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Modern Agriculture Assistance System for Farmers: Web Application

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Abstarct-modern husbandry system requires modern way to get backing. The use of internet has increased, and farmers are also looking for result to their problems online. Also, for good husbandry backing, farmers need downfall cast as well. Web operation predicated on PHP and MySQL. farmers can now check quotidian Mandi rates to sell the products. farmers can ask for help if demanded. With advancement in technology, use of information technology in the field of husbandry has come obligatory different reasons. husbandry is a top priority in India but moment people engaged in husbandry are from lower class and face multitudinous problems in their quotidian life due to extreme poverty. In India, about 15 of GDP(good domestic product) comes from husbandry, but these jobs employ 50 of our working population. Income generation is one of the biggest causes of farmer tone- murders in India. Lack of awareness of modern technology or advanced ways leads to poverty, although farmers work hard and produce by farmers, in moment's request, farmers are forced by agents, which leads to poverty. The part of the middleman in dealing the agricultural product must be removed to ensure direct deals between farmers and guests. The study shows changes in consumer preferences in India when it comes to food choices. presently several associations are dealing fresh fruits and vegetables and people in India prefer to buy them through online websites, Farmeeco plays a significant part in predicting the outgrowth of these digital fruit and vegetable requests. This will talk about information regarding Farmeeco, their former factory, software and tools espoused by the company to manage their online operations, as well as their marketing strategies.

Keywords Farmeeco, Fruit And Vegetable, Marketing, Smart Farm, Website.

I. INTRODUCTION

Modern life is necessary at this point. In our nation, growers frequently gather using the rainfall and meteorological information. Crops and shops. But moment, everyone may pierce all agrarian information thanks to technology. In Bangladesh moment, smart systems and innovative technologies are extensively used. Large and small growers are entering newer, more precise outfit for lower and further productivity as a result of recent technology advancements and its marketing. Fortunately, technological improvements are helping growers each across the world produce further food and vend it for much lower plutocrat. openings for more accurate husbandry can boost affair and profit while using less precious water and diseases. thus, we suppose that" Smart Farming System" will help contemporary, scientific husbandry develop. In conclusion, this system will support growers by furnishing a single platform for all smart ways to integrate husbandry. It requires gift to cultivate. A planter has to be apprehensive of the stylish times to sow, wash, fertilize, and crop. also, they must understand how to guard us against fungicides andpost-harvest harvesting. In the history, when there were a variety of pathogens in the crops that were grown on land during the husbandry season but there was no effective way to cover the crops from those conditions, growers would go to the fungicides merchandisers in the request, and they would always recommend starting with primary drug and utmost of them. As a result, crop loss occurs most constantly as a result of indecorous treatment that's delayed. After examining these enterprises, we began working on the" Smart Farming System" online web operation, which was substantially developed from all those Fortunately, ultramodern technology is helping growers each across the world produce further food and work together to vend it for a far more affordable price. Through the smart husbandry system, we can snappily resolve numerous of these issues. The Smart Farming System action is pivotal in helping growers diagnose their crops beforehand. • The Doctor's Directory system makes it simple for growers to get in touch with agrarian specialists.

• By creating an account on our smart husbandry system website, anyone may ask any question they've about husbandry at any time.

• If growers register on the" Smart Farming System" website, the Agriculture Adviser or any other listed member will be suitable to help them with their issues.

• Blogs on a range of agrarian motifs are available to everyone for the benefit of growers. growers will have access to the Disease

Prediction Blog's information to identify colorful The Disease Prediction Blog will enable growers to fete colorful conditions on their own crops. growers who want guidance on their husbandry practices can simply get in touch with agrarian counsels. also, Bangladeshi agrarian scholars can subscribe up on our platform to work as freelancers. This will give a result to their severance issues.

II.MOTIVATION

Seeing the ongoing condition of farmers, it was found out that; problems need modern way of solving. Advancing in information technology has changed the way of doing business, way of communication. So why not to use the modern way to solve the problem which has been existing since really long in Agriculture Sector. Farmer should be able to contact the expert & get the suggestions from them on specific topic. Farmers should also be able to see weather forecast which would help farmers to make better decisions to get maximum yield from their field. Because, Farmers are the feeder, so they deserve something better.

III. PROBLEM STATEMENT

For farmers getting to know the real time rate of Mandi daily is difficult. It is very difficult for farmers to communicate with experts because there would be no expert available in remote areas. Also, farmers always suffer due to unwanted rain, or dryness. They won't have access to weather forecast. Due to this every year, there's increase in price due to which common citizen suffer. Also, thousands of farmers do suicide, because they can't pay their loans, which they are supposed to pay after selling their crops. But, lack of proper idea on farming and other things, and unaware of weather and other circumstances farmers aren't able to grow crops as expected. Selling and buying of agriculture related products is one of the challenges for farmers.

IV. METHODOLOGY

The Proposed System differs from being technology where the area of specialization is taken into consideration to overcome debit of being system. With the proposed system, tilling backing with a web operation and upload that record on web garçon. growers to post the queries they have, and experts to respond them. growers can also see the rainfall cast, and other aspects of it. growers would be suitable to vend or buy products needed. Communication with expert is now easier also making it as a web operation has increased the effectiveness. Use of HTML, CSS and JavaScript with php and MySQL has increased the feasibility.

V. LITERATURE WORK

The article "Blockchain-Based Agriculture Assistance" by R. Anand, R. Divya Karthiga, T. Jeevitha, J. Leandra Mithra, and S. Yuvaraj discusses the use of blockchain technology in the agriculture sector. The authors begin by discussing the importance of agriculture and the challenges faced by farmers, such as limited access to credit, lack of market information, and poor infrastructure. They then introduce blockchain technology as a potential solution to these challenges.

The authors provide a literature review of previous studies that have explored the use of blockchain technology in agriculture. They cite several studies that have used blockchain to track the supply chain of agricultural products, such as coffee, cocoa, and beef. These studies have shown that blockchain can improve transparency and traceability in the supply chain, which can help to reduce fraud and improve the quality of the products.

The authors also discuss studies that have explored the use of blockchain for agricultural finance. They cite several examples of blockchain-based platforms that allow farmers to access credit and other financial services, such as Cropcoin, AgriDigital, and Agrocoin. These platforms use blockchain to create a secure and transparent record of farmers' financial transactions, which can help to reduce the risk of fraud and improve access to credit.

Finally, the authors discuss the potential benefits of using blockchain technology in agriculture. They suggest that blockchain can help to improve efficiency and reduce costs in the agriculture sector, as well as improve transparency and traceability. They also note that blockchain can help to empower small-scale farmers by giving them access to financial services and market information.

Overall, the authors provide a comprehensive literature review of previous studies on the use of blockchain technology in agriculture. They demonstrate the potential benefits of blockchain for the agriculture sector and suggest that further research is needed to explore the full potential of this technology.

VI SYSTEM DESIGN

Process in which device is implemented using different methodologies and design principles is referred as system design.

Definitions, Acronyms and Abbreviations

CFD - Context Flow Diagram.
ER - Entity Relationship Diagram.
UI - User Interface.
DFD- Data Flow Diagram.

Assumptions and dependencies

- All the fields must be entered in the prescribed format.
- All the mandatory field's needs to be filled.
- Proper internet connection is required.
- GUI designed is very easy for the end user to understand and use.
- In case of any error the application should display proper error messages

Development Methods

- MYSQL serve is used as back end of the application.
- HTML, MySQL, CSS, Bootstrap, JavaScript are used to develop this application.

System Perspective

The whole system is divided in to small parts known as Architecture design. These subsystems provide particular services. The architectural design is basically a framework of the system that control and communicate. 3-tier architecture is also called n-tier architecture.

The Three Tier architecture is given below:

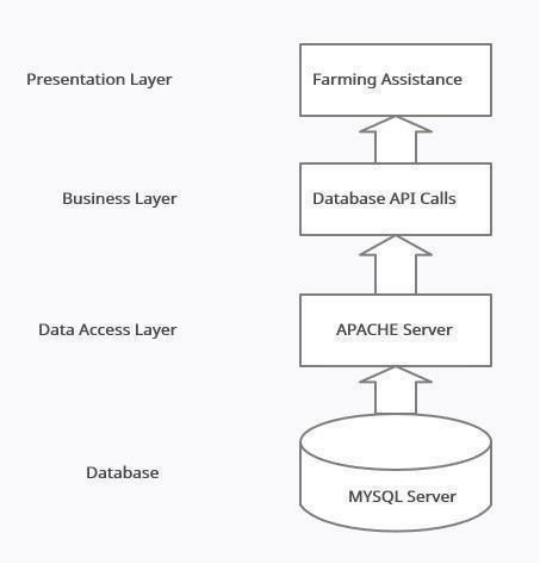

Fig.1

VII . USE CASE MODELING

Then's a use case illustration that shows what part and exertion the stoner, planter and director, Expert of this frame have. It just shows what they can and can't do.

USE CASE *SCENARIO* FOR ADMIN

An director can login and can view the planter and add the growers and Experts and also manage the mandi rates. They can view the how numerous active stoner and also feedbacks from the druggies.

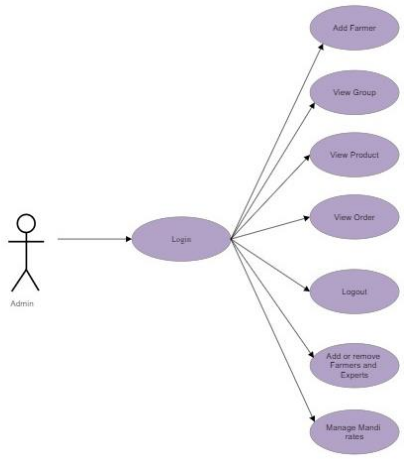

Fig 2. Admin use case diagram

USE CASE SCENARIO FOR FARMERS AND EXPERT:

As show below diagram

Farmer can view his orders and add the product by his own and also post his quries with experts and lab results and can ask his problems and get solutions from the experts.

Experts can view the Lab Results and suggest the related fertilizers for soil and also view the problems of the farmers regrading cultivation and give the solution for that problem.

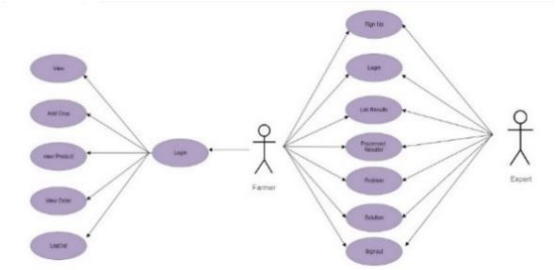

Fig 3. Use case scenario for farmers and expert

USE CASE SCENARIO FOR USER:

User can login to the website and view the products and buy the product and also can add to the cart.

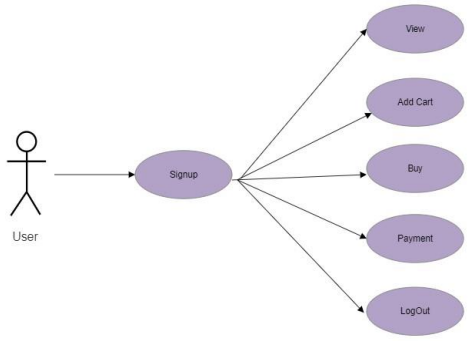

Fig 4: USE CASE SCENARIO FOR USER

VIII. IMPLEMENTATION

Only the administrator, farmer, or expert can log in if their username or password is correct; if not, an error message will be sent to them. Stoner must sign in and have their identity validated before they can post on the blog. Before they can acquire access, he must first enter the login runner and submit the necessary data.

Page for the administrator: By inputting each runner's unique dispatch and word, the administrator has complete ability to modernise runners at any moment. The administrator may then add experts and growers and see planter data like crops. Each module maintains a dispatch id and password for security reasons, and the administrator may examine client order information such as customer name, payment information, product name, and volume.

Farmer page: The farmer can add crops, delete existing ones, and update information about the fruits and vegetables that are available at his or her ranch; however, website visitors won't be able to see this. In addition to seeing and accepting the client's order information and cancelling the order, the planter may also examine and check the crop volume and order details.

Website home page: The webpage that a website visitor, or a customer, will see.

IX Result

Home page:

The home page of the "Farming Assistance" web application consists of six sections that provide different functionalities and information to the users:

1. View Videos by Admin: In this section, users can access videos uploaded by the admin. These videos could include tutorials, informative content, or updates related to farming practices, techniques, or agricultural advancements.

2. View Posts by Admin: Here, users can view posts created and shared by the admin. These posts might contain important announcements, news, or general information related to farming, agriculture policies, or upcoming events.

3. **View Posts by Expert:** This section allows users to browse through posts created by agricultural experts. These experts could be professionals from various agricultural domains, providing valuable insights, tips, and recommendations on specific farming practices, crop management, pest control, or soil health improvement.

4. View Videos by Expert: Users can access videos uploaded by agricultural experts in this section. These videos could be specialized tutorials, demonstrations, or expert opinions on specific farming techniques, equipment usage, or cropspecific guidelines.

5. E-commerce Store: This section provides an online marketplace for farmers to sell their products directly to buyers. Users can explore the store, various farming products such as seeds, fertilizers, pesticides, tools, and equipment. They can view product descriptions, images, prices, and make purchases conveniently.

6. Login: This section allows users to log in to their personal accounts. By logging in, users can access additional features and personalized content, including their profile information, saved preferences, previous orders, and wallet balance for easy transactions. It also enables users to post queries, interact with experts, and participate in discussions or forums.

Sample Pics:

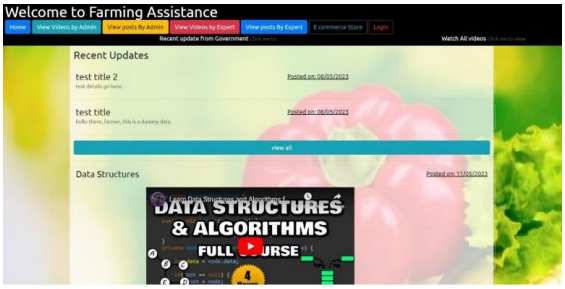

Fig 5 Home Page

Fig 6 Login Page

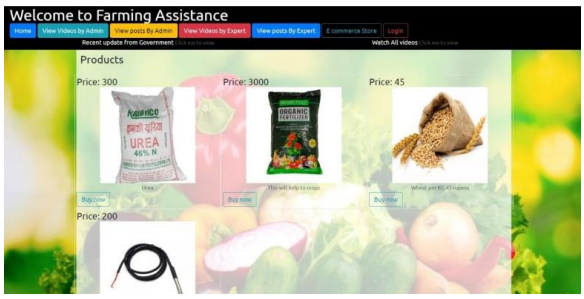

Fig 7 Ecommerce Store

X Future Enhancements

The future enhancement can be done easily. Following are the future enhancements of the system:

- Adding Customer care option.
- Adding sale of crops
- Adding sale of fertilizers

XI. COCLUSION

Farming Assistance, a web application, can address a current issue that affects farmers today. Remote farmers may submit questions and engage with experts throughout the country thanks to the one-touch solution that is now available. Farmers were having trouble comprehending the significance of the lab results they provided for the soil analysis. The lab results may now be sent, and they will receive a processed and simple remedy.

Farmers will also receive advice about the best additions to make to the soil in order to maximise the benefits for certain crops and how the soil should be used in general.

Weather information is important for farmers. Therefore, they will receive real-time updates through this online application.

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