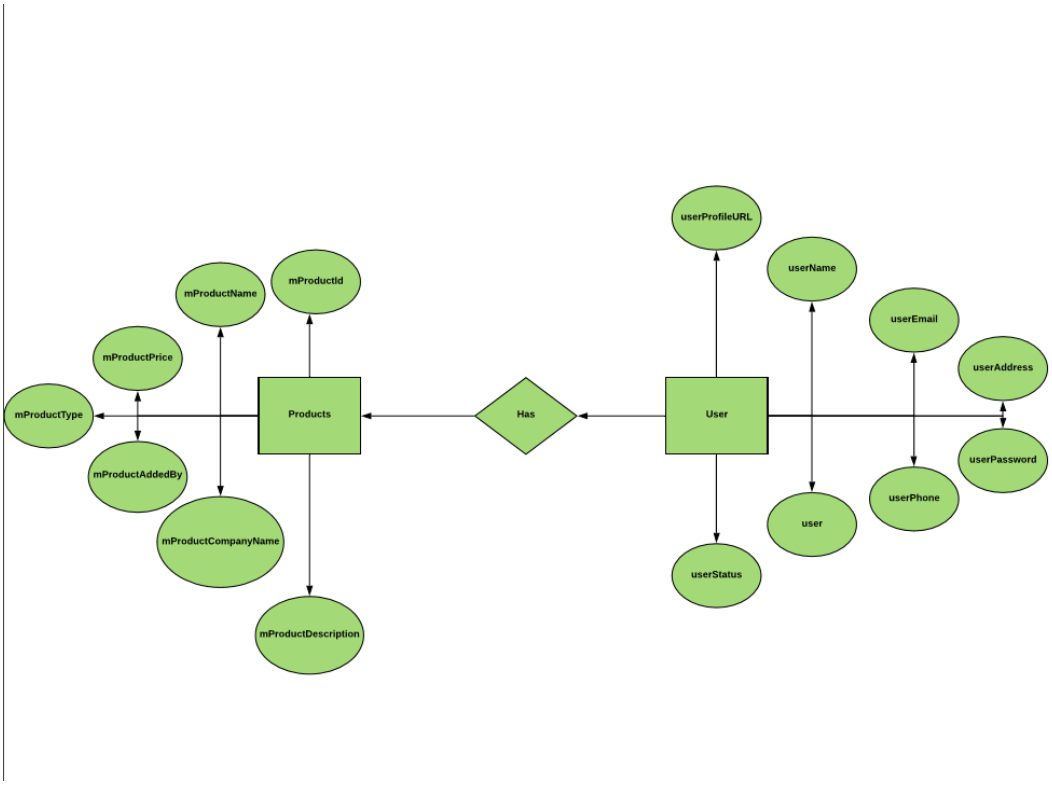
Class Diagram

Class Diagram is used to described the structure of a system by showing the systems database. In the following diagram we have shown the classes, their attributes, visibility, operations and the relationship between objects



ER Diagram

In this ER diagram we are showing our database. Each class with its stored attributes, including their relationship, and you can also see the key attributes in this diagram.



Chapter 5

5 Implementation

A very basic prototype was designed in Adobe XD, for understanding the functionality and work flow of the project. After the finalization of the prototype we started to develop the modules of web and android applications. Once modules were ready, we merge them according to the prototype.

5.1 Tools and Technologies

Hardware

Development Laptop or PC:	MS Windows 10
Testing Android Mobile:	OS Version Lollipop
Server PC:	1TB hard drive & 8 GB RAM

Software

Firebase	Database
XML & Android Studio	for Developing User Interface
Android SDK	Compiler
Java	Programming languages
Adobe XD, Illustrator	For User Interface design

5.2 Design Description

Following are the modules which have been developed. Please note that we are documenting only the salient properties and methods of each module to keep the description simple and more readable. Please note that we are documenting only the salient properties and methods of each module to keep the description simple and more readable.

Modules

Our system is based on following modules:

5.2.1 Module 1: Login System

Description:

A user can login to the system after getting register into our system by proving some information that is requested on signup page. After logging in the user can use other functionalities of the system.

Details:

This module will be having two block one will be id and the next will be password by which user will be able to login to the system and will be able to get the facilities from the application.

5.2.2 Module 2: Products Registration

Description:

User can register his product into our system to sell them, these are divided into categories like seeds, sprays, fertilizers and different farming machines. A user can add the required data or the machine or product and can post it on our application for others to view.

Details:

In this module the user will see the option of products registration by which user will be able to register their products. By clicking that option user will see the multiple options that what type of product he/she wants to register. By filling all the required information user will be able to register the product.

5.2.3 Module 3: Buy Products

Description:

After logging into our system, a user can view different product of his concerns. He can search for different products and can view the details for each product. the user can see different information like products name, quantity, city and etc. and can contact the owner to purchase it.

Detail:

In this module if user wants to buy a product. Than the user will click on the contact button. By clicking on contact button the user will be able to get the contact number by which he/she will be able to contact directly and buy the product easily without any convenience.

5.2.4 Module 4: Weather Forecast

Description:

Our forecast system will acknowledge the user about different weather conditions, so that the farmer can develop better strategy.

Details:

In this module the user will find an option of weather updates. By clicking that option user will see an activity where user will be able to add the any location or the current location in order to see the weather report of that regian.

5.2.5 Module 5: Expert Section

Description:

Our application includes an expert section, in which different registered expert are available to be communicated. Contacts and other necessary information about each expert will be visible and area of expertise. A user can contact the visit each profile and can contact the needed expert.

Details:

In this module the user will get the contact numbers of the registered Experts. By taping on the option the user will find out the contact list of experts and will be able to call directly by taping on the call button.

5.2.6 Module 6: Harvesting Timetable

Description:

In our application we are providing a time table which include the information of different farming seasons. It includes the data of when and how to grow crop and what will be procedure. It also includes the dated of watering and other fertilizing.

Details:

In this module the user will be able to see the timetable of the crops. By which the user will be able to acknowledge the right time of the crop harvest time of the year.

5.2.7 Module 7: Hire Machines

Description:

In this section we will display all the machines that are register with our system. User can visit each machine and can see the information. Owners contact details will be visible and the user can contact him.

Detail:

User will be able to hire any machinery they are seeing in the options that are available at that time. By taping on the particular machinery the user will get the contact number and the details about the machinery. By taping on the call button user will be able to make a call to the owner and will be able to hire the machinery.

5.2.8 Module 8: Blog

Description:

Our application will be having an agriculture blog which will post different post related to farming problems, techniques, tools, fertilizers, seeds and strategies.

Details:

In this module the user will be able to see the blogs by clicking on the blog option and the blogs will be really helpful for the user in order to get a good crops development.

Chapter 6

6. Testing

We have focused on thorough testing through-out the design, development and implementation phase. While testing the applications we always try to replicate the exact circumstances under which our application will be used. We have tested every module separately and make sure that its functioning according to the plan. After unit testing, we also tested our application as a full app while all modules interacting with each other. Unit testing and function testing is described below.

6.1 Unit Testing

Each module in the application was tested while being developed to confirm its adherence to the related requirements. This testing was performed with great caution, because even a slight mistake could have been the cause of dysfunction of module and could affected other modules. All modules were tested and marked success after testing and each module was tested multiple times. Furthermore, we also perform function testing which is described below.

6.2 Function Testing

After integrating the system, testing was done on requirement bases, we wanted to test that our application is fulfilling all requirements we wanted or not. So, each requirement was tested and details are described below.

6.2.1 Login System

We've tested our login system many times during the development and testing phase, as it was the first module to be developed so it is also the most tested module. We have some dummy accounts and have logged in successfully several times. We have also created some accounts to test this module and it always shows errors whenever the login information was not correct.

6.2.2 Product Registration

Product registration is an important module and its proper functionality is very important for our application, to ensure that this module is working properly we add multiple products into our system and this module worked fine.

6.2.3 Buy Product

To test this module, we add different information to the application with different information, the application performed all the functions correctly. We've tested this module with all categories of products and every function is working fine.

6.2.4 Expert Section

Our expert section contains expert profiles, we have added some experts into the system and have tested the module by contacting and viewing their profiles and by running other functionalities of this module and everything is working fine.

6.2.5 Harvesting Timetable

This module is only information based and working fine. We have gathered the information of right seasons to harvest right crops and have prepared a timetable which will inform you about the right time to harvest different crops. This time table can be different according to the different locations. We have tested this module by selecting different locations and it showed the timetable according to the location.

6.2.6 Hire Machines

This module is for hiring different machines, we added some dummy machines into our database and tested the functionality of this module. We tested this the contacting and chatting functionality as well as viewing information of different machines.

6.2.7 Weather Forecast

This module is all about the different whether information in different locations. This module is working fine as we are collecting all the information from a weather forecast site.

6.2.8 Blog

This blog is just like any other blog, we share some tips or advices for our user so they can take advantage of our blog. We have tested it by posting some tips and advices and its showing all the posts.

Chapter 7

Conclusions & Future Work

In this project, we have investigated and developed application and project will be targeting the agriculture related areas market. In this way the farmers will get the tremendous improvement in their businesses because they will be marketing their products from anywhere any time. So when this application will be used more frequently in the market it will increase its demand as well. So it is having a great future as well and with the passage of time improvements will be done as well.

There could be several improvements possible because it will be having lots of upcoming new features in the future. Some of the ideas for future development are mentioned below:

Farm Hub Web

In Farm Hub web we may be including more reliable facilities for the farmers / users on the basis of demand of the users. It may include online web portal and market.

Online Market/Mandi

In future we may want to add the feature of online market just like Amazon and ebay in this way the users will be able to sell and buy their products online and in this way they will be able to make their own online shops in the online market which will help them to hit the new buyers/sellers and to built their own brand.

Online Crop health care

In this feature the farmer will be able to get the online cure solution for different crop disease. It may include image processing and other. The user will be able to add / take an image of crop leaf and the system will determine what disease the crop is suffering from and how will it be cured? The answers to many of the questions will be available in this feature.

References

[1] W. R. Aul, "Herman Hollerith: Data Processing Pioneer," *Think*, 1972, pp. 22-24.

[2] E. Black, *IBM and the Holocaust*, Crown Books, 2001, p. 25.

[3] J. Marrs, *The Rise of the Fourth Reich*, HarperCollins, 2008, pp. 125-203

[4] You Be the Judge and Jury, *DARP Information Awareness Office*, 2014, http://www.youbethejudgeandjury.com/darpa_information_awareness_office.htm

[5] T. Durden, "Thousands Of Firms Trade Confidential Data With The US Government In Exchange For Classified Intelligence," *Zero Hedge*, 14 June 2013, http://www.zerohedge.com/news/2013-06-14/thousands-firms-trade-confidential-data-us-government-exchange-classified-intelligen

[6] M. Greenop. "Facebook – the CIA conspiracy," *The New Zealand Herald*,

[8] August 2007, http://www.nzherald.co.nz/technology/news/article .cfm?c_id=5&objectid=10456534

[7] Facebook, Company Info, Sept. 2014, http://newsroom.fb.com/company-info/

Appendix A: List of Components

Our system is based on two main components and are as follows:

1. **Android Device**

Android device should be atleast 4.0.3 The service supports devices running Android 4.0.3 or higher.

2. **Internet Connection**

User should have good internet connection in order to get efficient response on the application.

Appendix B: Project Timeline

Task	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June
Do the Literature Survey										
Data Analysis										
Data Manipulation										
Design the Database										
Design Data Search Algorithms										
Design the User Interface										
Develop the Data crawler										
Build the Database										
Develop Modules										
Build the User Interface										
Test the Website										
Test the Android Application										
Test the Data Search Algorithms										
Test the User Interface										
Perform Integration Testing										
Write the Proposal										
Write the Monthly Reports										
Write the Progress Report										
Write the Final Report										
Prepare for the Presentation										
Design the Project Poster										

** You can provide Gantt chart instead of filling this form, if you like*

Appendix C: User Manual

This user manual will tell you the steps you need to follow in order to use our application.

Application Installation:

To install the Android application, you need an active internet connection, then you need to go to the Play Store and search for Farm Hub in the search bar. Among other applications, you will find our application there. Click on the application and then click Install. The application will be downloaded and installed on your phone.

Compatibility:

To run the Android Application on your mobile you must have Android 5.0 or higher.

Registration:

In order to use our application, you must first register with our application. As soon as you open our application you will be asked to sign up automatically. To register you need to follow the steps given below:

1. Type your Name, Email, Password and phone number in the form of sign up.
2. Select you are sign up as a seller or buyer.
3. Click sign up.

Login:

Once you register in the application, you will be redirected to the login page. There you will need to follow the given below steps:

1. Enter your Email & Password.
2. Click Login.

For Android Application:

Home Screen:

Once you reached home screen you will see six different options and Manu with four option at seller side and different option at buyer side. Seller can add the product but buyer cannot. Which are discussed below, you can choose any option according to your need.

There will be a difference between seller and buyer home screen. Seller home screen include, machine booking, experts, selling & purchasing, mandi rates, weather updates and blog section.

Menu include add product, setting and logout.

But at the buyer home screen include products and their categories and menu include, weather update, experts, mandi rates, blog, setting and logout.

Machine Booking:

To book different machine, user follow the give below steps.

1. User Click the machine booking button.
2. User Select any type of machine related to agriculture about machine booking section.
3. User View detail of machine with machine owner contact number.
4. Click on Contact Button to be redirected to the Phone Dialer.

Experts:

To contact with experts, user follow the give below steps.

1. User Click the expert button.
2. User See the agriculture experts and their profile with contact number.
3. Click on Contact Button to be redirected to the Phone Dialer and discuss all problems abut agriculture.

Selling & purchasing:

To sell and buy products, user follow the give below steps.

1. User Click the selling and purchasing button.
2. View four product categories and labors.
3. Click the product as per choice see product details and owner contact number.
4. Click on Contact Button to be redirected to the Phone Dialer and buy the product from product owner.

Blog:

To get information, user follow the give below steps.

1. Click the blog button.
2. User Click the Search button.
3. User can Search information.

Weather update:

1. Click the weather update button.
2. Click Search weather button.
3. Type aria

Mandi rates update:

To check weather forecast, user follow the give below steps.

1. Click the mandi rates update button.
2. Click the Search button.
3. Type madi name.
4. Check mandi rates.

Menu:

User click the menu button and see the following option.

Add product or machine:

To add product or machine, user follow the give below steps.

1. User click the add product button.
2. User fill the product details like product name, price, owner name, owner contact number and select product category write product description.
3. Click the add button.
4. User can also Remove the product by just clicking the remove button.

User profile:

1. Click the user profile button.
2. Click update button for update his profile.
3. Click the Pushbutton to push notification of the application.

App setting:

To change the app setting, user follow the give below steps.

1. Click the setting button.
2. Click the language button and user will select their language.
3. User will set the app as per wish.
4. User can also check the privacy policy to click privacy button.
5. Click rate app.
6. To share app click share button.

Logout:

To logout, user follow the give below steps.

1. Click the logout button. or
2. Click on screen.