

SUPPORT KRISHI: A WEB-BASED APPLICATION

BY

NAME

RAHAT ANWAR

ID: 171-15-8651

This Report Presented in Partial Fulfillment of the Requirements for the
Degree of Bachelor of Science in Computer Science and Engineering

Supervised By

Mr. Saiful Islam

Lecturer (Senior Scale)

Department of CSE

Daffodil International University

Co-Supervised By

Ms. Moushumi Zaman Bonny

Assistant Professor

Department of CSE

Daffodil International University



DAFFODIL INTERNATIONAL UNIVERSITY

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APPROVAL

This Project titled “**Support Krishi: A Web based project**”, submitted by **Rahat Anwar, ID NO: 171-15-8651** to the Department of Computer Science and Engineering, Daffodil International University, has been accepted as satisfactory for the partial fulfillment of the requirements for the degree of B.Sc. in Computer Science and Engineering and approved as to its style and contents. The presentation has been held on 11 September 2021.

BOARD OF EXAMINERS

Chairman



Dr. Touhid Bhuiyan

Professor and Head

Department of Computer Science and Engineering
Faculty of Science & Information Technology
Daffodil International University

Internal Examiner



Abdus Sattar

Assistant Professor

Department of Computer Science and Engineering
Faculty of Science & Information Technology
Daffodil International University



Internal Examiner

Md. Riazur Rahman

Assistant Professor

Department of Computer Science and Engineering

Faculty of Science & Information Technology

Daffodil International University



External Examiner

Dr. Dewan Md. Farid

Associate Professor

Department of Computer Science and Engineering

United International University

DECLARATION

We hereby declare that, this project has been done by us under the supervision of **Mr. Saiful Islam, Sr. Lecturer, Department of CSE** Daffodil International University. We also declare that neither this project nor any part of this project has been submitted elsewhere for award of any degree or diploma.

Supervised by:



Mr. Saiful Islam
Lecturer (Senior Scale)
Department of Computer Science and Engineering
Faculty of Science & Information Technology
Daffodil International University

Co-Supervised by:



Ms. Moushumi Zaman Bonny.
Assistant Professor
Department of Computer Science and Engineering
Faculty of Science & Information Technology
Daffodil International University

Submitted by:

A handwritten signature in black ink that reads "Rahat Anwar". The signature is fluid and cursive, with a long horizontal stroke extending from the end of the name.

Rahat Anwar

ID: 171-15-8651

Department of Computer Science and Engineering

Daffodil International University

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ABSTRACT

This venture proposes and presents a hypothetical system of plant diseases information and an e-commerce platform. Still now, Bangladesh is an agricultural country, and the agriculture sectors are deprived of the advantages of the internet. This project aims to develop a platform for the farming sector where information will be available and accessible, and the users will get the solutions they need. In this venture, I also keep in mind the percentage of illiteracy of the farmers and try to provide a solution in this regard. This venture examined the apparatus and innovation utilized in creating the proposed framework (the framework consolidates a confrontation by using HTML, CSS, JavaScript, Bootstrap-5 to show the substance structure and a back-conclusion of database utilizing XAMPP and PHP). Assortment of improvement techniques was examined, and one of the techniques was chosen for this extent. Strategies acclimated to gathering the desired determinations were too discussed, and the way the analyst and engineers will utilize this as a rule in creating the proposed framework. Bound together, Modeling Dialect Graphs were made depicting each framework. Exhibits of different web pages accessible on the net location were talked about, and after that, an assessment was conducted utilizing two strategies to gauge the net area.

TABLE OF CONTENTS

CONTENTS	PAGE
Approval	i
Declaration	iii
Acknowledgments	v
Abstract	vi
CHAPTER	
Chapter 1: Introduction	1-5
1.1 Introduction	1
1.2 Motivation	2
1.3 Objectives	2
1.4 Description of the System	3
1.5 Expected Outcomes	3
1.6 Report Layout	4
Chapter 2: Background	6-10
2.1 Preliminary	6
2.2 Related Works	6
2.3 Comparative Studies	8
2.4 Scope of the Problem	9
2.5 Challenges	10

Chapter 3: Requirement Specification	11-25
3.1 Business Process Modeling	11
3.2 Requirement Collection and Analysis	12
3.3 Use Case Modeling and Description	12
3.4 Logical Data Model	23
3.5 Design Requirement	24
Chapter 4: Design Specification	26-34
4.1 Front-End Design	26
4.2 Back-End Design	28
4.3 Interaction Design and User Experience (UX)	32
4.4 Implementation Requirements	34
4.5 Software Requirements	34
Chapter 5: Implementation and Testing	35-47
5.1 Database Implementation	35
5.2 Front-End Design Implementation	36
5.3 Testing Implementation	45
Chapter 6: Implementation and Testing	48-49
6.1 Discussion and Conclusion	48
6.2 Scope for Further Development	48
APPENDIX	50
REFERENCES	51-53

LIST OF FIGURES

FIGURES	PAGE NO
Figure 2.2.1: Plant disease clinic homepage	7
Figure 2.2.2: Homepage of Krishi Batayan	8
Figure 3.1: BPMN for “Support Krishi”	11
Figure 3.3: Use Case for “Support Krishi”	13
Figure 3.4: ER diagram of “Support Krishi”	24
Figure 4.2.1: All tables of the “Support Krishi” database	29
Figure 4.2.2: User account information database	30
Figure 4.2.3: Admin account information database	30
Figure 4.2.4: Categories information database	31
Figure 4.2.5: Add product information database	31
Figure 4.2.6: Product order list information database	32
Figure 5.1.1: Database Implementation	35
Figure 5.2.1: Home Page	36
Figure 5.2.2: Specific categories of plant	37
Figure 5.2.3: Plant Disease Categories	38
Figure 5.2.4: Details of disease	39
Figure 5.2.5: E-commerce home page	40
Figure 5.2.6.1: Login page	40
Figure 5.2.6.2: Registration page	41
Figure 5.2.7.1: Add to cart page	42
Figure 5.2.7.2: Checkout page	42
Figure 5.2.8: User order status page	43
Figure 5.2.10.1: Add new user page	43
Figure 5.2.10.2: Update user account	44

Figure 5.2.11.1: Add categories page	44
Figure 5.2.11.2: Add product page	44
Figure 5.2.12: User order request page	45

LIST OF TABLES

TABLES	PAGE NO
Table 3.3.1: Description of admin login	14
Table 3.3.2: Description of user login	14
Table 3.3.3: Description of user registration	15
Table 3.3.4: Description of info about the farming	15
Table 3.3.5: Description of visit e-shop	16
Table 3.3.6: Description of select product	16
Table 3.3.7: Description of add to cart	16
Table 3.3.8: Description of wish list	17
Table 3.3.9: Description of checkout	17
Table 3.3.10: Description of order status	18
Table 3.3.11: Description of an update account	18
Table 3.3.12: Description of add info	19
Table 3.3.13: Description of add category	19
Table 3.3.14: Description of add product	20
Table 3.3.15: Description of manage product	20
Table 3.3.16: Description of check order	21
Table 3.3.17: Description of add/delete admin	21
Table 3.3.18: Description of update account	22
Table 3.3.19: Description of user data	22
Table 3.3.20: Description of update database	23
Table 5.3.1: A test case for the system	46

CHAPTER 1

INTRODUCTION

1.1 Introduction

In 1983, the internet was born by connecting various types of computer networks. A communication protocol named TCP/IP (Transfer Control Protocol) helped this revolution come into reality. For this reason, different kinds of networks and computers could communicate with each other and share information. In this revolution, a British scientist named Tim Berners-Lee invented the world's most used technology, the World Wide Web (WWW), in 1989. At first, www was developed to share information automatically between scientists, students, and activities around the world. But as of today, everyone uses the World Wide Web as their primary information-sharing route worldwide. From the recent report of DATA PORTAL [], 4.66 billion people use the internet, 4.20 billion social media users. All social media platforms are built on the unique technology known as the World Wide Web, and it's the face of the modern internet. In this modern era, by addressing the internet, we think of the world wide web as it gets involved in our daily life [1].

Bangladesh is a developing country, and the country's minister announced to make the country more digitized. To get the advantages of the digitized country, all information that will help our lives become more comfortable should be available online. By accessing information from anywhere, anytime, will be the primary key factor of a digitalized country. Although, from the government, we see the effort as every

government service and information are available on the open internet and users can get access and use them efficiently, still many services are not available to the masses. One of the problems is the farming industry of our country. In our country, there are plenty of farmers who are uneducated and deprived of the advantages of the internet. Therefore, not all information is available on the open internet concerning our country.

1.2 Motivation

As I grew up by watching the condition of farming in our village, the most common problem I noticed and other farmers encountered was that the correct information about the harvest and the disease of the crop was hard to get. Sometimes, the disease of the harvest shared the same symptoms, and it was hard to identify. If the yield was affected by one disease, one needs to go to the Union Parishad to determine the available cure of the disease. In this regard, they have to face two problems.

- The officer was not available all the time.
- It was hard to get the medicine for the disease as it was not available all the time.

As the country is becoming digitized, my motivation is to solve farming by using the technology available to us. By considering the mentioned problems, my goal is to come up with a unified solution.

1.3 Objectives

As my goal is to provide a solution to the problem of the farming sector, I have come up with an E-commerce platform that will give information on the agricultural issues. By taking the advice of professionals, my goal is to distribute the information and provide

medical care and solutions to the farmers in their hands. Providing them with information and solutions, my goal is to help them before the loss happens in real-time.

Also, many farmers are still illiterate. Therefore, I want to provide them a medium so that they can interact with my platform easily.

1.4 Description of the System

There are two types of variables needed to run this project: a user and another is admin. This project is created for farmers who need information about agriculture and to buy agricultural products from. As we mentioned earlier, we need two types of variables which are farmer and admin. Let's discuss this project and how it works. We did this project into two parts, one is for only information and solutions, and another is for buying products. A farmer can get information about plant disease and get solutions for the problem. For getting information, farmers do not need to create an account for this. Because we made the information page for everyone and we do not force you to buy something from our online shop. But if a farmer wants to buy any product, then he needs to create an account. On Eshop, farmers can purchase their required pesticides and agricultural equipment from home. On the other hand, an admin will handle the e-shop products and orders from a user.

1.5 Expected Outcomes

We expect to provide an E-commerce platform where:

- the information will be available and accessible to the farmers.
- Guidance to solve the problem they faced.
- I am suggesting to them the medical cure they need for the harvest.

- Providing them the medical cure right into their hands as an E-commerce platform.
- Providing them the agricultural equipment they need.

1.6 Report Layout

Chapter 1: Introduction

Chapter 1 makes a difference to get a handle on the early on thought of this venture other than inspiration, objective & anticipated result, etc.

Chapter 2: Background

This chapter will allow an arrangement around foundation talk and related works. By looking at relative results and considering many comparable frameworks at that point The discourse was done on the scope of the matter and thus the challenges of this extent.

Chapter 3: Requirement Specification

Trade prepare show, Utilize case show, ERD graph, Collection of necessity and them examination, Consistent information show and essentials of planning depicted amid this chapter.

Chapter 4: Design Specification

This chapter will reflect the front and backend plan of this extension additionally the interaction plan and client encounter. Usage prerequisites, too, will be portrayed here.

Chapter 5: Implementation and Testing

Here we'll take after the database execution in conjunction with a confront plan that

appears how this site will show up as if. A few testing results which can be taken after improvement are examined in this chapter.

Chapter 6: Conclusion and Future Scope

Outlines of our works and future advancement are depicted in this chapter. At the conclusion of the report, we provide the related reference to form beyond any doubt that the information inside the report must be correct.

CHAPTER 2

BACKGROUND

2.1 Preliminary

By researching on the open internet, I have found a few platforms which are only about agriculture. But on the platforms, some problems remain. Some are not secure for the end-users. Some of them are not user-friendly. Some websites do not provide enough information to differentiate between the disease of the harvest. Moreover, none of them offer immediate solutions that need to be reached to the end-users.

Also, when working on the project, I found some websites are not accessible because of the bandwidth problem, which will not be helpful at the time of need.

2.2 Related Works

There has been a couple of work within the past on helping farmers to get information about plant diseases. In addition, some websites are being used for interaction between farmers and plant pathologists.

Here are some examples:

Plantdiseaseclinic:

Plantdiseaseclinic website provides information about plant diseases and solutions of the diseases. This is an online platform site for farmers. This is similar to our project. InOn

this platform, users can get information about plant diseases and their solutions and buy pesticides from our online shop.

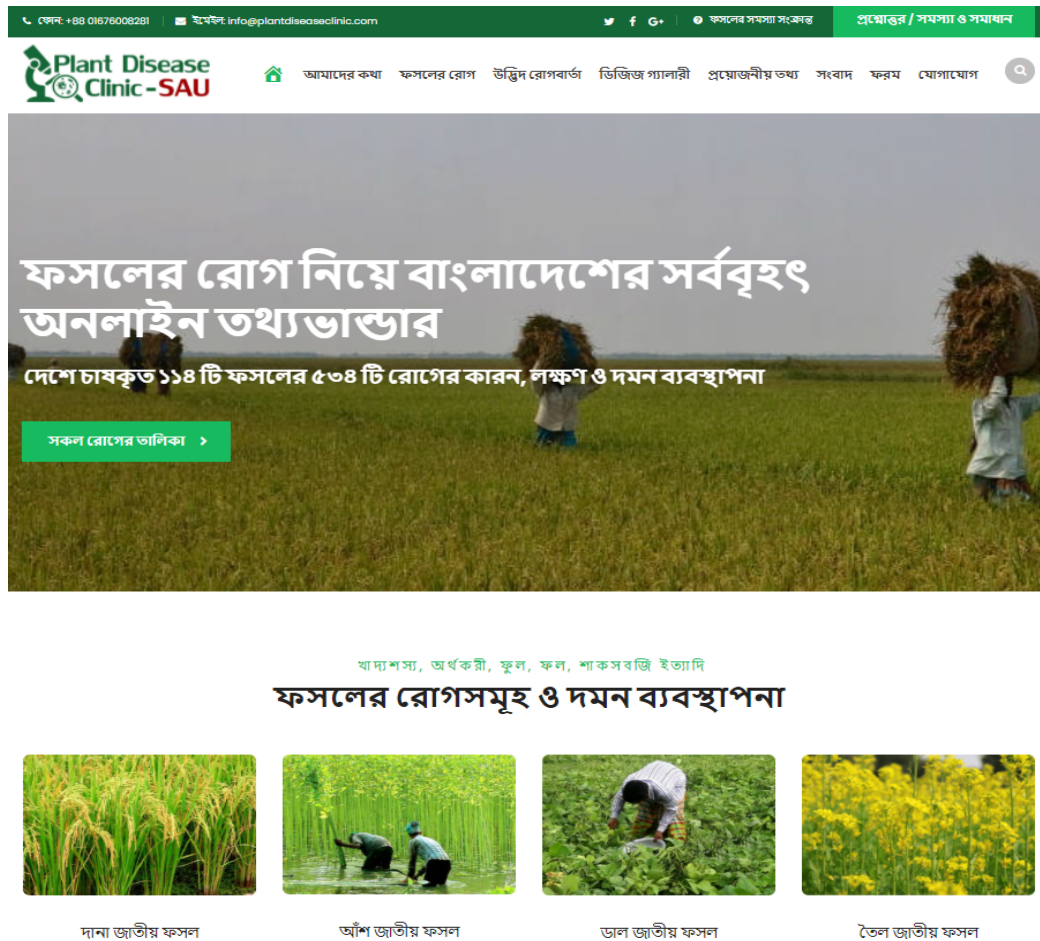


Figure 2.2.1: Plant disease clinic homepage

Krishi Batayan:

It is also an online site for farmers, run by the “Ministry of Agriculture” of Bangladesh. This is also similar to our site. On this site, users can get all information about plant diseases, and this website provides information about how a new farmer can cultivate. Using this site, people can see the current situation of farming society and recent achievements of our “Ministry of Agriculture.”



Figure 2.2.2: Homepage of Krishi Batayan.

2.3 Comparative Studies

Comparing the two stages that work separately with the proposed structure (Information about plant diseases) contrast for “Support Krishi” and website match. The two selected websites are “Plantdiseaseclinic” and “Krishi Batayan.”

2.3.1 Plantdiseaseclinic

Plantdiseaseclinic website provides information about plant disease and cures for the disease. Where user can get their specific details on plant disease, using this website, a user can understand why this disease happened and what will be the next step for curing the disease, and they also provide the name of pesticides. On the other hand, our website offers the same idea and information. But we have added an extra feature: an e-shop where a user can buy their pesticides and farming equipment from home. And if the

product is not available on our website, they request for the products. Therefore, our website is more user-friendly than Plantdiseaseclinic.

2.3.2 Krishi Batayon

Krishi Batayon is also a well-known agricultural website for farmers. It also services the information about plant disease, but it provides a mixed space for plant disease problems and cultivation. Most of their content is on cultivating, and they inspire people to farm with their content. But the main problem is their front-end page because it is a little complicated to understand for an ordinary man. For plant disease problems, they only provide the cure information like Plantdiseaseclinic. On the other hand, our website is user-friendly because we make it easier for ordinary people to understand. And the main difference between “Support Krishi ” and “Krishi Batayon” is that we only provide information about agricultural problems and solutions and provide an e-shop to buy agricultural equipment and pesticides.

2.4 Scope of The Problem

During the data period, there is nothing that can be called an ideal structure. So we have a few limitations in our initiative without delay. After running the initiative, we’ll be able to recognize the crucial issues for this initiative when this initiative is fulfilled by the natural clients and constant interaction with the project. But at the moment, we are ready to take out a few opportunities for the subject we are investigating to continue moving forward into the future.

A few scopes of the issue are-

- As this initiative could be an online platform for farmers, it fully strengthens the web, and every single preparation of this application works on the web. So, without the net, the initiative will not work. So, those who live farther away at the moment with limited web access will not be able to use our application legitimately.
- Our primary focus of this project relies on users with browser interaction. So users with mobile phones have to interact with this application through browsers. A mobile application is included in our future works.

2.5 Challenges

Since some web applications are still accessible to the showcase, we need to compete with them and move our work forward if we want to survive in this area. Hopefully, our fundamental problem will be clients and get as many as the number of clients. The number of observers is decreasing day by day. If the client becomes much better and more robust than other websites, we present to take a huge step toward victory.

Other than, we have identified a few challenges as follow:

- Give a smoother and more user-friendly website.
- Upgrading our structure in the interest of the user.
- Controlling the quality of the platform.
- Deploy an Android and IOS app as early as possible.
- Update and include more highlights for better communication between users and admin.
- Developing a forum where users can share their problems.
- Developing a chatbot for answering the user's common questions.

CHAPTER 3

REQUIREMENT SPECIFICATION

3.1 Business Process Modeling

Business Process Modeling and Notation (BPMN) is used for creating a visual representation of a complex business process flow. With this design, a client can easily understand the process of any complex project. And also, it will help to figure out the best route to the project destination [2]. In this business process, modeling and notation can explain how users can view information and buy products from e-commerce. But, on the other hand, it also explains the working admin process.

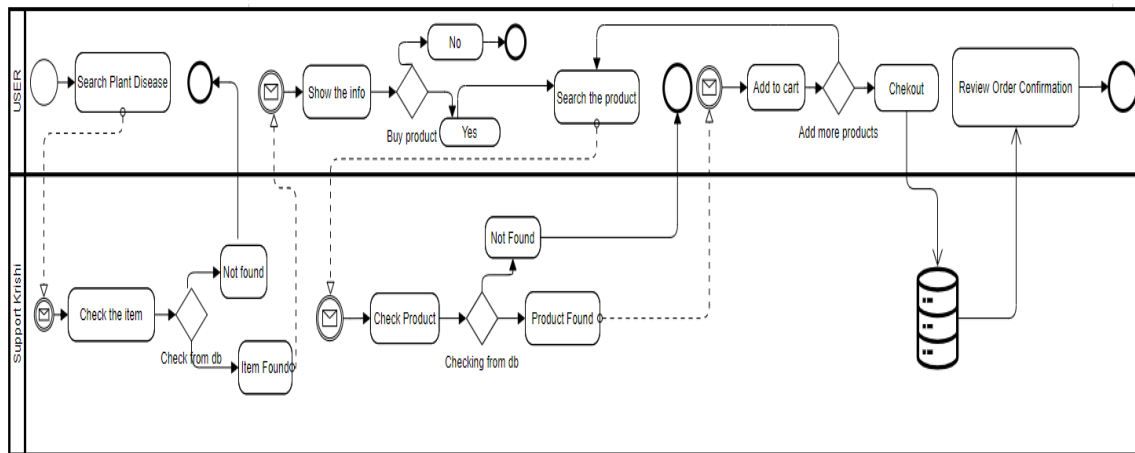


Figure 3.1: BPMN for "Support Krishi"

3.2 Requirement Collection and Analysis

Requirement collection is playing the most crucial role in a project. Because “if the developer fails to detect all the necessary requirements for a solution, the project will be running with a risk. This may lead to many disputes and disagreements in the future, and as a result, the business relationship can be severely damaged [3].” There are two types of prerequisites in the prerequisite examination. One is a “Useful prerequisite,” and another one is a “Nonfunctional prerequisite.” Let’s discuss this.

Useful Prerequisite: In our venture, there are numerous valuable necessities. There are two side actions in this project. One is a user, and another one is Admin. From a user point of view, you can get information about plant disease, and for buying products, there is a registration, login, add to cart, add to Wishlist, checkout, check order information, logout. And from an admin point of view, log in, register, add product, check product list, add a category, delete product and category, accept or cancel orders, add user and delete user, logout.

Non-Functional Prerequisite: As a rule, how much depends on the non-functional requirements of the user-friendly client interface you are using. This can be a must for client interfaces. Client-neighbor so that the client thinks it is reasonable to use it.

3.3 Use Case Modeling and Description

Use case model is used for showing how user and admin interact with the system. All of this process is visually present by the use case diagram [4]. And it also represents how an admin and a user interact with each other. Such as a user can create his account, add to cart products and checkout products, send requests for orders, etc. On the other hand, an

admin can accept or cancel order requests, add or delete categories and products. And a developer can check the database record to check the information about the use and admin of the website.

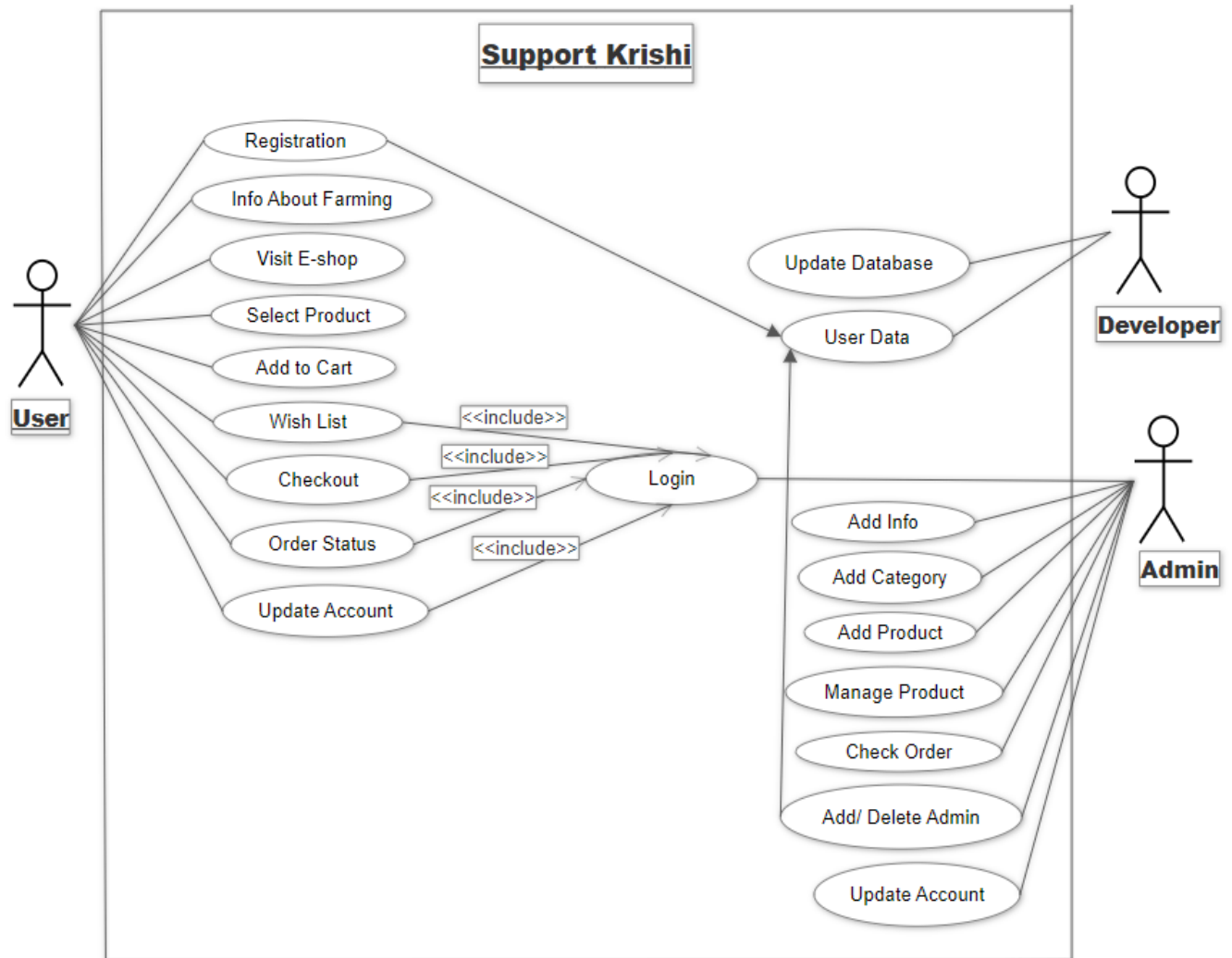


Figure 3.3: Use Case for "Support Krishi"

The description is given below:

Table 3.3.1: Description of admin login

Use Case Name	Action	Actor	Primary Path	Precondition	Exceptional Path
Login	Used for access to the admin panel	Admin	1) Username 2) Password 3) Login	None	If the username and password are wrong then redirect to the login page

Table 3.3.2: Description of user login

Use Case Name	Action	Actor	Primary Path	Precondition	Exceptional Path
Login	Used for access to the website	User	Username Password Login	Registration	If the username and password are wrong then redirect to the login page

Table 3.3.3: Description of user registration

Use Case Name	Action	Actor	Primary Path	Precondition	Exceptional Path
Registration	Used for creating an account	User	1) First name 2) Last name 3) Gender 4) Phone 5) number 6) Username 7) Password 8) Submit	None	If information is missing then redirect to the Registration page again.

Table 3.3.4: Description of info about the farming

Use Case Name	Action	Actor	Primary Path	Precondition	Exceptional Path
Info about farming	See the information about farming	User	Enter website URL View information	None	If the URL of the website is wrong then the user has to enter the correct URL

Table 3.3.5: Description of Visit e-shop

Use Case Name	Action	Actor	Primary Path	Precondition	Exceptional Path
Visit E-shop	Use for buy products	User	Enter website View product Search product Login or Create an account	None	If the website URL is wrong then enter the correct URL.

Table 3.3.6: Description of select product

Use Case Name	Action	Actor	Primary Path	Precondition	Exceptional Path
Select Product	Used for selecting products	User	Enter the website Search the product Select the product	None	If the product is missing then select the available product

Table 3.3.7: Description of Add to cart

Use Case Name	Action	Actor	Primary Path	Precondition	Exceptional Path
Add to Cart	Show the product quantity, price, and delivery cost	User	Select product Check add to cart	None	If there is no product then ask to select products

Table 3.3.8: Description of Wish list

Use Case Name	Action	Actor	Primary Path	Precondition	Exceptional Path
Wish list	Used for creating a personalized collection of product	User	Select product Add to wish list Check wish list	Login	If the product is not added to the wish list then login to the website

Table 3.3.9: Description of Checkout

Use Case Name	Action	Actor	Primary Path	Precondition	Exceptional Path
Checkout	Used for order products	User	Select product Add to cart Check the total cost of the product Checkout	Login	If the user is not logged in or has not added any product for check out, then add a product to the cart and login into the website.

Table 3.3.10: Description of Order status

Use Case Name	Action	Actor	Primary Path	Precondition	Exceptional Path
Order status	Used for checking order status	User	Checkout product Check order status	Login	If the user did not checkout then redirect to the select product page

Table 3.3.11: Description of an updated account

Use Case Name	Action	Actor	Primary Path	Precondition	Exceptional Path
Update account	Used for update username and password	User	Login account Edit profile Change username or password	Login	If the user have no account the redirect to the registration page

Table 3.3.12: Description of Add info

Use Case Name	Action	Actor	Primary Path	Precondition	Exceptional Path
Add info	Used to add information on the homepage	Admin	Login Add information submit	Login	If login information is wrong then redirect to the login page

Table 3.3.13: Description of Add category

Use Case Name	Action	Actor	Primary Path	Precondition	Exceptional Path
Add Category	Used for add category in the website	Admin	Add Category name Add Category	Login	If the category name is not added then redirect add a category page

Table 3.3.14: Description of Add product

Use Case Name	Action	Actor	Primary Path	Precondition	Exceptional Path
Add Product	Used to add product on to the website	Admin	Select Category Enter product name Enter product price Enter product quantity	Login	If product information is missing then redirect to add product page

Table 3.3.15: Description of Manage product

Use Case Name	Action	Actor	Primary Path	Precondition	Exceptional Path
Manage product	Used for edit or delete products	Admin	Login Check product list Edit product information Delete product information	Login	If the Product is not added then add the product from the add product page

Table 3.3.16: Description of Check order

Use Case Name	Action	Actor	Primary Path	Precondition	Exceptional Path
Check order	Used for checking the user order	Admin	Enter admin panel Check user order request list Accept or delete order	Login	If there is no order request then redirect to the admin panel

Table 3.3.17: Description of Add/Delete admin

Use Case Name	Action	Actor	Primary Path	Precondition	Exceptional Path
Add/Delete admin	Used for add or Delete an admin to control the website	Admin	User name User password Add role	Login	If any of the information is missing the redirect to the add new admin page

Table 3.3.18: Description of Update account

Use Case Name	Action	Actor	Primary Path	Precondition	Exceptional Path
Update account	Used for edit account information	Admin	Select update account Edit information Submit	Login	If there is no account then redirect to the login page

Table 3.3.19: Description of User data

Use Case Name	Action	Actor	Primary Path	Precondition	Exceptional Path
User data	Used for collecting user and admin information	Developer	Enter database Check user data table and admin data table	Access database	If the database path is wrong then enter the correct path

Table 3.3.20: Description of Update database

Use Case Name	Action	Actor	Primary Path	Precondition	Exceptional Path
Update database	Used for control the user and admin activities,	Developer	Enter database Check all activity of user and admin Edit or delete user and admins' activities.	Access database	If the database is not connected to the website then connect the database to website for get informations

3.4 Logical Data Modeling

Logical data modeling is used to represent the process of project data architecture and organization graphically without the physical implementation [5]. And logical and physical data implemented with the Entity-Relation Diagram (ERD). ERD can be a chart used to display the relationship of the substance set is kept in a database. A substance is considered to be a database protest. And the group of importance is the collection of all comparative substances in a complete database. These substances have several properties that characterize the properties of a set of implications. Displaying consistent information presents entity-relationship graphs called ER charts. The ER chart of our framework is given underneath:

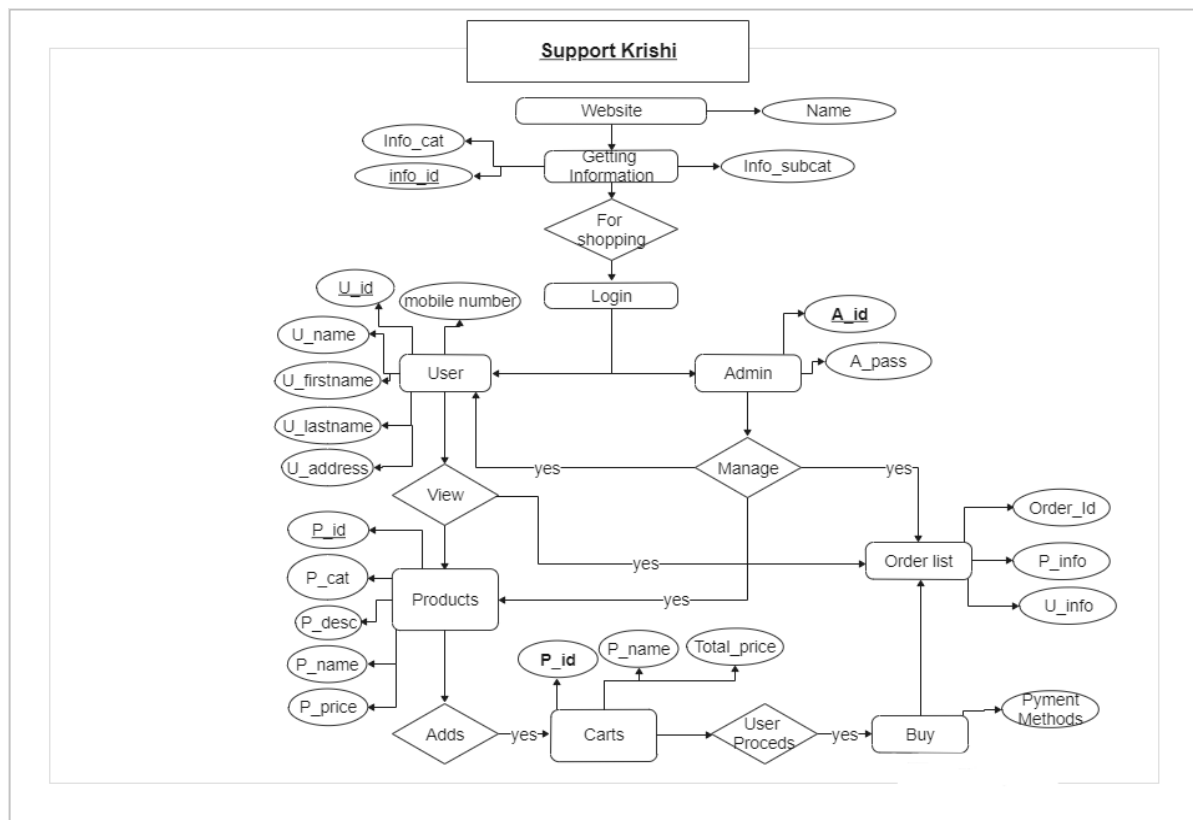


Figure 3.4: ER diagram of “Support Krishi”

3.5 Design Requirement

In the improvement of any program, there is a plan prerequisite. The prerequisite of the plan replicates the larger goal of the objectives of the structure expected to achieve. Therefore, our initial goal is exciting. Here are few key ones the planning requirements are given below:

Proficient: Quickly running applications on any gadget is exceptionally essential. We’ve made our application extremely smooth and bug-free. We have created this application plan incredibly light.

User-Friendly: This application is exceptionally user-friendly. People will be able to get all the highlights effortlessly quickly. The plan is very subtle Users, and all the formats are exceptionally nicely arranged.

Here are some extra features.

1. Users can create their accounts.
2. Users can add and delete products from their cart.
3. Users can add and delete products from their Wishlist.
4. Users can request products that are unavailable on the website.
5. Users can increase or decrease the product from add to cart.
6. Admin can add or delete categories and products from the website
7. Admin can add a new admin and also update his account.
8. Admin can accept and reject order requests.

CHAPTER 4

DESIGN SPECIFICATION

4.1 Front-End Design

Front-end design helps make the UI (User Interface) a reality. Because Front-End structure is connected with two worlds, UI design and another is the world of application-level development with business logic. To make a product with a good user experience, a good UI design, a website, and a front-end design, a developer needs to learn HTML, CSS, JavaScript, jQuery, and Bootstrap. This chapter provides an overview of language which is used to make front-end design. [6] [7]

4.1.1 HTML: Hypertext Mark-up Language

HTML is used for creating a static web page. We know that HTML means Hypertext Mark-up language, where HyperText means “Text within Texting.” A text has a link within it, and it is a Hypertext. When we click on a link, it will redirect with a new webpage, which means you have connected on a hypertext because hypertext is used to link two or more web pages with each other. On the other hand, the Markup language is a computer language used to apply layout and formatting conventions to a text document. With the help of markup language, it can turn text into images, tables, links, etc., because it makes the text more interactive and dynamic.[8] [9] [10]

4.1.2 CSS: Cascading Style Sheet

Cascading Style Sheet is known as CSS, which is a style sheet language. With the help of CSS, we can design (color, formatting, etc.) the HTML pages. It is normally used for HTML to change the style of web pages and user interfaces. Also, it can be used in JavaScript to create user interfaces for web applications and UI for many mobile applications. Before CSS, it was hard to design a webpage using HTML built-in style code because if you develop a website where fonts and color information are added to every page, it will become a long and expensive process. That's why CSS was created to solve this problem. It saves a lot of time because now we can change the entire website by changing just one file.[11] [12] [13]

4.1.3 JavaScript

JavaScript is an object-based scripting language that is lightweight and cross-platform, and it is a translated language. It is used in the website for scripting the web pages and creating a client-side dynamic page. JavaScript was invented in 1995; since then, it has been adopted by all other graphical web browsers. With the help of JavaScript, users can build modern web applications to interact directly without reloading the pages every time. JavaScript is used to create interactive websites. It is mainly used for client-side validation, dynamic drop-down menus, displaying date and time, displaying clock, etc. It provides good control to the users over the web browsers.[11] [14] [15] [16]

4.1.4 jQuery

jQuery is a JavaScript library that is designed to simplify the client-side scripting of HTML. The main purpose of jQuery is “write less, do more” because it provides an easy way to use JavaScript on our website to make it more interactive and attractive. And it is most popular for its high-speed and extensible features and also for being platform-independent. JQuery is mainly used for HTML, CSS, DOM, JSON parsing, HTML event methods, AJAX, etc.[17] [18]

4.1.5 Bootstrap

Bootstrap is an open-source JavaScript system, and it is also the framework of HTML, CSS, and JavaScript, which is used for developing a responsive and mobile-friendly website. It is used primarily for faster web development. Bootstrap contained features like a grid system, link style, background, global CSS setting, iconography, drop-downs, navigation, alerts, pop-over, jQuery plugins. Bootstrap is more than efficient in creating a responsive and mobile-first website.[19] [20]

4.2 Back-End Design

To develop a website developer, there are two parts—one is the front-end used for UI design, and another is the back-end used for a server and application and database. Back-end developers write code to help a database and application communicate. And a user can only see the front-end UI designed in web pages. Still, he cannot see the back-end operation because a back-end developer handles the process behind a website, including servers, database, and application. For back-end development, a developer needs to learn advanced programming such as PHP, Java, Ruby, Python, etc. In this

project, we used PHP language for back-end development, and for maintaining the database and server, we used XAMPP. [7]

4.2.1 PHP

PHP stands for “Hypertext Preprocessor.” It is an HTML-embedded Web scripting language, which means PHP code can be used in HTML web pages. The server parses the PHP code, and the output is returned as HTML code which the browser can read. Because PHP code is transformed into HTML when pages are loaded, that’s why a user cannot see the PHP language in the website. Because those PHP pages are secure enough to access databases. PHP adopts lots of syntaxes from other languages such as Perl, C, and Java. But PHP has some unique features. The main goal of this language is that PHP allows a web developer to write dynamically generated pages quickly and easily.[21]

4.2.2 Database Tables

Table	Action	Rows	Type	Collation	Size	Overhead
☐ messagein	★ Browse Structure Search Insert Empty Drop	6	InnoDB	utf8mb4_general_ci	16 KiB	-
☐ messagelog	★ Browse Structure Search Insert Empty Drop	27	InnoDB	utf8mb4_general_ci	32 KiB	-
☐ messageout	★ Browse Structure Search Insert Empty Drop	0	InnoDB	utf8mb4_general_ci	32 KiB	-
☐ tblautonumber	★ Browse Structure Search Insert Empty Drop	2	InnoDB	latin1_swedish_ci	16 KiB	-
☐ tblcategory	★ Browse Structure Search Insert Empty Drop	2	InnoDB	latin1_swedish_ci	16 KiB	-
☐ tblcustomer	★ Browse Structure Search Insert Empty Drop	12	InnoDB	latin1_swedish_ci	16 KiB	-
☐ tblorder	★ Browse Structure Search Insert Empty Drop	14	InnoDB	latin1_swedish_ci	64 KiB	-
☐ tblproduct	★ Browse Structure Search Insert Empty Drop	10	InnoDB	latin1_swedish_ci	32 KiB	-
☐ tblpromopro	★ Browse Structure Search Insert Empty Drop	10	InnoDB	latin1_swedish_ci	32 KiB	-
☐ tblsetting	★ Browse Structure Search Insert Empty Drop	2	InnoDB	latin1_swedish_ci	16 KiB	-
☐ tblstockin	★ Browse Structure Search Insert Empty Drop	0	InnoDB	latin1_swedish_ci	48 KiB	-
☐ tblsummary	★ Browse Structure Search Insert Empty Drop	10	InnoDB	latin1_swedish_ci	64 KiB	-
☐ tbluseraccount	★ Browse Structure Search Insert Empty Drop	4	InnoDB	latin1_swedish_ci	16 KiB	-
☐ tblwishlist	★ Browse Structure Search Insert Empty Drop	2	InnoDB	latin1_swedish_ci	16 KiB	-
14 tables	Sum	101	InnoDB	latin1_swedish_ci	416 KiB	0 B

Figure 4.2.1: All tables of the “Support Krishi” database

Figure 4.2.1 shows all tables which are included in the “Support Krishi” database. When a user or admin inserts something into this system, the data will be stored in this database.

	CUSTOMERID	FNAME	LNAME	MNAME	CUSHOMEENUM	STREETADD	BRGYADD	CITYADD	PROVINCE	COUNTRY	DBIRTH	GENDER	PHONE	EMAILADD	ZIPCODE	CUSUNAME	CUSPASS
☐ Edit Copy Delete	1	Janobe	Palacios		321	Coloso Street	brgy. 1	Kabankalan City	Negros Occidental	Philippines	0000-00-00	Male	+639956112920		6111	kenjie@yahoo.com	1dd4efc8113
☐ Edit Copy Delete	2	Mark Anthony	Geasin		1234	paglaom	dancalan	Ilog	negros occ	philippines	0000-00-00		091023333234		6111	bboy	0377588176
☐ Edit Copy Delete	3	Jano	Palacios		12312	s	brgy 1	kabankalan city	negross occidental	philippines	0000-00-00	Male	21312312312		6111	jan	53199a57fd
☐ Edit Copy Delete	4	Jamei	Laveste					kabankalan city			0000-00-00	Female	362656556		0	jame	f144dcoe05a
☐ Edit Copy Delete	5	Jeanniebe	Palacios					Kab City			0000-00-00	Female	+639486457414		0	bebe	d079a1c068
☐ Edit Copy Delete	6	Janry	Tan					Kab City			0000-00-00	Male	0234234		0	jan	0271c54679
☐ Edit Copy Delete	7	Jake	Cuenca					Kabankalan City			0000-00-00	Male	639305235027		0	jake	403ba16f71c
☐ Edit Copy Delete	8	Jake	Tam					Kab City			0000-00-00	Male	021312312		0	j	30ef1fe5311f
☐ Edit Copy Delete	9	Annie	Paredes					s			0000-00-00	Female	12312312		0	an	aa46142b60
☐ Edit Copy Delete	10	Rahat	Anwar					Dhaka			0000-00-00	Male	8801234567890		0	rahat	85ea631412
☐ Edit Copy Delete	11	Rahat	Adnan					Bhola			0000-00-00	Male	01718512007		0	rahat01	ac59b37b5a
☐ Edit Copy Delete	12	test	1					test city			0000-00-00	Male	01718512007		0	test	3bc21f44ce

Figure 4.2.2: User account information database

Figure 4.2.2 shows all the information about the user account. When a user creates an account his all will be saved in this section.

	USERID	U_NAME	U_USERNAME	U_PASS	U_ROLE	USERIMAGE
☐ Edit Copy Delete	124	Kenjie Palacios	kenjie	4752fe635442d048e8e8d2d1d845e6a578f30470	Administrator	photos/COC-war-base-design.jpg
☐ Edit Copy Delete	126	Rahat Anwar	rahat	d033e22ae348aeb5660fc2140aec35850c4da997	Administrator	photos/10329236_874204835938922_663689799025722447...
☐ Edit Copy Delete	127	Craig Palacios	craig	d033e22ae348aeb5660fc2140aec35850c4da997	Administrator	
☐ Edit Copy Delete	128	Rahat Adnan	rahat	7c4a8d09ca3762af61e59520943dc264948941b	Administrator	

Figure 4.2.3: Admin account information database

Figure 4.2.3 shows all information about an admin account. When an admin adds a new admin, the information will be saved into this database section.

			CATEGID	CATEGORIES	USERID
☐	Edit Copy Delete		21	à!•à\$Èà!ÿà! à!%4à!¶à!•	0
☐	Edit Copy Delete		22	check	0
☐	Edit Copy Delete		23	test2	0
☐	Edit Copy Delete		24	test3	0
☐	Edit Copy Delete		25	test 4	0
☐	Edit Copy Delete		26	test 5	0

Figure 4.2.4: Categories information database

Figure 4.2.4 shows all the category lists which are added to the website. When an admin adds a new category to the website, the information will be saved into this section.

		PROID	PRODESC	INGREDIENTS	PROQTY	ORIGINALPRICE	PROPRICE	CATEGID	IMAGES	PROSTATS	OWNERNAME	OWNERPHONE
☐	Edit Copy Delete	201737	KILY Korean Casual Sleeveless Dress Printed Dress ...		4	100	119	12	uploaded_photos/korean.jpeg	Available	janobe	
☐	Edit Copy Delete	201738	terno top and pants korean fashion boho terno summ...		2	150	199	12	uploaded_photos/terno.jpeg	Available	janobe	
☐	Edit Copy Delete	201739	4Color Men&S Denim Pants STRETCHABLE Skinny Blac...		5	250	289	18	uploaded_photos/jeans.jpg	Available	janobe	
☐	Edit Copy Delete	201740	SIMPLE Fashion Men'S Casual T Shirt Short Sleeve R...		1	100	149	18	uploaded_photos/shirt.jpg	Available	janobe	
☐	Edit Copy Delete	201741	ICM #T146 BESTSELLER TOPS TSHIRT FOR MEN		4	50	89	18	uploaded_photos/shirt2.jpg	Available	janobe	
☐	Edit Copy Delete	201742	CJY&OT Coat Rack Creative Simple CoatRack Bedroom		4	250	287	14	uploaded_photos/bed.jpeg	Available	janobe	
☐	Edit Copy Delete	201743	fald		120	120	120	20	uploaded_photos/0a62408f57701a67e09fa8a8c46d3793...	Available	à!•à!à!%4à!•à!%	213216541521
☐	Edit Copy Delete	201744	à!•à\$Çà!•à!•à\$1à!•à!•à! (à\$à\$%) + à!•à!à!à!à!		3	120	120	21	uploaded_photos/0a62408f57701a67e09fa8a8c46d3793...	Available	à!•à!•à!•à!•à\$Çà!•à!•à! (à\$à\$%) + à!•à!à!à!à!	8801718512007
☐	Edit Copy Delete	201745	à!•à\$Çà!•à!•à!•à!%4à!•à!%		18	120	258	21	uploaded_photos/download.jpg	Available	à!•à\$Çà!•à!•à\$1à!•à!•à! (à\$à\$%) + à!•à!%4à!à!à!à!...	880123456789
☐	Edit Copy Delete	201746	daf		16	120	120	21	uploaded_photos/syngenta_karate_insecticide_syngen...	Available	check	12345678900

Figure 4.2.5: Add product information database

Figure 4.2.5 shows all the information about adding products that are included on the website. When an admin adds a product to his website, the information will be saved into this section.

		ORDERID	PROID	ORDEREDQTY	ORDEREDPRICE	ORDEREDNUM	USERID
☐	Edit Copy Delete	1	201737	4	476	93	0
☐	Edit Copy Delete	2	201740	3	447	93	0
☐	Edit Copy Delete	3	201738	1	199	94	0
☐	Edit Copy Delete	4	201737	1	119	95	0
☐	Edit Copy Delete	5	201738	1	199	95	0
☐	Edit Copy Delete	6	201744	1	120	95	0
☐	Edit Copy Delete	7	201745	1	258	96	0
☐	Edit Copy Delete	8	201744	1	120	97	0
☐	Edit Copy Delete	9	201744	1	120	98	0
☐	Edit Copy Delete	10	201744	3	360	99	0
☐	Edit Copy Delete	11	201746	1	120	100	0
☐	Edit Copy Delete	12	201744	1	120	100	0
☐	Edit Copy Delete	13	201746	3	360	101	0
☐	Edit Copy Delete	14	201745	1	258	102	0

Figure 4.2.6: Product order list information database

Figure 4.2.6 shows all the information about the user product order list. When a user orders a product from a website, the order information will be saved in this section.

4.3 Interaction Design and UX

On this website, there are two different panels for the three different roles. Any general user will interact with the homepage of the web application for information. When the user decides to purchase a product from an e-commerce site, the user will go through the registration to use the service. At that point, the client will be prepared to log in and employ the interface.

4.3.1 General User's Site

For general users-

- If the user only wants to know the plant disease information, the user can get the information through the website.
- But if the user wants to buy the product, the user must go to the e-commerce site.
- Users can view the products on the website.
- Users can add to cart product, add to wish list, order product, cancel the order.
- Only an admin can maintain the website.
- Admin can create categories, add products, review customer orders, delete categories, delete a product, delete order, add a discount, delete a user.

4.3.2 Database Controller

- Only developers can access the database.
- Developers can add and delete an admin or user from the database.
- Developers can act as admin.
- Developers can create new attributes.
- Developers can make changes within the system.

4.3.3 UX Design

User experience (UX) design is the process design teams use to create products that provide meaningful and relevant experiences to users [22]. But we don't have the UX yet.

4.4 Implementation Requirements

For doing this project, we used some software tools. For controlling the database, we used a PHP system where the stage is XAMPP. That's why in this project, XAMPP is our database management system. Using the XAMPP, we can create and delete a class, row, and table into the database. We can store data and interact with it from the database controller.

4.5 Software Requirements

We need some software tools for implementing and controlling this web application.

- Visual Studio Code and Notepad (For writing codes)
- XAMPP (use for control database and localhost web server for testing and deployment)
- Firefox or Chrome or Safari (For checking the website interface and test the website)

CHAPTER 5

IMPLEMENTATION AND TESTING

5.1 Database Implementation

A developer must use a database to manage website information because web databases are built for taking user information and personal information like email addresses and mobile numbers or home addresses. Because databases can be used for professional and personal purposes [23]. In this project, for keeping information, we executed databases by utilizing PHP and dealing with the databases we used XAMPP. We used XAMPP to utilize capacities for SQL for an activity database. When a user registers an account, the information will be saved into the database.

Table	Action	Rows	Type	Collation	Size	Overhead
☐ messagein	★ Browse Structure Search Insert Empty Drop	6	InnoDB	utf8mb4_general_ci	16 KiB	-
☐ messagelog	★ Browse Structure Search Insert Empty Drop	27	InnoDB	utf8mb4_general_ci	32 KiB	-
☐ messageout	★ Browse Structure Search Insert Empty Drop	0	InnoDB	utf8mb4_general_ci	32 KiB	-
☐ tblautonumber	★ Browse Structure Search Insert Empty Drop	2	InnoDB	latin1_swedish_ci	16 KiB	-
☐ tblcategory	★ Browse Structure Search Insert Empty Drop	2	InnoDB	latin1_swedish_ci	16 KiB	-
☐ tblcustomer	★ Browse Structure Search Insert Empty Drop	12	InnoDB	latin1_swedish_ci	16 KiB	-
☐ tblorder	★ Browse Structure Search Insert Empty Drop	14	InnoDB	latin1_swedish_ci	64 KiB	-
☐ tblproduct	★ Browse Structure Search Insert Empty Drop	10	InnoDB	latin1_swedish_ci	32 KiB	-
☐ tblpromopro	★ Browse Structure Search Insert Empty Drop	10	InnoDB	latin1_swedish_ci	32 KiB	-
☐ tblsetting	★ Browse Structure Search Insert Empty Drop	2	InnoDB	latin1_swedish_ci	16 KiB	-
☐ tblstockin	★ Browse Structure Search Insert Empty Drop	0	InnoDB	latin1_swedish_ci	48 KiB	-
☐ tblsummary	★ Browse Structure Search Insert Empty Drop	10	InnoDB	latin1_swedish_ci	64 KiB	-
☐ tbluseraccount	★ Browse Structure Search Insert Empty Drop	4	InnoDB	latin1_swedish_ci	16 KiB	-
☐ tblwishlist	★ Browse Structure Search Insert Empty Drop	2	InnoDB	latin1_swedish_ci	16 KiB	-
14 tables	Sum	101	InnoDB	latin1_swedish_ci	416 KiB	0 B

Figure 5.1.1: Database Implementation

5.2 Front-End design implementation

Front-End design is the primary step in showing your content to a user. Because without front-end design, a user cannot understand your website content because the general user does not know anything about back-end operation. They just do their task using front-end web pages. That's why a developer must implement a front-end web page first. And web pages interfaces need to look responsive and user friendly. Because users do not like complex website design.

5.2.1 Home Page:

If anyone wants to know something about plant diseases and find solutions, this page will help him get information. This page contains categories for each type of plant disease. Therefore, the user only needs to select the category he is looking for.

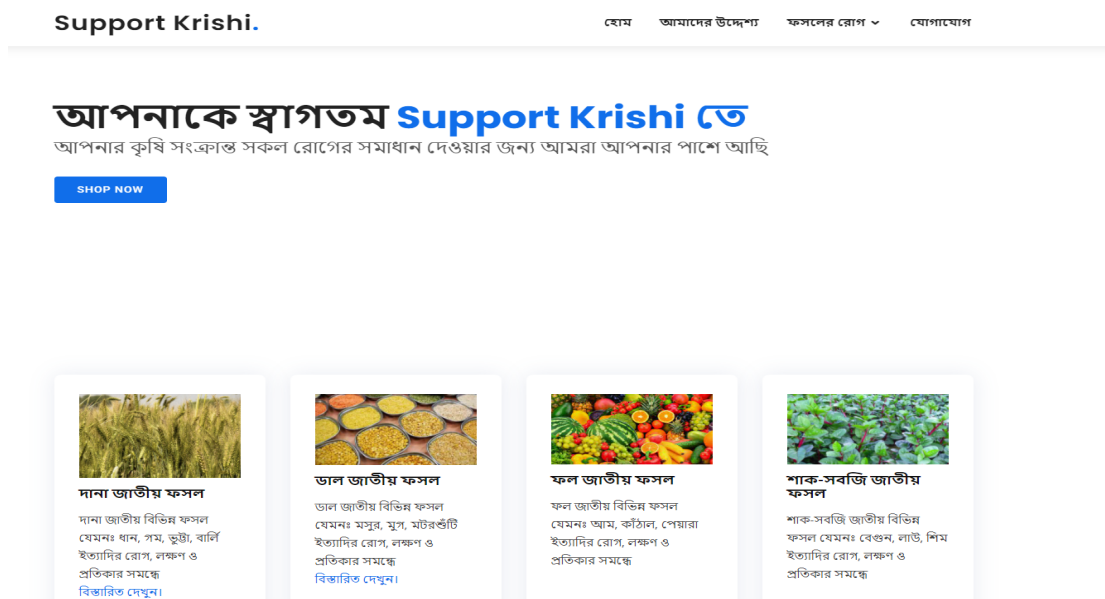


Figure 5.2.1: Home Page

5.2.2 Specific categories of Plant

After selecting a category of plants from the home page, the user will be transferred into this page, where the user will see all the problems of this selecting category.

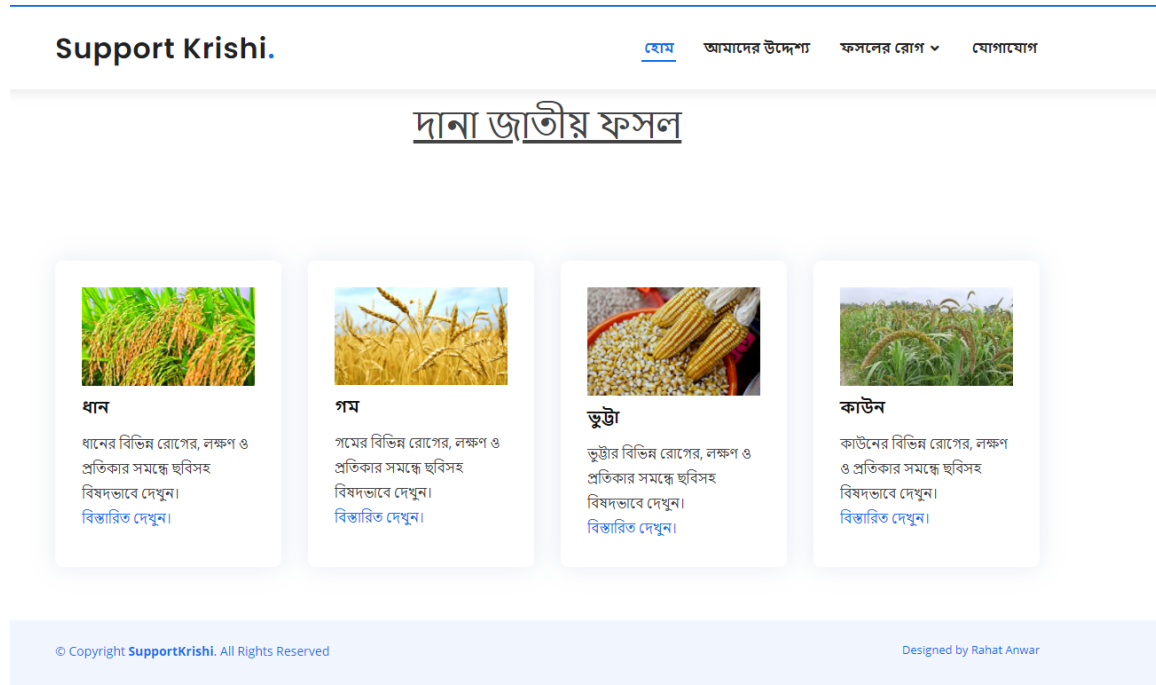


Figure 5.2.2: Specific categories of plant

5.2.3 Plant Disease Categories

After selecting a specific plant category, the user will be transferred to the next page, which is the category of plant diseases. On this page, the user will see all the issues that the user wants. And then, the user has to select the problem that matches his problem.

ধানের রোগের লক্ষণ এবং তার প্রতিকার



খোল পচা রোগ

এ রোগ ধান গাছের ডিপ পাতার খোলে সাধারণত ঘোড় অবস্থায় দেখা যায়।
[বিস্তারিত দেখুন।](#)



খোলপোড়া রোগ

কৃষি গজানোর সময় প্রথমে ছোট গোলকর বা লম্বাটে ধরনের ধূসর রঙের জলাছাপের মত দাগ পড়ে এবং তা আস্তে আস্তে বড় হয়ে উপরের দিকে সমস্ত খোল ও পাতায় ছড়িয়ে পড়ে।
[বিস্তারিত দেখুন।](#)



বাকানি রোগ

গোড়া পচা হলে গোড়ায় পচন ধরে, শিকড় বড় হয় না, ফলে গাছ দুর্বল হয়। গাছ খাটো এবং গাছের গোড়ায় সাদা বা গোলাপী ছত্রাক দেখা যায়।
[বিস্তারিত দেখুন।](#)



উফরা রোগ

এটি মাটি, রোগাক্রান্ত নীচ ও খড়ে থাকে।
[বিস্তারিত দেখুন।](#)

Figure 5.2.3: Plant Disease Categories

5.2.4 Details of disease

After selecting the problem from the plant disease categories page, the user will be transferred to the next page, the details of the disease. On this page, the user will know about his problem, why it happened, and the solution.

ধানের রোগ

খোল পচা রোগ

**রোগের নাম :**

ধানের খোল পচা রোগ Sheath Rot Disease (Cerocladium oryzae)

এই রোগের লক্ষণ:

1. এ রোগ ধান গাছের ডিগ পাতার খোলে সাধারণত খোড় অবস্থায় দেখা যায়।
2. প্রথমে খোলে ছোট ছোট নানা আকারের বাদামী দাগ হয়।
3. দাগগুলো আস্তে আস্তে বেড়ে একত্রে মিশে সমস্ত খোলে ছড়িয়ে পড়ে।
4. এ অবস্থায় যদি শীঘ্র বের হয় তাহলে ধান চিটা ও অপুষ্ট হয়। অনেক সময় শীঘ্র অর্ধেক বের হতে পারে বা একবারেই বের হতে পারে না।

সমন্বিত দমন ব্যবস্থাপনা:

1. রোগ প্রতিরোধ ক্ষমতা সম্পন্ন জাত ব্যবহার করা।
2. জমিতে ইউরিয়া সার কম ব্যবহার করা।
3. রোগ দেখা দিলে জমির পানি শুকিয়ে কয়েকদিন পর আবার সেচের পানি দেয়া।
4. প্রয়োজনের ছত্রাকনাশক ব্যবহার করা যথাঃ ১ মিলি প্রোপিকনাজল (টিল্ট ২৫০ ইসি) বা নাটিভো, বা কনটাক্স প্রতি লিটার পানিতে - এ হারে স্প্রে করা।

Figure 5.2.4: Details of disease.

5.2.5: E-commerce home page

After receiving the information, a user can buy pesticides from e-commerce sites. To do this, the user just needs to click the shop now button from the home page. It will transfer the user to the e-commerce site's home page. Where users will see the pesticides medicine.

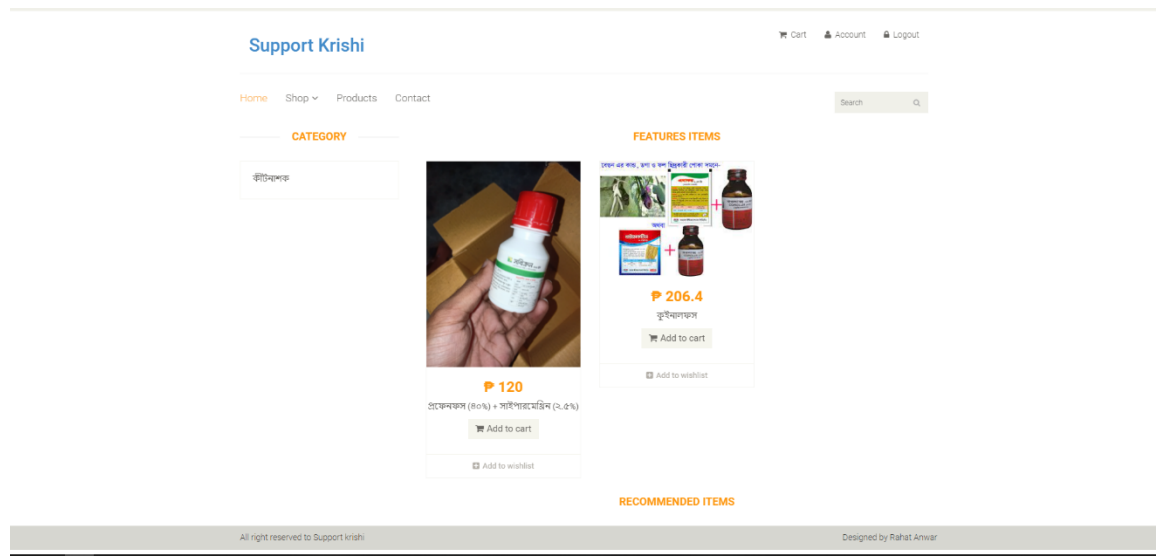


Figure 5.2.5: E-commerce home page

5.2.6 Login and Registration

If a user only wants to know the information, the user does not need to create an account, but if the user wants to buy something from our e-commerce site, then the user must have an account. And using this page, users can create an account and login into the website.

Login
Sign Up

Login Details

Username:

Password:

Login
Close

Figure 5.2.6.1: Login page

Customer Details

First Name:

Last Name:

Gender: ☒ Male ☐ Female

Municipality/City:

Username:

Password:

Note
Password must be atleast 8 to 15 characters. Only letter, numeric digits, underscore and first character must be a letter.

Contact Number:

☐ I Agree with the [TERMS AND CONDITION](#) of supportkrishi.

© Support Krishi

Figure 5.2.6.2: Registration page

5.2.7 Add to Cart and Checkout

If the user wants to buy any product, the user needs to add to the cart product, and after that, the user can check out the product. And also, users can add any product to their Wishlist. And the payment getaway is the simple cash-on-delivery.

1 Item added in the cart.

Product	Description	Price	Quantity	Total
	প্রফেনফস (৪০%) + সাইপারমেথ্রিন (২.৫%)	₹ 120	1	₹ 120
				Total ₹120.00

[Add to wishlist](#)

What would you like to do next?
Choose if you have a discount code or reward points you want to use or would like to estimate your delivery cost.

[← Add New Order](#) [Proceed And Checkout →](#)

Figure 5.2.7.1: Add to cart page

[Home](#) > Order Details

Name: Rahat Anwar Order Number :097
Address: Dhaka

Product	Description	Quantity	Price	Total
	প্রফেনফস (৪০%) + সাইপারমেথ্রিন (২.৫%)	1	120	120

Total Price : 120.00
Delivery Fee : 0.00
Overall Price : 120

What would you like to do next?
Choose if you have a discount code or reward points you want to use or would like to estimate your delivery cost.

Payment Method :

☒ Cash on Delivery

Address where to deliver
Place(City):

[← View Cart](#) [Submit Order →](#)

Figure 5.2.7.2: Checkout page

5.2.8 User Order Status

After checkout, the product user can see the order status, and also, the user can download his order document.

#	Order#	Date Oredered	TotalPrice	PaymentMethod	Status	Remarks	
1	97	Aug/18/2021 12:18:02	₹ 120	Cash on Delivery	Pending	Your order is on process.	
2	96	Aug/18/2021 11:09:15	₹ 258	Cash on Delivery	Pending	Your order is on process.	
3	95	Aug/18/2021 05:43:31	₹ 120	Cash on Delivery	Confirmed	Your order has been confirmed.	

Figure 5.2.8: User order status page

5.2.9 Admin panel

Admin panel is used for maintaining the website where admin can add or delete category and product. Admin can also see the user registration data and list of products and user order status.

5.2.10 Add New Admin and Update Account

In this section, Admin can add a new admin and update the existing profile. Without an account, the admin can not access the admin panel.

Add New User

Name:

Username:

Password:

Role:

Administrator

Figure 5.2.10.1: Add new user page

Update User Account

Name:

Username:

Password:

Role:

[Save](#)

Figure 5.2.10.2: Update user account

5.2.11 Add Categories and Add Product

In this section, the admin can add a category that will show on the website and add products inside the category.

Category /

List of Categories [Now](#)

Show 10 entries

Search:

Category	Action
ক্যাটাগরি	Add Edit

Showing 1 to 1 of 1 entries

Previous [1](#) Next

Figure 5.2.11.1: Add categories page

Support Krishi [Now](#) [Howdy, Rahat Anwar](#)

Products /

List of Products [Now](#)

Show 10 entries

Search:

#	Image	Product	Description	Price	Discount%	Discounted Price	Quantity
☐		ক্যাটাগরি	প্রথমবার (৪০%) - সর্বশেষবার (২.৫%)	₹ 120.00	0	₹ 120.00	9
☐		ক্যাটাগরি	ক্যাটাগরি	₹ 250.00	20	₹ 200.40	19

Showing 1 to 2 of 2 entries

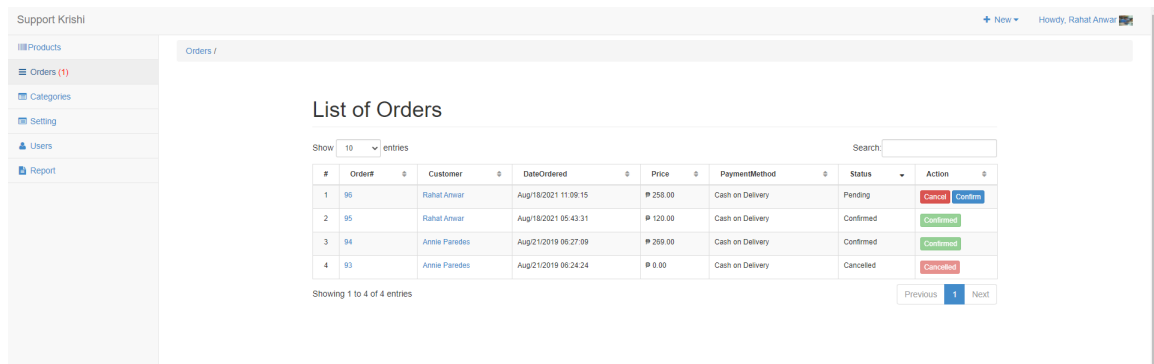
[Delete Selected](#)

Previous [1](#) Next

Figure 5.2.11.2: Add products page

5.2.12 Review User Order

In this section, the admin can see the user order request list. Then, Admin can accept or delete the order. When the admin agrees with the order request, the user will see the order status is confirmed, or if the admin cancels the order request, the user will see the order status.



Support Krishi

Orders /

List of Orders

Show 10 entries

Search:

#	Order#	Customer	DateOrdered	Price	PaymentMethod	Status	Action
1	96	Rahat Amwar	Aug/18/2021 11:09:15	₹ 258.00	Cash on Delivery	Pending	Cancel Confirm
2	95	Rahat Amwar	Aug/18/2021 05:43:31	₹ 120.00	Cash on Delivery	Confirmed	Confirmed
3	94	Annie Paredes	Aug/21/2019 00:27:09	₹ 269.00	Cash on Delivery	Confirmed	Confirmed
4	93	Annie Paredes	Aug/21/2019 00:24:24	₹ 9.00	Cash on Delivery	Cancelled	Cancelled

Showing 1 to 4 of 4 entries

Previous 1 Next

Figure 5.2.12: User order request page

5.3 Testing Implementation

Implementation is the process of putting an action for the formulated plan. Before we implement, the plan should have been completed, and our objectives should be clear [24]. Testing is the most important before you publish your project. Testing checks that you have any kind of bug or not in your project. If it finds any kind of bugs, it will inform you about the bugs to fix them. The process will continue until your project has zero percent bugs. There are a few test cases of our web application project are given underneath:

Table 5.3.1: A Test Case for The System

Test Case	Test Input	Expected Outcome	Obtained Outcome	Pass/Fail	Tested Date
1.Create account	Complete information	Account create successfully	Account create successfully	Pass	20.08.2021
2. Login	Valid Information	Logins Success	Login Success	Pass	20.08.2021
3. Create an account	Incomplete information	Account create unsuccessfully	Account create unsuccessfully	Pass	20.08.2021
4.Login	Invalid information	Please enter a valid username and password	Please enter a valid username and password	Pass	20.08.2021
5. Add to cart	Add product into the cart	Successfully added product to the cart	Successfully added product to the cart	Pass	20.08.2021
6. Add to cart	Do not select any product	Cart is empty	Cart is empty	Pass	20.08.2021
7. Checkout	Add product into add to cart for checkout	Order complete	Order complete	Pass	20.08.2021
8.Checkout	Cart is empty	No option for checkout	No option for checkout	Pass	20.08.2021
9.Checkout	Not login to the website	Please login/registration first	Please login/registration first	Pass	20.08.2021
10. Order	Order request	Pending	Pending	Pass	20.08.2021
11. Order	Auto approve order	Not possible	Not Possible	Pass	20.08.2021

12. Wishlist	Add the product to the Wishlist	Product added into Wishlist	Product added into Wishlist	Pass	20.08.2021
13. Accept order by admin	Accept request	Order complete	Order Complete	Pass	20.08.2021
14. Accept order by admin	Cancel request	Order canceled	Order canceled	Pass	20.08.2021
15. Add category	Add a category to the website	Success	Success	Pass	20.08.2021
16. Delete Category	Remove category	Delete from website	Delete from website	Pass	20.08.2021
17. Add product	Add product	Success	Success	Pass	20.08.2021
18. Delete product	Delete product from the website	There is no such product on this website	There is no such product on this website	Pass	20.08.2021
19. Delete user	Delete user from the database	Success	Success	Pass	20.08.2021
20. Add discount	Add discount on product	Show new price	Show new price	Pass	20.08.2021
21. Product list	Delete from product category	Not showing the product	Not showing the product	Pass	20.08.2021

CHAPTER 6

CONCLUSION AND FUTURE SCOPE

6.1 Discussion and Conclusion

We have created a web-based application named “Support Krishi- A web-based application.” This project is done for the farming sector because I wanted to give them free information about plant diseases and conditions solutions. And also, I have created an e-commerce website for pesticides so that they can easily buy pesticides without any hassle. I have kept the payment gateway as simple as possible. I have tried to alleviate their suffering by doing this project. I have been working on this since 2021, and it wasn't a perfect journey for me. But I learned a lot by creating this project. I have so many plans about this project to establish this web application as a startup and establish a company for the farmer.

6.2 Scope for Further Development

Since I am the sole creator of this project, I could not add some features because there was very little time to create such a large project. And I lack some skills, that is why I can't create some features now. But in the future, I'll add some features to make this project more user-friendly.

Some future development scopes for this project are-

- As many farmers are still not educated, they can't read and write correctly. I want to provide audio services to each problem so that it will be easier for them to grasp the situation.
- I want to develop it area-specific, as not all types of crops grow everywhere.
- I want to develop an android application for the platform.
- I want to make the login system more manageable than ever. For registration, farmers will use their only mobile number and their address and name.
- Making user information more secure.
- A real-time forum where they can post their problem.
- A chatbot for common questions.
- Make information Dynamic.

APPENDIX

Name	Description
HTML	HTML is used to build a basic structure of web applications.
CSS	CSS is used to design HTML code to make a website beautiful.
JavaScript	JavaScript is a client-side programming language that is used to make web pages dynamic.
jQuery	jQuery is primarily used to add animations to websites
Bootstrap	Bootstrap helps to create a responsive website easily because it is already responsive by design.
PHP	PHP is a server-side language used to create dynamic and interactive websites.

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