ANTI PESTO

A PROJECT REPORT
for
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Professor

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DECLARATION

I hereby declare that the work presented in report entitled "Anti Pesto" was carried out by me. I have not submitted the matter embodied in this report for the award of any other degree or diploma of any other University of Institute. I have given due credit to the original authors/sources for all the words, ideas, diagrams, graphics, computer programs, that are not my original contribution. I have used quotation marks to identify verbatim sentences and give credit to the original authors/sources. I affirm that no portion of my work is plagiarized, and the experiments and results reported in the report are not manipulated. In the event of a complaint of plagiarism and the manipulation of the experiments and results, I shall be fully responsible and answerable.

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CERTIFICATE

Certified that **Navneet Chaudhary 2200290140097, Madhav Sharma 2200290140083** have carried out the project work having "**Anti Pesto**" (**Mini Project-KCA353**) for **Master of Computer Application** from Dr. A.P.J. Abdul Kalam Technical University (AKTU**)** (formerly UPTU), Lucknow under my supervision. The project report embodies original work, and studies are carried out by the student himself/herself and the contents of the project report do not form the basis for the award of any other degree to the candidate or to anybody else from this or any other University/Institution.

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This is to certify that the above statement made by the candidate is correct to the best of my knowledge.

Date:

Dr. Amit Kumar Gupta	**Dr. Arun Tripathi**
Professor	**Head**
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ABSTRACT

The project "Anti Pesto" aims to revolutionize agricultural practices by providing a comprehensive online platform dedicated to pest management and government schemes. In the face of increasing challenges posed by pests and insects in agriculture, the need for a centralized resource becomes imperative. Anti Pesto serves as an invaluable tool for farmers, agronomists, and policymakers by offering a wealth of information on pest prevention, and control measures.

The website features a user-friendly interface, allowing easy access to a vast database of pests and insects affecting crops. It provides detailed insights into the life cycles, habitats, and damage patterns caused by various pests, empowering farmers with the knowledge needed for effective pest management. Additionally, Anti Pesto acts as a bridge between farmers and government initiatives, offering a dedicated section that outlines and explains relevant agricultural schemes and subsidies.

The project not only seeks to educate and empower the agricultural community but also fosters a collaborative environment for information exchange. With Anti Pesto, we envision a sustainable and resilient agricultural landscape, where farmers are equipped with the latest knowledge and supported by government interventions.

ACKNOWLEDGEMENT

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CHAPTER 1

INTRODUCTION

1.1 OVERVIEW

With the increasing population, demand of more food is increasing which leads to more farming, done by modern agricultural methods. These crops need proper care and attention from the farmers, but there is always a risk that the crops may be damaged by the insects or pests.

According to an IACR report approx. 30% of the total crops are damaged by the pests, this is a big loss for the farmers and the Economy.

We are providing the solution for the farmers in which we will give the Information related to different crops and the threats caused by the different pests, It will provide the solutions and suggestions to protect the farmer's crops from harmful insects and pests.

1.2 Motivation

We as human beings and being related to agriculture background are looking for best app and that guidance which will guide and give information of several aspects of pests and crop information such as various crops, various pests, name, symptoms, bionomics and that solution and various government schemes. We as students also watch so many farmers to search on websites how to get protected from pests.
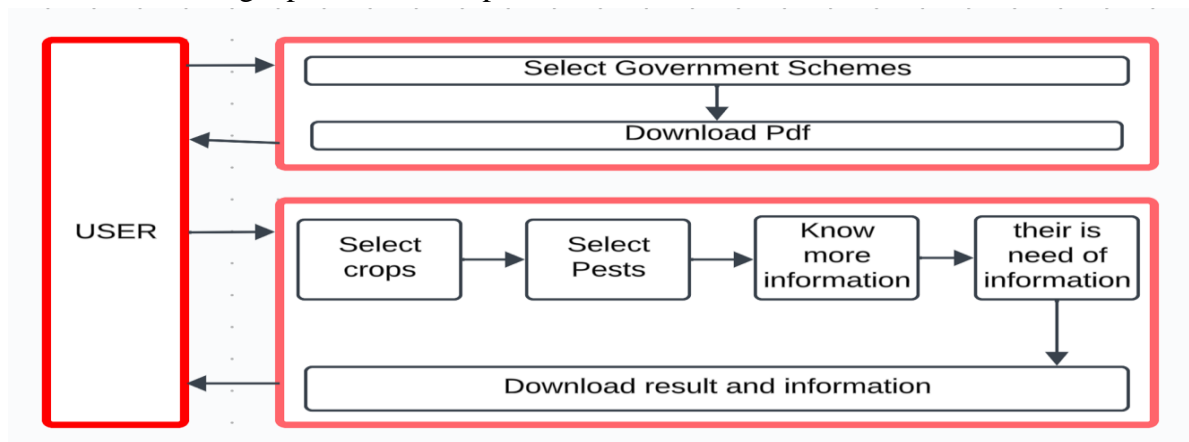
Fig. 1.1 Basic Architecture of User Interface System

Fig 1.1 represents the basic architecture of the User Interface system in which the user will interact with the system and will select crops and then select pests then click on know more information and then it will check their information is successfully needed then it would download all information related to that crop and pests, user will select government schemes and then it will be download in the form of pdf.

1.3 User Interface

This is a user interface which is used for users where users interact with this facility like when he/she was registered and login successfully then he will interact with home page then he/she will select many pages which is:

Home, Found new pests, pests, Government Schemes etc.
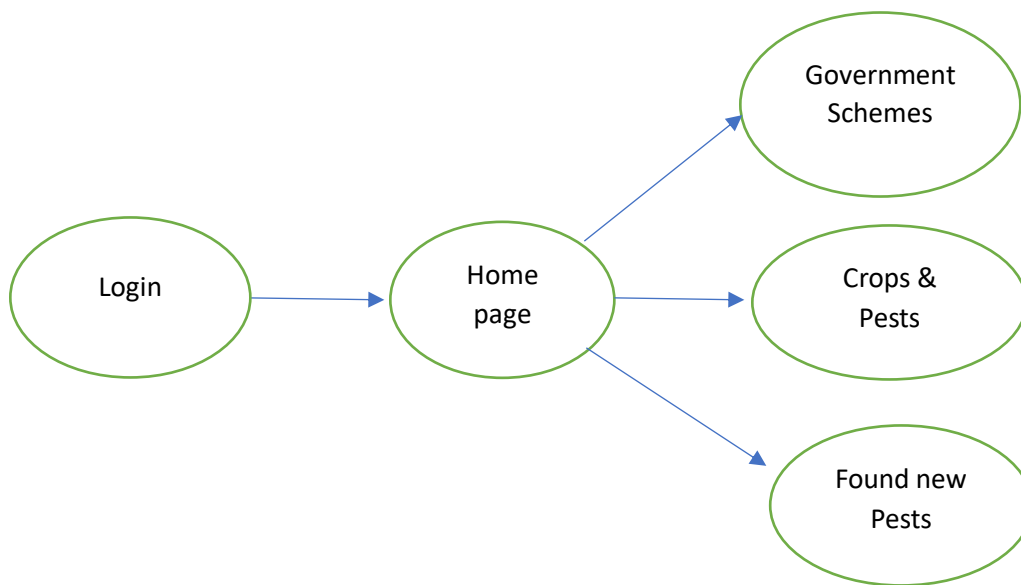
Fig. 1.2 User Interfaces

Fig 1.2 represents the basic flow of the User Interface system in which the user will interact with the system and will select crops and then select pests then click on know more information and then it will check their information is successfully needed then it would download all information related to that crop and pests, user will select government schemes and then it will be download in the form of pdf.

1.3.1 Government Schemes

The details about various Government schemes will be shown here, helping farmers to get benefits from the state and the central government.

1.3.2 Crops and Pests

The details about different types of crops and the insects that damage those crops will be shown, providing suggestions to the farmers to protect their crops.

1.3.3 Found new Pests

If a new type of pest is found, A form is provided to upload information of that pest. Using that information the details of the pest will be found out.

1.4 ADMIN INTERFACE

This is an Admin interface which is only interact with admins and users can't login and admins can having many facility like to upload details, can see all query's information, see schemes information etc.

Having facility, Client information, Admin information, Schemes information, Pests information, Query's information, upload schemes, upload pest details.
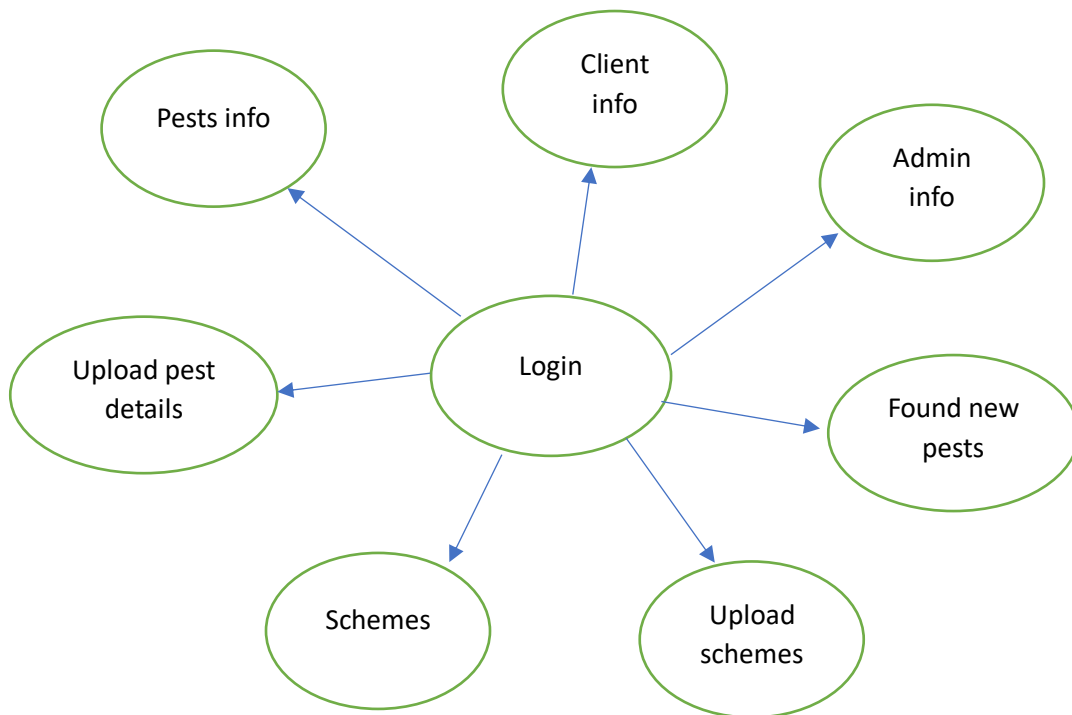
Fig. 1.3 Admin Interfaces

Fig 1.3 represents the basic flow of the Amin Interface system in which the admin will interact with the system and having many options like to see pests information, client information, admin information, pests details, schemes etc.

1.4.1 Pests Information

The details about various pests will be shown on client side.

1.4.2 Client Information

There all details about clients , How many clients will connect with us.

1.4.3 Admin Information

There all details about Admins, How many Admins are there.

1.4.4 Upload Pests Details

There upload all details of pests which will be shown on client side.

1.4.5 Schemes

The details about various schemes will be shown on client side.

1.4.6 Upload Schemes Details

There upload all details of schemes which will be shown on client side.

1.4.7 Found New Pests Details

The details about found new pests will be upload by client on client side.

CHAPTER 2

LITERATURE REVIEW

2.1 GENERAL

The Agriculture information website, Anti Pesto, serves as a comprehensive platform offering crucial insights into pest management, crop information, and government schemes.

Numerous studies emphasize the pivotal role of integrated pest management in sustainable agriculture. Anti Pesto aligns with this approach by providing farmers with a one-stop solution for pest related challenges.

Crop information is a vital component of agricultural success. Anti Pesto's commitment to delivering precise crop information aligns with this research, contributing to the overall advancement of agricultural practices.

Anti Pesto's integration of pest management, crop information, and government schemes resonates with existing literature emphasizes the importance of holistic agricultural resources. The platform stands as a valuable tool in empowering farmers with knowledge, aligning with the broader goals of sustainable and informed agricultural practices.

A survey of the population densities of rice planthoppers is important for forecasting decisions and efficient control. Traditional manual surveying of rice planthoppers is time-consuming, fatiguing, and subjective. A new three-layer detection method was proposed to detect and identify white-backed planthoppers (WBPHs, Sogatella furcifera (Horvath)) and their developmental stages using image processing. In the first two detection layers, we used an AdaBoost classifier that was trained on a histogram of oriented gradient (HOG) features and a support vector machine (SVM) classifier that was trained on Gabor and Local Binary Pattern (LBP) features to detect WBPHs and remove impurities. We achieved a detection rate of 85.6% and a false detection rate of 10.2%. In the third detection layer, a SVM classifier that was trained on the HOG features was used to identify the different developmental stages of the WBPHs, and we achieved an identification rate of 73.1%, a false identification rate of 23.3%, and a 5.6% false detection rate for the images without WBPHs. The proposed three-layer detection method is

feasible and effective for the identification of different developmental stages of planthoppers on rice plants in paddy fields.

Accurate identification of field pests can provide basic data for scientific pest control. It is an essential prerequisite for effective pest investigation, pest prediction, and accurate pest killing as well as a critical foundation for appropriate pesticide application, contributing to decision-making significance for integrated pest control.

In recent years, the automatic pest identification method based on digital image processing technology has become a research hotspot for experts and scholars. The traditional machine learning technology mainly includes three steps: image pre processing, feature extraction, and pest identification. Ebrahimi M.A. et al. proposed a method to identify thrips using the SVM (Support Vector Machines) method with region index and intensify as the color index. The average error of the classification was less than 2.25%. Yao et al. developed a rice light-trap insect imaging system to automate rice pest identification. The experimental results revealed that the average accuracy of the identification of the four species of Lepidoptera rice pests was 97.5%. Wen et al. designed an invariant local feature-based insect classification method to automatically classify certain common insects in orchards.

Although the traditional machine learning technology has made great progress in pest identification, its identification effect depends on the effect of feature extraction and the performance of the selected classifier, resulting in weak generalization ability and poor robustness of its identification model. Agriculture field pests are a kind of visual target with small sizes and diverse posture changes. Additionally, its identification environment is complex. Since most field pests have the characteristics of protective color (such as Pieris rapae), the identification model of deep learning with strong generalization ability is more suitable for field pest identification. This method adopts a convolutional layer, activation layer, normalization layer, and pooling layer to continuously superimpose, automatically extracts the characteristics of pest, and recognizes pests through the fully connected layer. Proposed a classification algorithm based on feature optimization to identify rice planthoppers and reached the identification accuracy of 96.19%. Zhang et al. improved the Faster R-CNN (Convolutional Neural Networks) model by replacing the VGG16 (Visual Geometry Group) with the depth residual network (ResNet50) to identify aphids and leaf miners on sticky cards. The results suggested that the precision of the improved Faster R-CNN model reached 90.7%. Patel D. J. and Bhatt N. compared three widely used deep learning meta-architectures (Faster R-CNN, SSD (Single Shot MultiBox Detector) Inception, and SSD Mobilenet) as object detection for selected flying insects, and Faster R-CNN meta-architecture presented the most outstanding performance with an accuracy of 95.33%. Thenmozhi K. and Reddy U.S. Proposed an efficient deep CNN model to classify insect species on three publicly available insect datasets. Rustia et al. designed a multi-class insect identification method for yellow sticky paper and obtained it from wireless cameras using cascaded convolutional neural networks. The multi-class insect classifier had an accuracy of 86–92%. Although the identification accuracy of the above methods is high, most of

them are for the identification of pests on the sticky card, or for the identification of pests with large differences between target and background. At present, there are few studies on field pest identification with protective color characteristics.

Pieris rapae and its host plant (cabbage) with a similar color to Pieris rapae were selected as experimental objects in this paper. As an extension of computer vision technology, near infrared imaging technology, especially the conventional imaging in the first NIR (NIR-I) window of 700 to 900 nm, can distinguish the target objects similar to the background in appearance characteristics. It is widely used in insect species identification and plant disease monitoring, but there is little research on pest identification. Firstly, the average spectral characteristic curves of Pieris rapae and cabbage were obtained by hyperspectral experiment. By analysing and comparing these two curves, the wavelength with the largest difference in spectral reflectance is obtained.

CHAPTER 3

DESIGN

3.1 Data Flow Diagram

3.1.1 Level 0 Data Flow Diagram

Level 0 Data Flow Diagram will explain the basic flow of data in a system which shows how the new or old user will interact with the system.
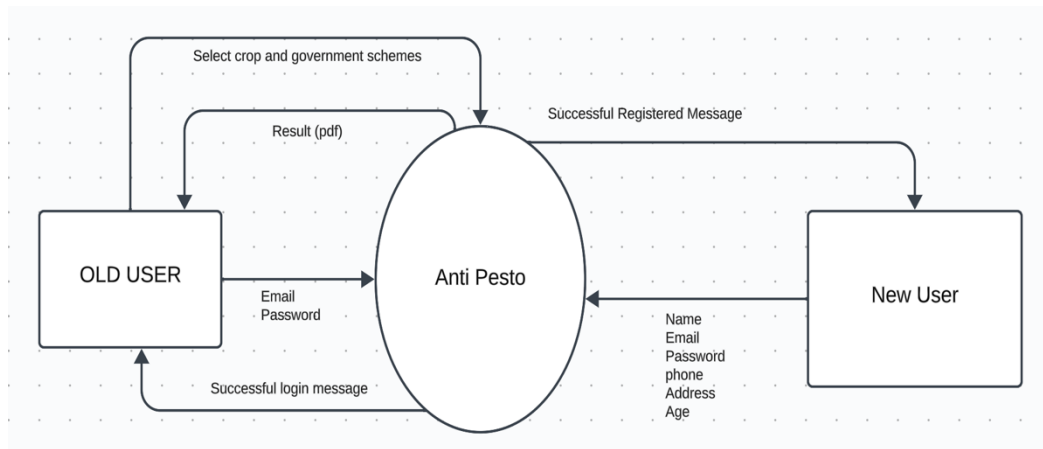
Fig. 3.1 0-Level Data Flow Diagram

Fig. 3.1 elaborates the interaction between user and the system. If the user is new then user will first register to the system by providing name, username, email, password, phone, age and address. Once successfully registered a message will be display to the user of successfully registered. If the user is old, then they can directly login to the system. Once successfully logged into the system, it will provide a message to the user. Then the user will provide the home page and many facilities.

3.1.2 Level 1 Data Flow Diagram
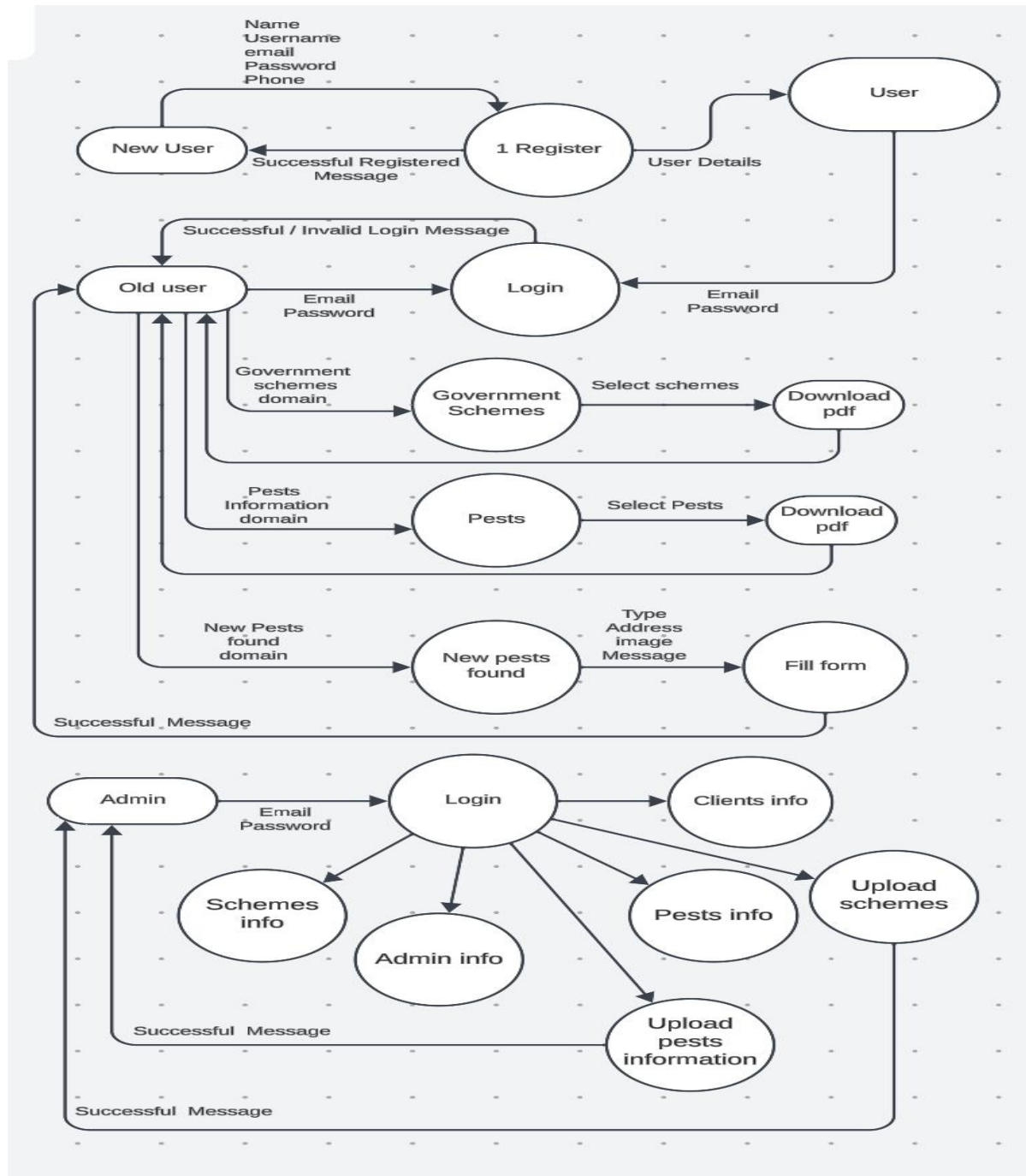
Fig. 3.2 1-Level Data Flow Diagram

Fig. 3.2 explains the entire flow of user and system with all processes involved in the system. If the user is new to the system, then register to the system by providing the details to it. And all the details of the user will be stored in the database. If the user is old, then user will log into the

system by email and password which will be validated from the database.

3.2 Sequence Diagram

Sequence Diagram is used to show the process of the system based on the different timeline.

3.2.1 Sequence Diagram of Registration Process

In this Diagram of Registration Process, it has 4 objects one actor, one boundary object, one control object, one store object.
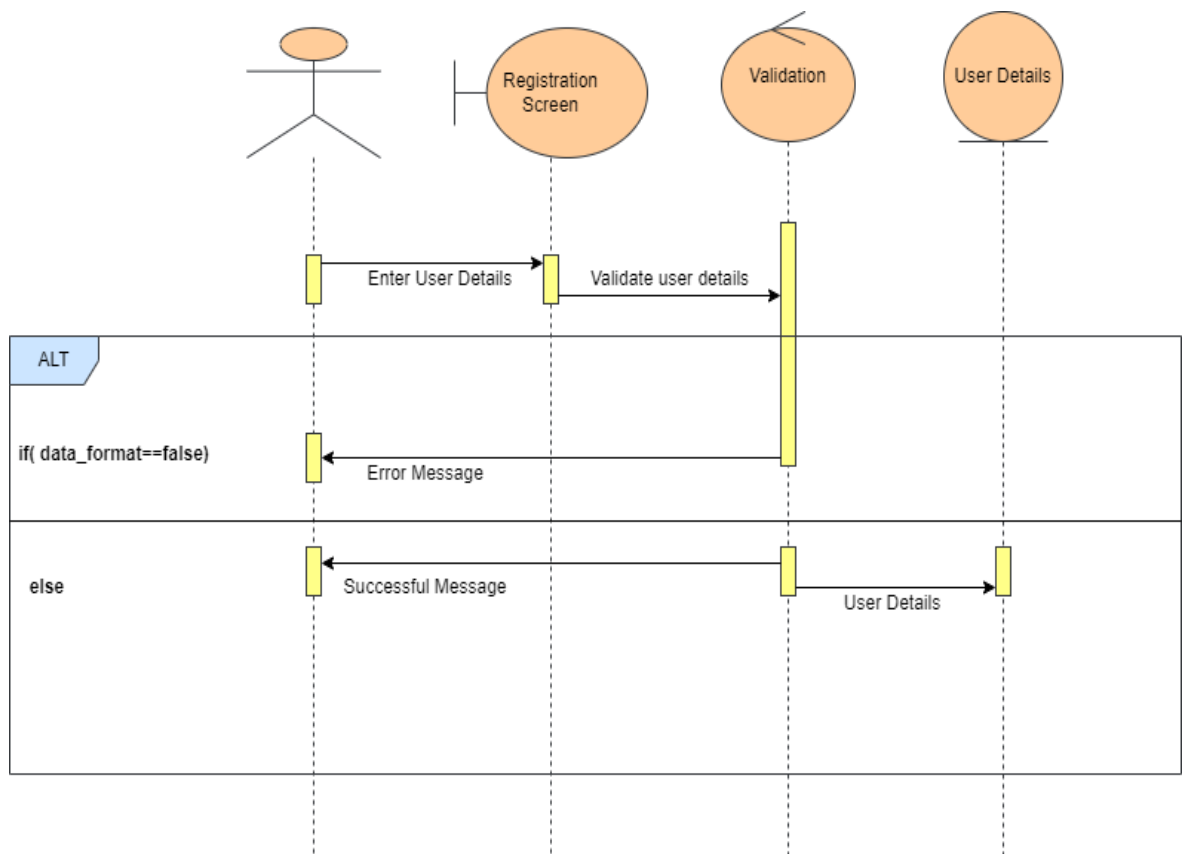
Fig. 3.3 Registration Sequence Diagram

Fig 3.3 explains about the process of registration where user send the details to the screen then validate those details. If details are not in correct format, then an error message is displayed. If details are in correct format, then successful message is displayed. Then details are stores in user database.

3.2.2 Sequence Diagram of Login Process

In this Diagram of Login Process, it has 4 objects one actor, one boundary object, one control object, one store object.

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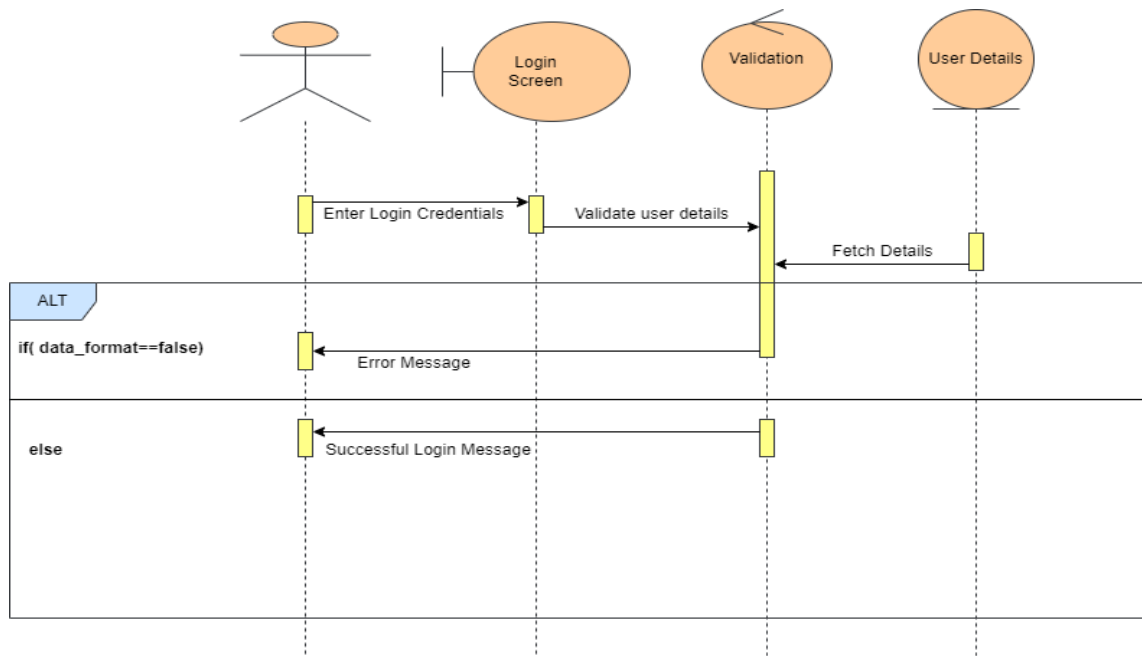
Fig. 3.4 Login Sequence Diagram

Fig 3.4 explains about the process of login where user send the details to the screen then validate those details. If details are not correct from fetched data from database, then an error message is displayed. If details are correct from fetched data from database, then successful message is displayed.

3.2.3 Sequence Diagram of Pests and Crops Process

In this diagram of crops and pests Process.
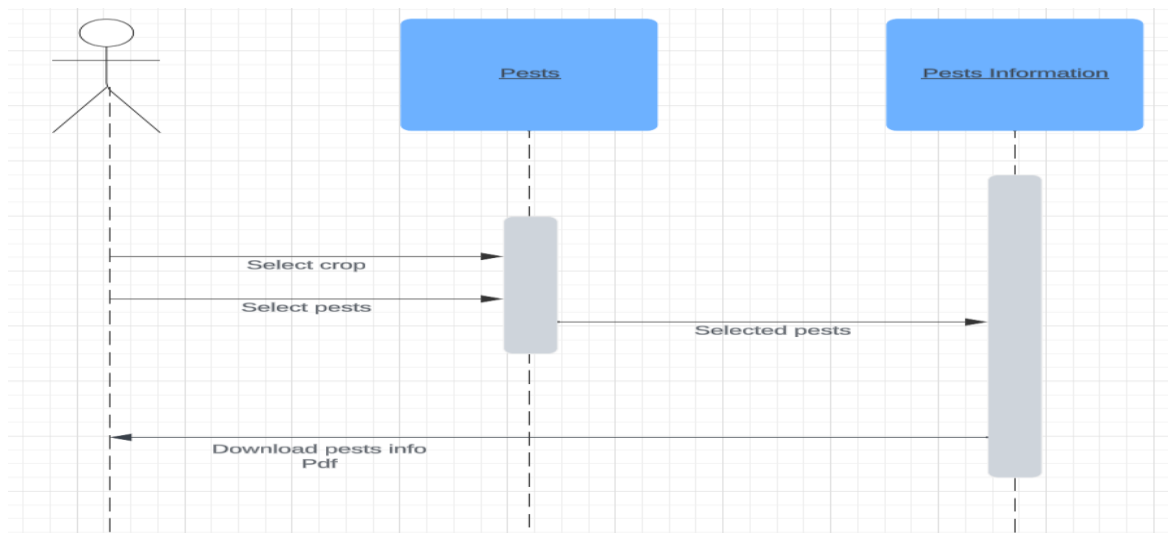
Fig. 3.5 Crops and Pests Sequence Diagram

Fig 3.5 explains about how user will select crops and pests, and then provide the fully pests

information to them. Then user will download full information in pdf.

3.2.4 Sequence Diagram of Government Schemes Process

In this diagram of Government Schemes. Having one objects.
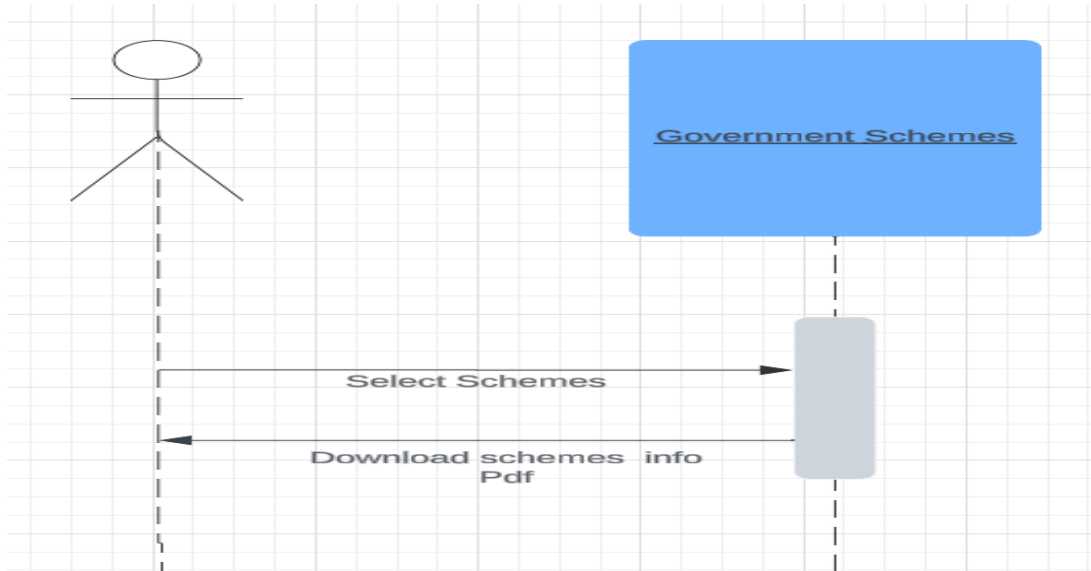
Fig. 3.6 Government Scheme Sequence Diagram

Fig 3.6 explains about how user will select Government Schemes, and then provide the fully Schemes information to them. Then user will download full information in pdf.

3.2.5 Sequence Diagram of Found New Pests Process

In this diagram of Found New pest. Having two objects.
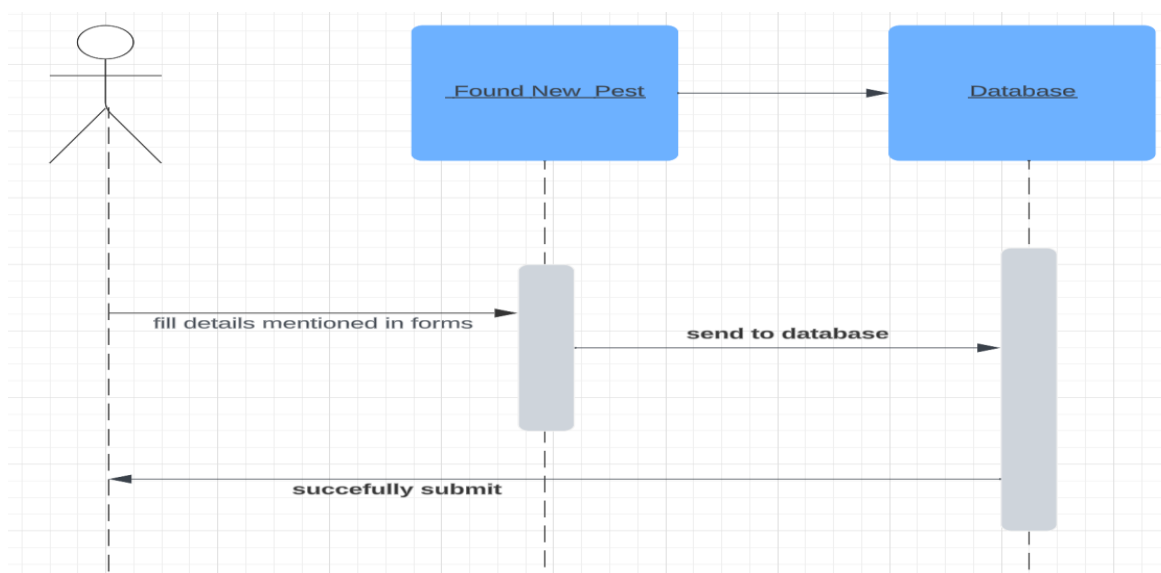
Fig.
3.7 Found New Pest Process Sequence Diagram

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Fig 3.7 explains about of all process, fill all details related to pest in form and which is successfully submit in database then show successfully submit message to user otherwise show error.

3.3 Use Case Diagram

In Use Case Diagram we elaborate about the purpose, actor, pre-condition, post- condition, basic flow, and alternate flow of all the use cases. In our system there are two actors, one is an old user and other is the new user who interacts with the use cases of the mock interview system.

It explains the details and conditions of the system to be fulfilled in order to successfully complete each use case.
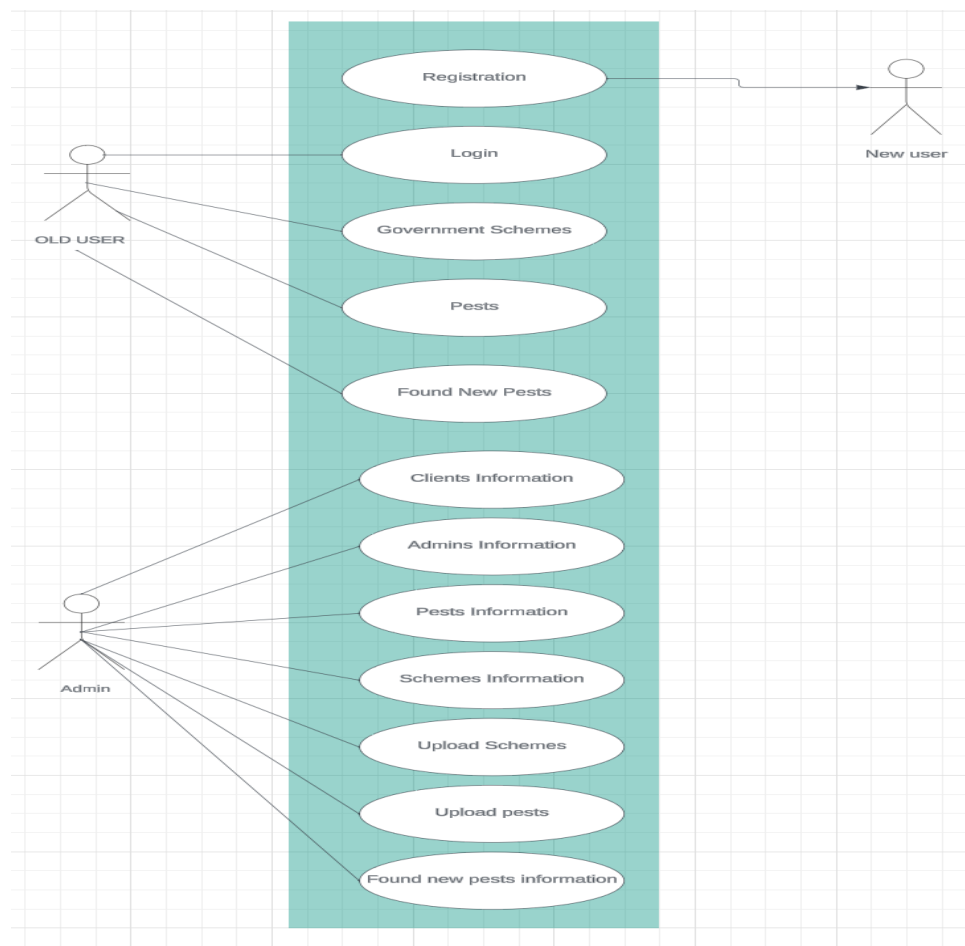
Fig.3.8 Use Case Diagram of Anti Pesto System

Fig 3.8 Explains the use case diagram of Anti pesto system and having two interfaces where its shows all the process where new user registered first then he will login to the system and old user login directly and admin having other case diagram.

3.3.1 Use Case Description of Registration

Purpose:

The purpose is to register the user into the system who is new to the system.

Actor:

New User

Pre-condition:

None

Post-condition:

The user will successfully register to the system.

Basic Flow:

- The user will enter the name, email, phone, college details of themselves.
- The System will check the format of the details.
- If the details of the user are correct, then it will successfully register the user.

Alternate Flow:

If the details entered by the user are not in the right format, then it will return the error message to the user.

3.3.2 Use Case Description of Login

Purpose:

The purpose is to Login the user into the system.

Actor:

Old User

Pre-condition:

The user must be registered into the system.

Post-condition:

The User will successfully Logged in to the system.

Basic Flow:

- The user will enter the email and password.

- The System will check the email and password from the database.
- If the details of the user are correct, then it will successfully Logged in the user.

Alternate Flow:

If the details entered by the user are not correct, then it will return the error message to the user.

3.3.3 Use Case Description of Crops and Pests Process

Purpose:

The purpose is to specify the process of Crops and Pests.

Actor:

Old User

Pre-condition:

The user must be logged in to the system.

Post-condition:

The crops and pests process are specified.

Basic Flow:

- The user will select the types of crops i.e. wheat, rice etc.
- The user will choose the pests of that crop.
- The user will download pdf of pest information.

Alternate Flow:
If the crop select by the user and that related pest is not shown in this section then he will go to the found new pests section.

3.3.4 Use Case Description of Found New Pests
Purpose:
The purpose is to take the details of new pests.
Actor:
Old User
Pre-condition:
- The user must be logged in to the system.
- The user must be confirmed that related pest information that will not be available in the pest

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section.

Post-condition:

The user will successfully fill all details related to pest.

Basic Flow:

The user will enter the details of new pests.

Alternate Flow:

If the detail of pest is not found in pest section then user fill the all related pest detail in form.

3.3.5 Use Case Description of Government Schemes

Purpose:

The purpose is to give information of different government schemes of agriculture.

Actor:

Old User

Pre-condition:

The user must be logged in to the system.

Post-condition:

The government schemes are specified.

Basic Flow:

The user will select the scheme and download pdf.

Alternate Flow:

If there is no internet connection, then the scheme cannot be shown.

CHAPTER 4

PROPOSED WORK

4.1 Dataset Description

A dataset comprises similar sets of information that are made up of distinct elements but can be modified by a computer. In our dataset model, there are many table i.e. user details, admin table etc.

4.1.1 Users Table

It stores the details of the user such as name, email, password, number, id, address, age.

Table 1: Users Table Description

Field	Type	Null	Key	Default
Name	Varchar(255)	No		None
mail (username)	Varchar(255)	No	Unique Key	None
Number	bigint(20)	No		None
Id	int(25)	No	Primary Key	None
Password	Varchar(255)	No		None
Address	Varchar(255)	No		None
Age	Int(22)	No		None

4.1.2 Admin Table

It stores the details of the admin such as name, email, password, number, id, address.

Table 2: Admin Table Description

Field	Type	Null	Key	Default
Name	Varchar(255)	No		None
Email (username)	Varchar(255)	No	Unique Key	None
Number	bigint(20)	No		None

Id	int(25)	No	Primary Key	None
Password	Varchar(255)	No		None
Address	Varchar(255)	No		None

4.1.3 Pest Table

It stores the details of the pests such as name, id, symptoms, bionomics, solution, image, type.

Table 3: Pest Table Description

Field	Type	Null	Key	Default
Id	int(25)	No	Primary Key	None
Name	Varchar(255)	No		None
Symptoms	longtext	No		None
Bionomics	longtext	No		None
Solution	longtext	No		None
Image	Varchar(255)	No		None
Type	Enum('wheat', 'barley', 'canola', 'lupins' 'oats', 'cotton', 'sugarcane', 'rice')	No		None

4.1.4 Scheme Table

It stores the details of the pests such as id, title, date, file, details.

Table 4: Scheme Table Description

Field	Type	Null	Key	Default
Id	int(25)	No	Primary Key	None
Title	Varchar(255)	No		None
Date	date	No		None
File	Varchar(255)	No		None
Details	longtext	No		None

4.1.5 Found New Pest Table

It stores the details of the new pests such as name, id, email, crop, location, message, image.

Table 5: Pest Table Description

Field	Type	Null	Key	Default
Id	int(25)	No	Primary Key	None
Name	Varchar(255)	No		None
Email	Varchar(255)	No		None
Crop	Varchar(255)	No		None
Location	Varchar(255)	No		None
Message	longtext	No		None
Image	Varchar(255)	No		None

4.1.6 Query Table

It stores the details of the pests such as name, id, email, number, message.

Table 6: Pest Table Description

Field	Type	Null	Key	Default
Id	int(25)	No	Primary Key	None
Name	Varchar(255)	No		None
Email	Varchar(255)	No		None
Number	bigint(255)	No		None
Message	Varchar(255)	No		None

4.2 Technology Description

- **Selection of Operating System:** Our website is platform independent, so it does not depend on the operating system.
- **Selection of Software:** Visual Studio, XAMPP is used to create our software.
- **Languages Used:** HTML, CSS, MYSQL, PHP, JAVASCRIPT.

CHAPTER 5

SYSTEM REQUIREMENTS AND SPECIFICATION

5.1 System Requirement Specification

System Requirement Specification (SRS) is a fundamental document, which forms the foundation of the software development process. The System Requirements Specification (SRS) document describes all data, functional and behavioral requirements of the software under production or development. An SRS is basically an organization's understanding (in writing) of a customer or potential client's system requirements and dependencies at a particular point in time (usually) prior to any actual design or development work. It's a two- way insurance policy that assures that both the client and the organization understand the other's requirements from that perspective at a given point in time. The SRS also functions as a blueprint for completing a project with as little cost growth as possible. The SRS is often referred to as the "parent" document because all subsequent project management documents, such as design specifications, statements of work, software architecture specifications, testing and validation plans, and documentation plans, are related to it. It is important to note that an SRS contains functional and non-functional requirements only. It doesn't offer design suggestions, possible solutions to technology or business issues, or any other information other than what the development team understands the customer's system requirements.

5.2 Hardware Specification

➢ RAM: 1GB and Higher

➢ Processor: intel i3 and above

➢ Hard Disk or SSD: 128GB: Minimum

5.3 Software Specification

➢ OS: Windows or Linux or macOS

➢ Xampp

➢ Language: html, css, mysql, javascript, php

5.4 Functional Requirements

Functional Requirement defines a function of a software system and how the system must behave when presented with specific inputs or conditions. These may include calculations, data manipulation and processing and other specific functionality. In this system following are the functional requirements:

- connect to the Datasets.

- user select options.

- show and download the results.

5.5 Non-Functional Requirements

- The system should be easy to maintain.

- The system should be compatible with different platforms.

- The system should be fast as customers always need speed.

- The system should be accessible to online users.

- The system should provide many functionalities and user-friendly interfaces.

- The system should produce result in pdf or other document.

CHAPTER-6

SCREENSHOTS OF WEB APPLICATION

This chapter show all screenshots of all process with having two interfaces. One is user interface and other is admin interface.

6.1 User Interface

This will show all screenshots of process of user interface and having many functionality.

6.1.1 Register Page

Fig. 6.1 Register Page

Fig 6.1 Register page, there will registered by new user. They will fill all details and all details is important and every detail is fill then he will login.

6.1.2 Login Page

Fig. 6.2 Login Page

Fig 6.2 Login page, there will login by old user and then will get to access all function of web.

6.1.3 Home Page

Fig. 6.3.1 Home Page
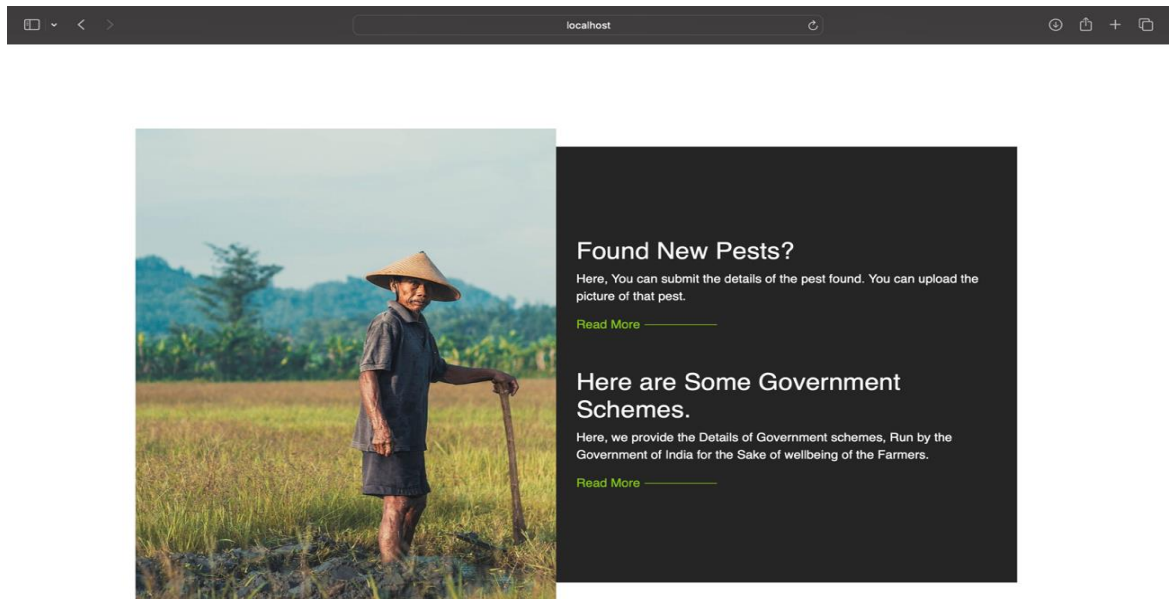
Fig. 6.3.2 Home Page

Fig 6.3.1 and 6.3.2 Home page, it is an home page will be very attractive and show introduction to web on this page.

6.1.4 Government Schemes Page

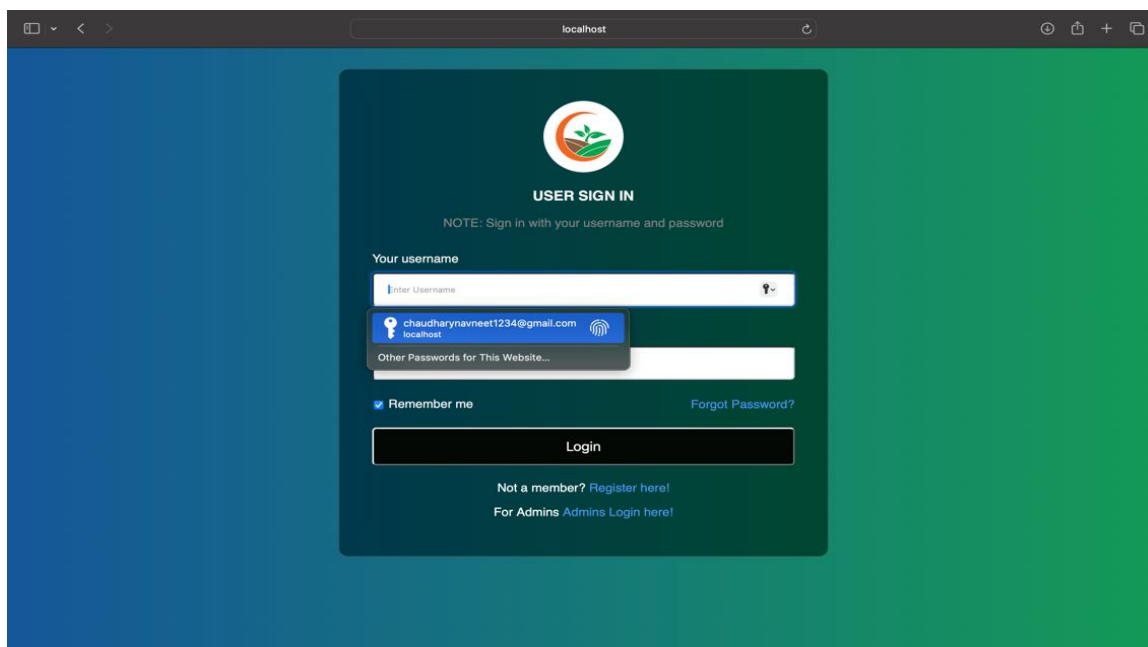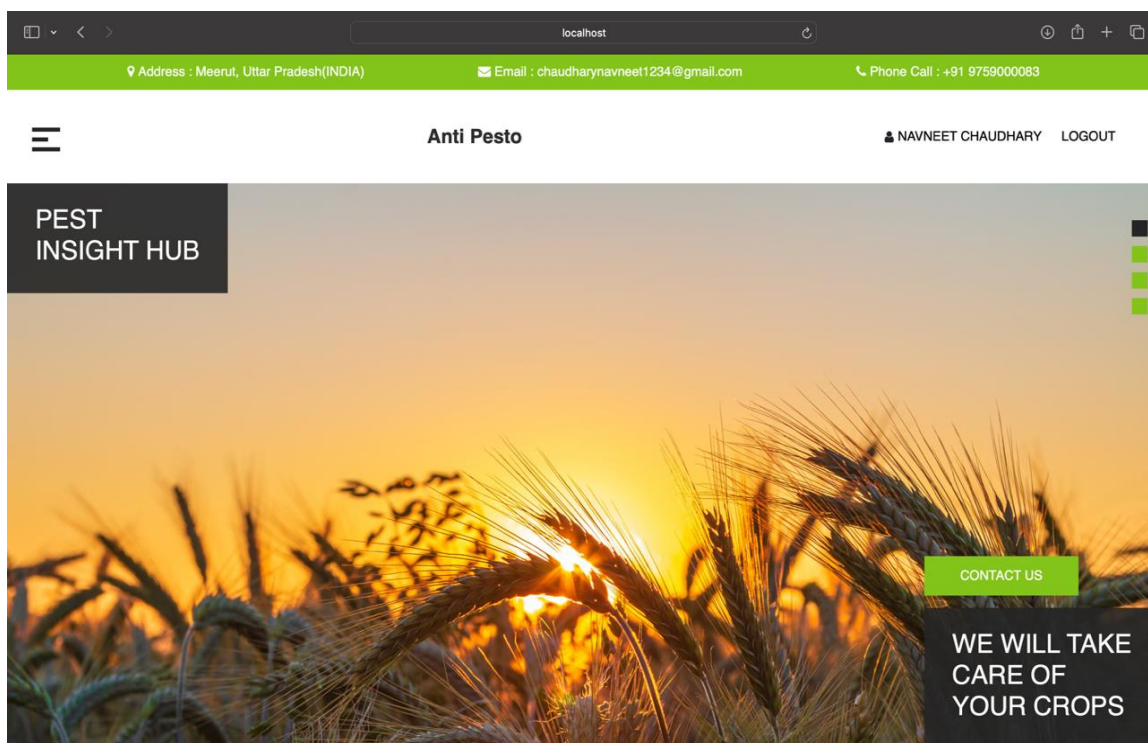| SR.NO	TITLE	PUBLISH DATE	DETAILS	
1	cdschus	2024-01-17	hadasjSAL	Download
2	ATMA	2018-10-03	'आत्मा' योजना (ATMA Yojana) की मदद से किसान और कृषि वैज्ञानिक एक-दूसरे के आमने-सामने आते हैं. कृषि वैज्ञानिक किसानों को आधुनिक तरीके से खेती करने का प्रशिक्षण देते हैं।	Download
3	DBT in Agriculture	2014-05-12	सरकार ने अक्टूबर, 2016 से उर्वरकों में प्रत्यक्ष लाभ अंतरण (डीबीटी) प्रणाली लागू की है। उर्वरक डीबीटी प्रणाली के तहत खुदरा विक्रेताओं द्वारा लाभार्थियों को की गई वास्तविक बिक्री के आधार पर उर्वरक कम्पनियों को विभिन्न उर्वरक ग्रेडों पर 100% राजसहायता जारी की जाती है।	Download
4	Horticulture	2014-04-05	National Horticulture Mission योजना के जरिए बागवानी फसलों का उत्पादन बढ़ाने का प्लान है, ताकि किसानों की आय में इजाफा किया जा सके. इस स्कीम के तहत बागवानी ट्रेनिंग, गाइडेंस और अनुदान भी दिया जाता है।	Download
5	AGMARKNET	2014-03-14	एगमार्कनेट भारत सरकार के अधीन कृषि मंत्रालय द्वारा भारतीय कृषि के वैश्वीकरण की दिशा में एक पहल है। यह पोर्टल कृषि विपणन सुधार पर विस्तृत जानकारी प्रदान करता है, विपणन अनुसंधान, बाजार प्रोफाइल, कीमतों और आगमन तथा वस्तुओं और कृषि बाजार के अनुबंध खेती आदि के विवरण प्रदान करता है।	Download
6	Agriculture Infrastructure Fund	2014-02-13	वही एग्रीकल्चर इंफ्रास्ट्रक्चर फंड स्कीम कोल्ड स्टोरेज, प्रोसेसिंग यूनिट्स, वेयरहाउस, पैकेजिंग यूनिट की स्थापना करने पर किसानों को 2 करोड़ रुपये तक का लोन देती है. केंद्र सरकार की ओर से इस योजना के माध्यम से किसानों को 2 करोड़ रुपए तक के लोन पर अधिकतम 7 साल तक ब्याज में 03% तक की छूट दी जा रही है.	Download

Fig. 6.4 Government Scheme Page

Fig 6.4 Government scheme page is an gives information all about schemes.

24

6.1.5 Crops and pests page

Fig. 6.5 Crops and Pests Page

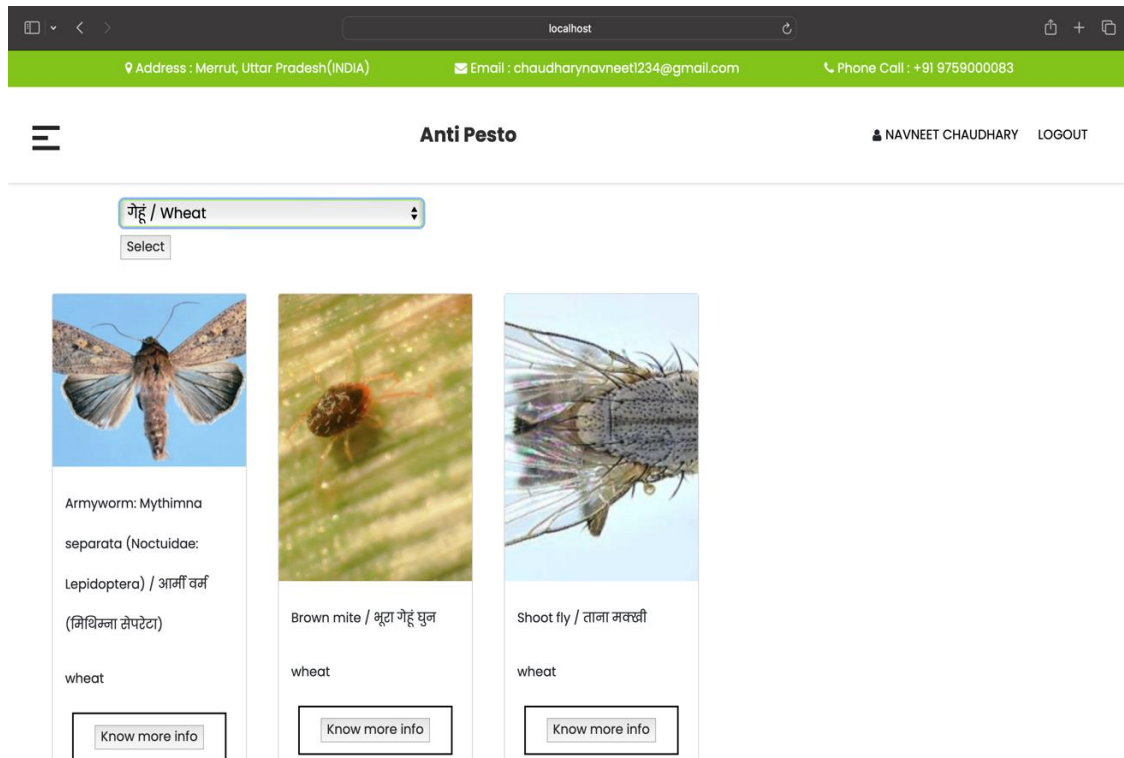Fig 6.5 Crops and Pests page show all details of pests and crops, here we select first crop and then show all pests related to that crop and then we select one of the pest from there.
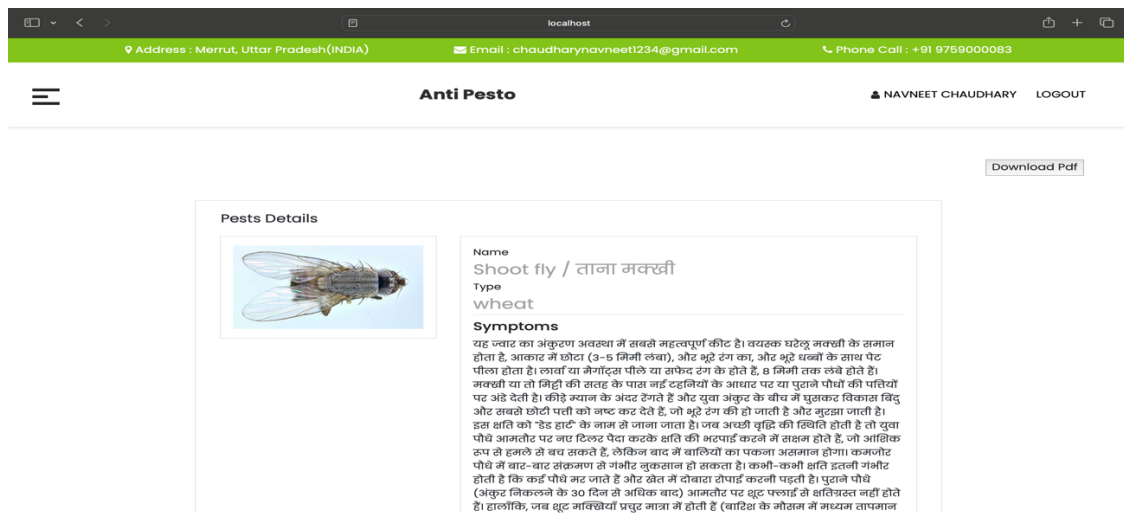
6.1.6 Pests Information Page
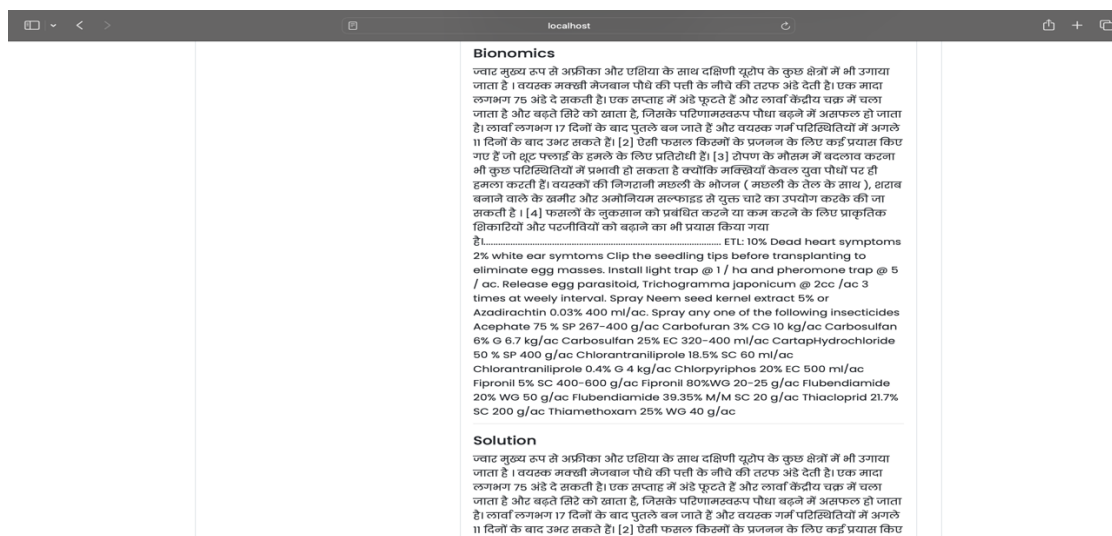

Fig. 6.6.1 Pest Information Page

Bionomics

ज्वार मुख्य रूप से अफ्रीका और एशिया के साथ दक्षिणी यूरोप के कुछ क्षेत्रों में भी उगाया जाता है । वयस्क मक्खी मेजबान पौधे की पत्ती के नीचे की तरफ अंडे देती है। एक मादा लगभग 75 अंडे दे सकती है। एक सप्ताह में अंडे फूटते हैं और लार्वा केंद्रीय चक्र में चला जाता है और बढ़ते लिंट को खाता है, जिसके परिणामस्वरूप पौधा बढ़ने में असफल हो जाता है। लार्वा लगभग 17 दिनों के बाद पुतले बन जाते हैं और वयस्क गर्म परिस्थितियों में अगले 11 दिनों के बाद उभर सकते हैं। [2] ऐसी फसल किस्मों के प्रजनन के लिए कई प्रयास किए गए हैं जो शूट फ्लाई के हमले के लिए प्रतिरोधी हैं। [3] रोपण के मौसम में बदलाव करना भी कुछ परिस्थितियों में प्रभावी हो सकता है क्योंकि मक्खियाँ केवल युवा पौधों पर ही हमला करती हैं। वयस्कों की निगरानी मछली के भोजन (मछली के तेल के साथ), शराब बनाने वाले के खमीर और अमोनियम सल्फाइड से युक्त चारे का उपयोग करके की जा सकती है । [4] फसलों के नुकसान को प्रबंधित करने या कम करने के लिए प्राकृतिक शिकारियों और परजीवियों को बढ़ाने का भी प्रयास किया गया है।......................... ETL: 10% Dead heart symptoms 2% white ear symtoms Clip the seedling tips before transplanting to eliminate egg masses. Install light trap @ 1 / ha and pheromone trap @ 5 / ac. Release egg parasitoid, Trichogramma japonicum @ 2cc /ac 3 times at weely interval. Spray Neem seed kernel extract 5% or Azadirachtin 0.03% 400 ml/ac. Spray any one of the following insecticides Acephate 75 % SP 267-400 g/ac Carbofuran 3% CG 10 kg/ac Carbosulfan 6% G 6.7 kg/ac Carbosulfan 25% EC 320-400 ml/ac CartapHydrochloride 50 % SP 400 g/ac Chlorantraniliprole 18.5% SC 60 ml/ac Chlorantraniliprole 0.4% G 4 kg/ac Chlorpyriphos 20% EC 500 ml/ac Fipronil 5% SC 400-600 g/ac Fipronil 80%WG 20-25 g/ac Flubendiamide 20% WG 50 g/ac Flubendiamide 39.35% M/M SC 20 g/ac Thiacloprid 21.7% SC 200 g/ac Thiamethoxam 25% WG 40 g/ac

Solution

ज्वार मुख्य रूप से अफ्रीका और एशिया के साथ दक्षिणी यूरोप के कुछ क्षेत्रों में भी उगाया जाता है । वयस्क मक्खी मेजबान पौधे की पत्ती के नीचे की तरफ अंडे देती है। एक मादा लगभग 75 अंडे दे सकती है। एक सप्ताह में अंडे फूटते हैं और लार्वा केंद्रीय चक्र में चला जाता है और बढ़ते लिंट को खाता है, जिसके परिणामस्वरूप पौधा बढ़ने में असफल हो जाता है। लार्वा लगभग 17 दिनों के बाद पुतले बन जाते हैं और वयस्क गर्म परिस्थितियों में अगले 11 दिनों के बाद उभर सकते हैं। [2] ऐसी फसल किस्मों के प्रजनन के लिए कई प्रयास किए

Fig. 6.6.2 Pest Information Page

ज्वार मुख्य रूप से अफ्रीका और एशिया के साथ दक्षिणी यूरोप के कुछ क्षेत्रों में भी उगाया जाता है । वयस्क मक्खी मेजबान पौधे की पत्ती के नीचे की तरफ अंडे देती है। एक मादा लगभग 75 अंडे दे सकती है। एक सप्ताह में अंडे फूटते हैं और लार्वा केंद्रीय चक्र में चला जाता है और बढ़ते लिंट को खाता है, जिसके परिणामस्वरूप पौधा बढ़ने में असफल हो जाता है। लार्वा लगभग 17 दिनों के बाद पुतले बन जाते हैं और वयस्क गर्म परिस्थितियों में अगले 11 दिनों के बाद उभर सकते हैं। [2] ऐसी फसल किस्मों के प्रजनन के लिए कई प्रयास किए गए हैं जो शूट फ्लाई के हमले के लिए प्रतिरोधी हैं। [3] रोपण के मौसम में बदलाव करना भी कुछ परिस्थितियों में प्रभावी हो सकता है क्योंकि मक्खियाँ केवल युवा पौधों पर ही हमला करती हैं। वयस्कों की निगरानी मछली के भोजन (मछली के तेल के साथ), शराब बनाने वाले के खमीर और अमोनियम सल्फाइड से युक्त चारे का उपयोग करके की जा सकती है । [4] फसलों के नुकसान को प्रबंधित करने या कम करने के लिए प्राकृतिक शिकारियों और परजीवियों को बढ़ाने का भी प्रयास किया गया है।......................... ETL: 10% Dead heart symptoms 2% white ear symtoms Clip the seedling tips before transplanting to eliminate egg masses. Install light trap @ 1 / ha and pheromone trap @ 5 / ac. Release egg parasitoid, Trichogramma japonicum @ 2cc /ac 3 times at weely interval. Spray Neem seed kernel extract 5% or Azadirachtin 0.03% 400 ml/ac. Spray any one of the following insecticides Acephate 75 % SP 267-400 g/ac Carbofuran 3% CG 10 kg/ac Carbosulfan 6% G 6.7 kg/ac Carbosulfan 25% EC 320-400 ml/ac CartapHydrochloride 50 % SP 400 g/ac Chlorantraniliprole 18.5% SC 60 ml/ac Chlorantraniliprole 0.4% G 4 kg/ac Chlorpyriphos 20% EC 500 ml/ac Fipronil 5% SC 400-600 g/ac Fipronil 80%WG 20-25 g/ac Flubendiamide 20% WG 50 g/ac Flubendiamide 39.35% M/M SC 20 g/ac Thiacloprid 21.7% SC 200 g/ac Thiamethoxam 25% WG 40 g/ac

Address
Location
Call +9759000083
chaudharynavneet1234@gmail.com

Navigation
> Home
> Crops and pests
> Government Schemes
> Found New Pests

Newsletter
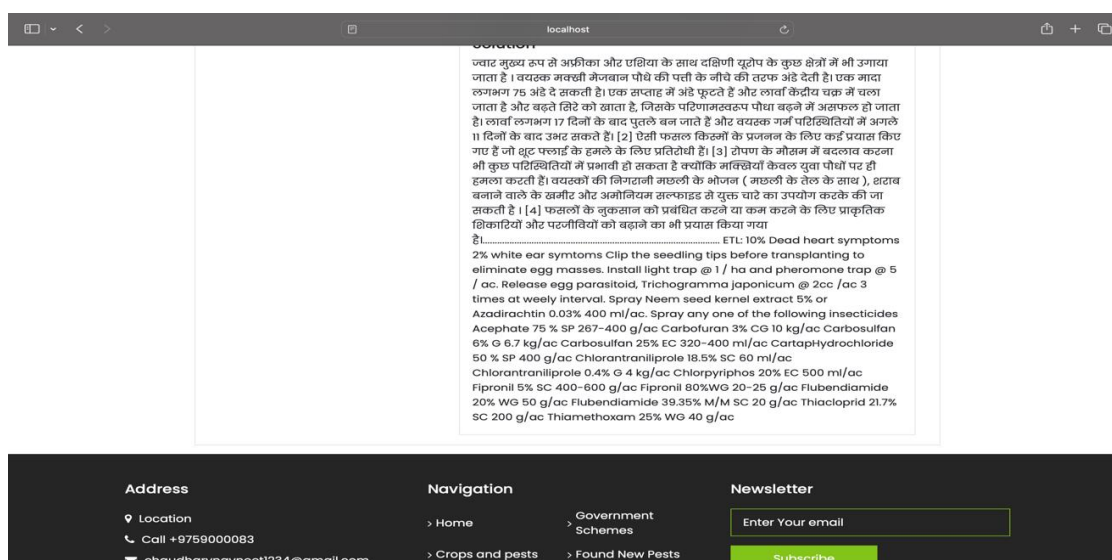Enter Your email
Subscribe

Fig. 6.6.3 Pest Information Page

Fig 6.6.1 and 6.6.2 and 6.6.3 show pest information which we select from crops and pests page, and here we also download a pdf.

6.1.7 Found New Pests Form Page

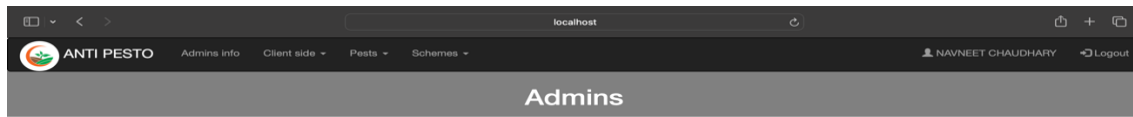Fig. 6.7.1 Found New Pests Form Page

Fig. 6.7.2 Found New Pests Form Page

Fig 6.7.1 and 6.7.2 their found new pests form is usefull when users find new pests which information is not having on pests page then user fill this form for alert for new pest found.

6.2 Admin Interface

This will show all screenshots of process of admin interface and having many functionality.
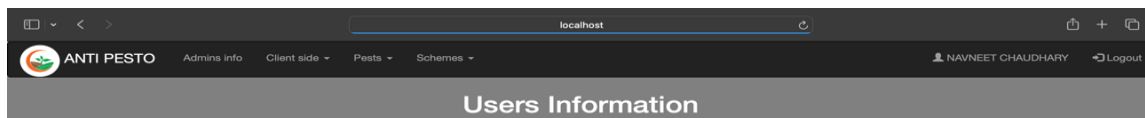
6.2.1 Admins Information Page

Fig. 6.8 Admin Information Page

Fig 6.8 Their show all information of admins with that having search out functionality.

6.2.2 Clients Information Page

Fig. 6.9 Clients Information Page

Fig 6.9 Their show all details of clients where having to search out all results like name, address, age (greater than or less than) etc.

6.2.3 Queries Information

Fig. 6.10 Queries Information Page

Fig 6.10 Their show all having queries of users and show then admin solve that queries.

6.2.4 New Pests Information (By User)

Fig. 6.11 New Pests Information Page

Fig 6.11 Their show all details of new pests found by user and send details with important alert.
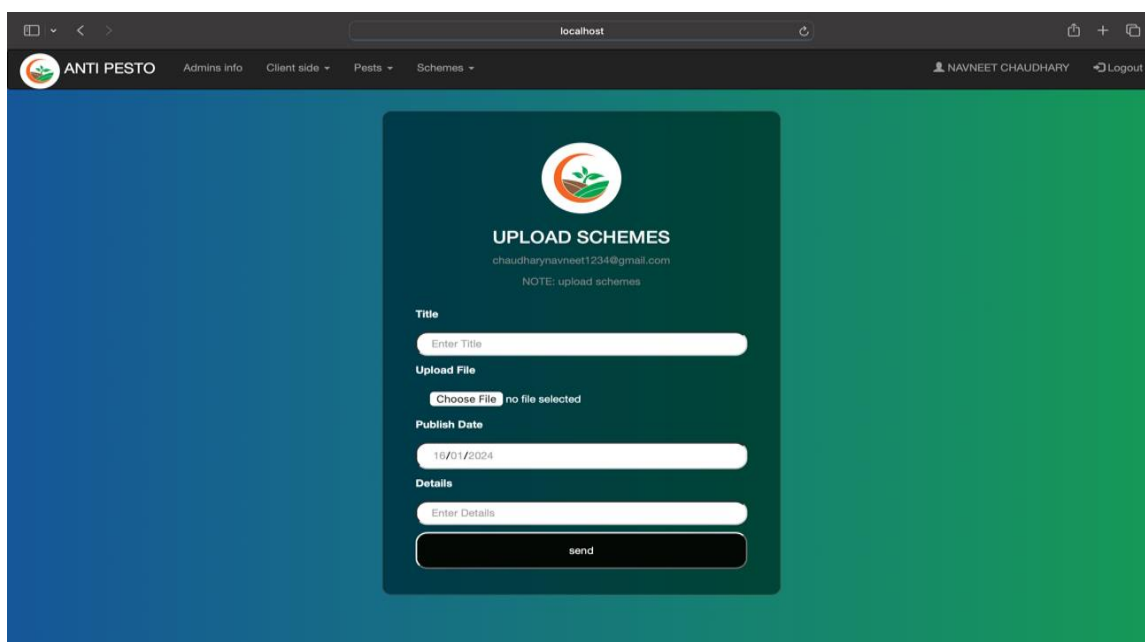
6.2.5 Upload Pests Information Form

Fig. 6.12 Upload Pests Information Form Page

Fig 6.12 This is an form for uploading pests information where it is saved on database and then show on user interface.

6.2.6 Schemes Upload Form

Fig. 6.13 Schemes Upload Form Page

Fig 6.13 This is an form for upload schemes where it is saved on database and then show on user interface.

CHAPTER-7

TESTING

Testing is a process of executing a program with intent of finding an error. Testing presents an interesting anomaly for the software engineering. The goal of the software testing is to convince system developer and customers that the software is good enough for operational use. Testing is a process intended to build confidence in the software. Testing is a set of activities that can be planned in advance and conducted systematically. Software testing is often referred to as verification & validation.

7.1 Unit Testing

In this testing we test each module individually and integrate with the overall system. Unit testing focuses verification efforts on the smallest unit of software design in the module. This is also known as module testing. The module of the system is tested separately. This testing is carried out during programming stage itself. In this testing step each module is found to working satisfactorily as regard to the expected output from the module. There are some validation checks for fields also. It is very easy to find error debut in the system.

7.2 Validation Testing

At the culmination of the black box testing, software is completely assembled as a package, interfacing errors have been uncovered and corrected and a final series of software tests. Asking the user about the format required by system tests the output displayed or generated by the system under consideration. Here the output format is considered the of screen display. The output format on the screen is found to be correct as the format was designed in the system phase according to the user need. For the hard copy also, the output comes out as specified by the user. Hence the output testing does not result in any correction in the system.

7.3 Functional Testing

Functional tests provide systematic demonstrations that functions tested are available as specified by the business and technical requirements, system documentation, and user manuals. Functional testing is centered on the following items: Valid Input: identified classes of valid input must be accepted. Invalid Input: identified classes of invalid input must be rejected. Functions: identified functions must be exercised. Output: identified classes of application outputs must be exercised. Systems/Procedures: interfacing systems or procedures must be invoked. Organization and preparation of functional tests is focused on requirements, key

functions, or special test cases Before functional testing is complete, additional tests are identified and the effective value of current tests is determined.

7.4 Integration Testing

Data can be lost across an interface; one module can have an adverse effort on the other sub functions when combined may not produces the desired major functions. Integrated testing is the systematic testing for constructing the uncover errors within the interface. The testing was done with sample data. The Developed system has run successfully for this sample data. The need for integrated test is to find the overall system performance.

7.5 User acceptance testing

User Acceptance Testing is a critical phase of any project and requires significant participation by the end user. It also ensures that the system meets the functional requirements. Some of my friends were who tested this module suggested that this was really a user-friendly application and giving good processing speed.

CHAPTER-8

PERFORMANCE ANALYSIS

8.1 Performance metrics

It functions by stating a goal for how long a specific application transaction or web request must take. Those transactions are then labeled as failed, too slow, tolerating (sluggish), or satisfied (fast) requests. A mathematical formula is then applied to give a score from 0 to 1.

Time to First Byte

TTFB is the time required to request information from the server and to transfer the information that was requested. In simple terms, it is the time from the point where you navigate to a webpage through to when it starts to render. This period of time includes:

- The server request can differ according to internet connection and location
- The time needed to process a request or form a response
- The time needed to send information based on the question

Return time equals 40% of the total TTFB. The slower the TTFB, the more time it will take for your user to view any content on your site.

Speed Index

The speed index is another metric that relates to the user experience—specifically, to when and what the visitor sees. The speed index is an indicator of how readily the above-the-fold content appears on a screen. It is sensitive to the quality of the web connection and the size of the viewpoint. This makes it an essential part of optimizing web applications for different screen sizes.

Time to Interactive

This indicator measures how much time elapses before a page is fully interactive, meaning the first contentful point takes place, event handlers are registered for most of the visible elements, and the website reacts to user action.

Error Rate

A performance metric that tracks the percentage of request issues you incur in relation to the overall number of requests. You should watch this number as any spike will indicate that you are looking at a significant failure in the near future.

Peak Response Time

Measure the longest response time for the total number of requests traveling through the server. This will provide you with an understanding of where your web application is underperforming or having trouble fulfilling requests. It can also help you isolate the cause more easily.

CHAPTER-9

CONCLUSION & FUTURE ENHANCEMENT

In conclusion, the Anti Pesto project has successfully addressed a crucial need in the agricultural sector by providing a comprehensive platform for farmers to access information about pests and insects. The website's integration of government schemes further empowers farmers with knowledge and resources to enhance crop protection and overall agricultural productivity. The user-friendly interface and regularly updated content contribute to the project's effectiveness in bridging the information gap that often hinders sustainable farming practices.

Future Enhancement

Looking ahead, there are several avenues for future enhancement of the Anti Pesto platform. Firstly, incorporating machine learning algorithms could enable more accurate pest predictions and tailored recommendations based on specific geographical regions and crop types. Additionally, expanding the scope to include real-time weather data and advanced analytics would further enhance the platform's utility. Collaborations with agricultural research institutions and pest control experts could ensure that the platform remains at the forefront of emerging pest management strategies.

Furthermore, the Anti Pesto project could explore mobile applications and localized language support to reach a wider audience, especially in rural areas. Continuous user feedback and engagement will be crucial for refining the platform and ensuring its relevance in the dynamic field of agriculture. By staying adaptive and innovative, Anti Pesto has the potential to evolve into an indispensable tool for farmers, contributing significantly to sustainable and resilient agricultural practices.

CHAPTER 10

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