MODERN AGRICULTURE ASSISTANCE SYSTEM FOR FARMERS: WEB APPLICATION

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ABSTRACT:

Ultra-modern husbandry system needs ultra-modern methods to support them. Internet use has increased and growers are still looking for online solutions to their problems. Also, farmers need rain to support livestock. The website works based on PHP and MySQL. Growers can now look at Mandi prices every day to sell their produce. Breeders can ask for help if needed. With the advancement of technology, the use of information technologies in agriculture has become a necessity for many reasons. Farming is the most important activity in India, but currently the people engaged in animal husbandry are from the lower classes who face many problems in their daily lives due to poverty. In India, around 15% of GDP (good domestic product) comes from livestock, but this sector employs 50 of our workers. Income generation is one of the biggest causes of suicide of plantation owners in India. There is no awareness of modern technology or advanced techniques that cause poverty, although breeders are created by breeders with hard work, breeders are forced by name according to the need of the time, which causes poverty. In order to ensure direct exchange between the grower and the consumer, the middle of the sale should be removed. This study reveals the changes in the preferences of Indian consumers in their food choices. Now that some establishments are dealing with fresh fruits and vegetables and Indians want to buy them from online websites, Farmeeco has played a big part in forecasting the growth in demand for these images. This will discuss information about Farmeeco, previous workshops, the software and tools the company supports to manage its online operations, and business strategies.

Keywords: Breeders, PHP, MySQL, Farmeeco, Fruit And Vegetable, Marketing, Smart Farm, Website.

INTRODUCTION:

Modern life is necessary at this point. In our nation, farmers often harvest using the weather and meteorological information. Crops and plants. But today, everyone may access all agricultural information thanks to technology. In Bangladesh today, smart systems and innovative technologies are widely used. Large and small farmers are receiving newer, more precise equipment for less and more productivity as a result of recent technology advancements and its marketing. Fortunately, technological breakthroughs are helping farmers all across the world produce more food and sell it for much less money. Opportunities for more accurate farming can boost output and revenue while using less expensive water and fertilizers. Therefore, we think that "Smart Farming System" will help contemporary, scientific farming develop. In conclusion, this system will support farmers by providing a single platform for all smart ways to integrate farming.

It requires talent to cultivate. A farmer has to be aware of the best times to sow, irrigate, fertilize, and harvest. Additionally, they must understand how to safeguard us against pesticides and post-harvest harvesting. In the past, when there were a variety of pathogens in the crops that were grown on land during the farming season but there was no effective way to protect the crops from those diseases, farmers would go to the

pesticides merchants in the market, and they would always recommend starting with primary medication and most of them. As a result, crop loss occurs most frequently as a result of improper treatment that is delayed. After examining these concerns, we began working on the "Smart Farming System" online web application, which was mostly developed from all those

Fortunately, modern technology is helping farmers all across the world produce more food and work together to sell it for a far more affordable price.

Through the smart farming system, we can quickly resolve many of these issues. The Smart Farming System initiative is crucial in helping farmers diagnose their crops early.

- The Doctor's Directory system makes it simple for farmers to get in touch with agricultural specialists.
- By creating an account on our smart farming system website, anyone may ask any question they have about agriculture at any time.
- If farmers register on the "Smart Farming System" website, the Agriculture Consultant or any other registered member will be able to help them with their issues.
- Blogs on a range of agricultural topics are available to everyone for the benefit of farmers. Farmers will have access to the Disease Prediction Blog's information to identify various

The Disease Prediction Blog will enable farmers to recognize various diseases on their own crops. Farmers who want guidance on their farming practices can simply get in touch with agricultural advisors. Additionally, Bangladeshi agricultural students can sign up on our platform to work as freelancers. This will provide a solution to their unemployment issues.

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.

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.

OBJECTIVE:

Primary objective of the system is to help farmers to communicate with experts whenever they have any issues, also farmers should be able to enter the result of the soil test in system and get the meaning behind it with suggested crops.

The purpose of the design process is the following five points:

- **Cost:** The system should be inexpensive because cost is an important thing to remember during design.
- **Portable:** The system is portable and easy to use, the web application can be accessed from the phone.
- **Security:** The security of the system is ensured by running it on AWS.
- **Speed:** Server response time should be fast; farmers will be in remote areas and internet speeds will be very slow.
- **True:** The system must be correct; Therefore, the most accurate algorithm is selected.

SCOPE:

The system can be used in any remote location and could be applicable at any location. Mostly implementing the system in district wise level would help. Most of the district have agriculture department, so this could be implemented in that level to help farmers.

METHODOLOGY:

The Proposed System differs from existing technology where the area of specialization is taken into consideration to overcome drawback of existing system. With the proposed system, Farming Assistance with a web application and upload that record on web server. Farmers to post the queries they have, and experts to respond them. Farmers can also see the weather forecast, and other aspects of it.

Farmers would be able to sell or buy products required. Communication with expert is now easier moreover making it as a web application has increased the efficiency.

Use of HTML,CSS and JavaScript with php and MySQL has increased the feasibility.

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.

At long last, the creators examine the potential benefits of utilizing blockchain innovation in agribusiness. They recommend that blockchain can offer assistance to progress effectiveness and decrease costs within the horticulture division, as well as make strides straightforwardness and traceability. They too note that blockchain can offer assistance to engage small-scale ranchers by giving them get to to money related administrations and advertise data.

By and large, the creators give a comprehensive writing audit of past thinks about on the utilize of blockchain innovation in horticulture. They illustrate the potential benefits of blockchain for the farming division and recommend that assist inquire about is required to investigate the total potential of this innovation.

DESIGN CONSIDERATIONS:

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 users to understand and use.
- In case of any error the application should display proper error messages
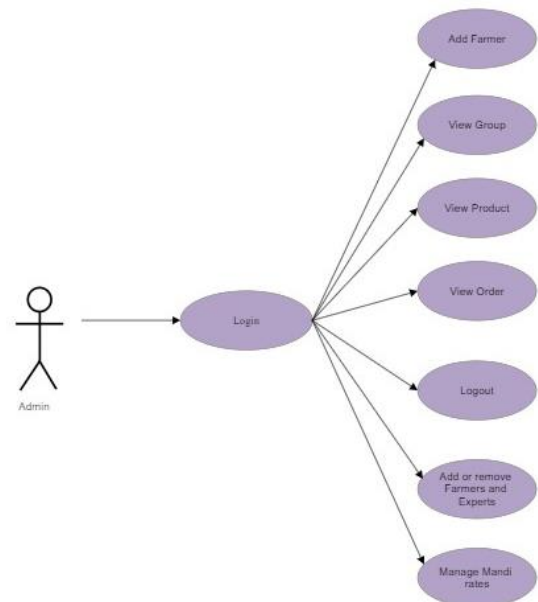
Development methods

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

USE CASE MODELING

Here is a use case diagram that shows what role and activity the user, farmer and administrator , Expert of this framework have. It just shows what they can and can't do.

USE CASE SCENARIO FOR ADMIN:

An administrator can login and can view the farmer and add the farmers and Experts and also manage the mandi rates. They can view the how many active user and also feedbacks from the users.
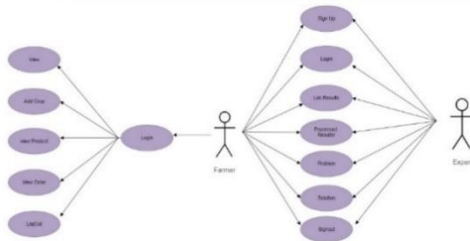

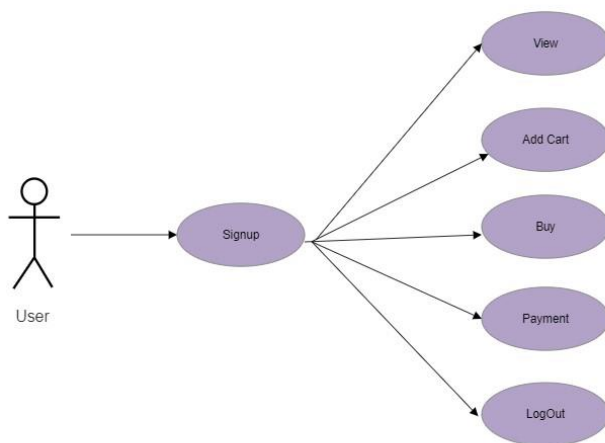## USE CASE SCENARIO FOR FARMERS AND EXPERT:

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.
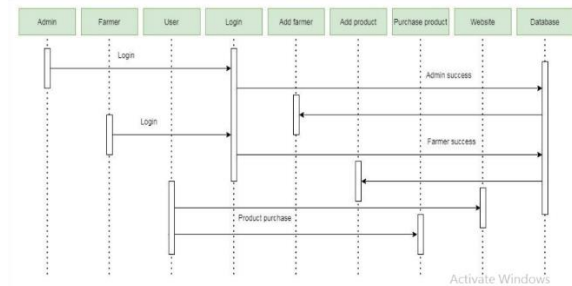
USE CASE SCENARIO FOR USER:

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

BUSINESS PROCESS MODELING

The number of internet users in India is growing rapidly these days and many are happy to sit back and relax while getting help with shipping from the international market. Finding a job opportunity and making good money is a very good thing. People are willing to pay a premium for a business opportunity that can make very little money. Farmers will benefit from managers; other reforms will be beneficial for users of this program. It will create new jobs. Now that everyone has a smartphone, it will be easy for Android users to work. Doing business will also be easier as everyone has a smartphone.

Farmer information can only be added, deleted or changed by administrators. Admins have full control over page updates at any time by entering the appropriate email address and password. For security reasons, each module protects its own email address and password. The farmer is the only person who can add, remove and update information about the fruits and vegetables on his farm; website visitors will not see this page. Order details are only visible to farmers. People who visit the website to buy fruits and vegetables online or offline are called users.

IMPLEMENTATION

LOGIN: If the Farmer/Manager/Professional username or password is correct, only the administrator/Employee/Expert will access, otherwise an error will be thrown. First, they have to go to the entrance to run and fill in the necessary information before they can enter.

ADMIN PAGE: Managers have full authority to develop new employees at any time through access to programs and messages. Admins can add growers and experts and view breeding details such as crops. Admin can view customer order details such as customer name, payment, product name and quantity, each model keeps its own delivery ID and password for security.

FARMER PAGE: The farmer can add crops and remove and change the content of vegetables and fruits on his farm, the operator will not be able to find a place to search. In addition to crop production, growers can view orders, accept orders from customers, and cancel orders.

WEB PAGE: The website home one who's going to visit the website, the customer can register and log in, the customer can search for vegetables and fruits. However, he can add it to the wain, the customer can make the payment for his orders online or offline, If the customer wants to buy.

COCLUSION

The web application Named Farming Assistance is able to solve modern day problem which farmers are farmers. Now remote farmers have the one touch solution, they can post the queries they have, and interact with the experts which are located all over nation. Farmers were getting difficulty in understanding what does the lab result mean which they give for soil testing. Now they can post the lab result and get processed and easily understandable solution.

Farmers also will get suggestions like how the soil is for certain crops what kind of things to be added into the soil such that they get optimum benefit out of it.

For farmers weather update plays and crucial role. So, in this web app they will receive live update of weather as well.

Thus, the system is able to solve modern day problems which farmers were facing.

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