



## RESPONSIVE WEB DESIGN WITH CHATBOT FOR AGRICULTURAL WEBSITE

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### ABSTRACT

E-Commerce Agricultural websites provide an interaction between farmers and customers. However, many of these websites are not designed to be accessible on mobile devices, which can limit their effectiveness in reaching a broad audience. In this paper, we present a responsive web design for e-commerce agricultural websites, which allows interaction across a range of devices and screen sizes. It allows customers to shop for products from the comfort of their own homes, without having to physically visit a store. This can be particularly useful for customers who live in remote or rural areas. Chatbots are used to provide customers with quick and convenient customer support, personalized recommendations, help in resolving customer issues, and learning about products and services. Chatbot is developed to help farmers to get to know about the crop that suits their environment and provide various agriculture-related details. It also helps the farmers get to know about current weather details. With the growing technology and internet services the information related to the government agricultural schemes are now available on internet which are provided by the chatbot. And crops are also recommended according to the weather by chatbot. So, the motivation of this paper is to provide the farmers of our country with easy to use website for their benefit so that they can get all the information related to agriculture.

**Keywords** E-Commerce, Chatbot, Crop Recommendation, Responsive Website

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### INTRODUCTION

Agriculture is the strength of Indian economy and 70% of India's total population is primarily dependent on agriculture for their employment. With the global population expected to reach 9.7

billion by 2050, agriculture has become an increasingly important area of research and development as the demand for food and other agricultural products continues to grow. The design and development of agricultural websites can also incorporate features such as e-commerce functionality, which allows farmers and other users to purchase agricultural products and services online. This can improve access to markets for farmers and provide greater convenience for buyers. Agricultural websites can also play a critical role in promoting sustainable agriculture practices and raising awareness about environmental issues in the agriculture industry. The main objective of this project is to ensure a direct line of communication between the User and the farmer. A farmer can also sell his product directly to the customer and he will get the profit.

Chatbots can provide customers with quick and convenient support, as they are available 24/7 and can respond to queries instantly. Chat bot acts as a virtual assistant for farming business. Farmers can use this chat bot for conversational purposes. This can save customers time and effort, and help resolve issues more efficiently. Chatbots can also assist farmers in resolving issues related to crop recommendation, government provided schemes and assist farmers to nearby Direct Purchase Centre. And also, the chatbot help the farmers to schedule appointment with the experts to clarify their issues.

## II.LITERATURE SURVEY:

[1] Prof. Kumbharde M. V., GhodkeTushar D., DevdeNitin N., AgwanSagar C. and KudalYogesh N developed a website and as well as a mob app which will help the end users (farmers) to access the information related to agricultural in an efficient and easy way. This web and mob app provides information about prediction about the crops production, agricultural bank loan and different government schemes.

[2] Prof. A. A. Bamanikar., Harshal Awate., Jay Katre., Hritik Rasal., Akshaya Mahadik developed a system for direct selling of farmer's products to the customer without any middleman. This application also has a "CHAT BOT" through which users can communicate with it. Also, there is a weather map for the farmer to use in order to check which crop will grow at a certain time in this project. Data mining techniques like PAM, CLARA, DBSCAN and Multiple Linear Regression are necessary for accomplishing practical and effective solutions for this problem.

[3] Prof. Manisha Pise., Dhananjay Girsawale., Siddhant Chilke., Praful Ramedwar., Shivam Longadge developed a website where buyer and seller can sell their products at best rate and eliminate the middlemen or third party. Every farmer is given an individual login id, with which

their information is recorded in a database and linked to a related bank for secure transactions. In this system Farmers can first submit their produce with an estimated ultimate price.

[4] Prof.Naina Palandurkar., Pritam Ramteke., Sandeep Pathak., Pooja Raut., Pradnya Sarade proposed a Website for Farmers to Sell Vendors Directly is intended to provide an online platform that will help farmers from Indian cities sell their products directly to customers without the help of intermediaries or agents. This website will serve as a unique and safe way to do agricultural marketing.This new site allows good farmer, sellers and sellers to communicate. It allows farmers to log in and sell a product published by other farmers.

[5] Rahul Singh Chowhan, Purva Dayya, Dr. U.N. Shukla proposed a E-Agriculture to enhance agricultural in addition to rural improvement by using various facts and verbal exchange techniques. The inspiration to use full-fledged potential of ICTs for agriculture capability building, and marketing has existed for a long time. It's far just most currently the dissemination of records started out harnessing ICTs extra efficaciously for better provider delivery to the farmers.

[6] Sindhu M R, Aditya Pabshettiwar, Ketan.K.Ghumatkar, Pravin.H.Budhehalkar, Paresh.V.Jaju paper says that Farming is the Prime Occupation in India in spite of this, today the people involved in farming belongs to the lower class and is in deep poverty. The Advanced techniques and the Automated machines which are leading the world to new heights, is been lagging when it is concerned to Farming, either the lack of awareness of the advanced facilities or the unavailability leads to the poverty in Farming. Even after all the hard work and the production done by the farmers, in today's market the farmers are cheated by the Agents, leading to the poverty.

[7] Sumitha Thankachan, Dr. S. Kirubakaran paper states that Technological importance has been a great support for making decisions in various fields especially in agriculture. The development of agriculture has been on under development for the past few years due to lack of Agriculture knowledge and environmental changes.The main aim of this paper is to reach farmers for their awareness, usage and perception in e-Agriculture. The study used statistical survey design technique to collect data from farmers for their awareness in e-Commerce.

[8] Dr. Deshmukh Nilesh Kailasrao“ICT for Indian Agricultural Informatics Developments”, It aims to focus on key factors discovered for effective utilization of Information Communication

Technology for agricultural boost up, at least on the surface, with supportive of evidence here in. Some issues discussed concern with how information technologies contribute to the wide sphere of agricultural and rural developments, as they are two sides of a coin. Provide IT- ICT based services in Asian region.

### III.METHODOLOGY

We used languages such as HTML, CSS, JAVASCRIPT And PHP According to previous drawbacks in the sites and app. We discovered a Website with an easy user interface. In our website where buyer and seller can sell their products at best rate. Eliminating the middleman i.e third party person or a brokers. All the Buyers and Sellers details are stored in database by using MySQL Database. Figure 1 depicts the overall architecture of the proposed system.

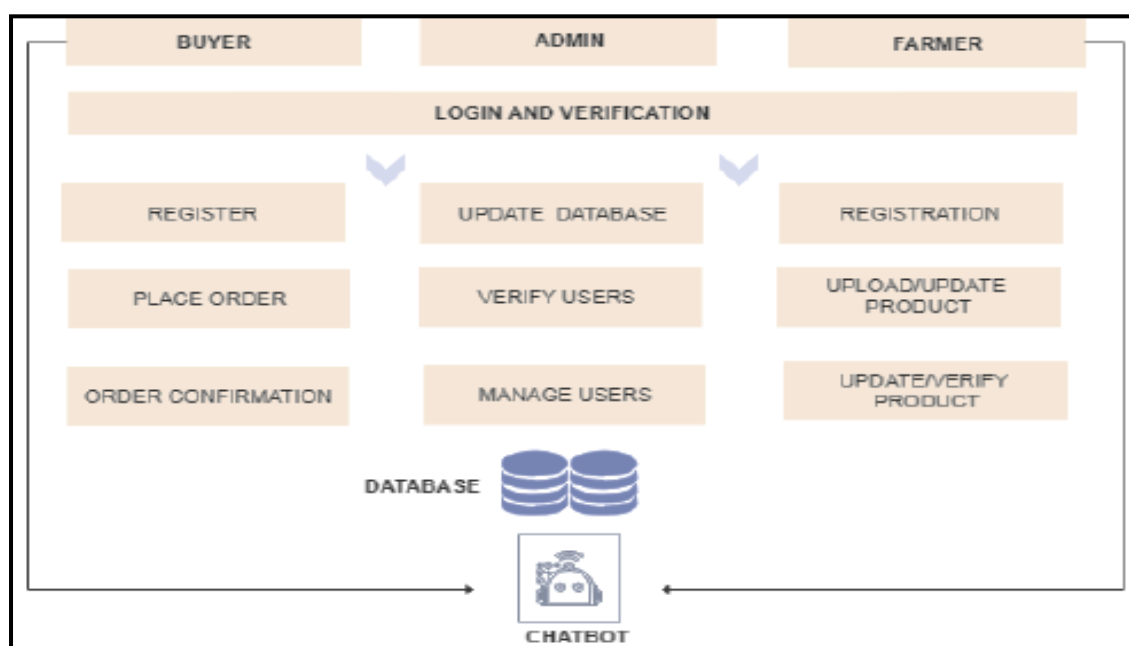


Figure 1 Overall Architecture -Proposed System

### IV.EXISTING SYSTEM:

Most of the existing systems have the feature of selling the farmer's crops to the end customers. They don't provide any other necessary information like current weather and direct purchase centre details. The farmers are unaware of the schemes that are offered by the government. Since they can help farmers in various ways, an agricultural website needs to provide those details. In addition, many of these websites are demanding some kind of subscription fee from the farmers which makes them unreliable. In most of the existing systems, the farmer must

log in with the necessary information and provide the details about the crops that they want to sell. Here, the farmers can have difficulty in using that interface. Hence, the applications that has been developed earlier were not efficient and effective for use.

#### **A. Modules of Website Implementation:**

- **ADMIN MODULE:**

Admin is a first step in a process, and the farmer or consumer must be logged in before moving on to the next step. The information about the admin is saved in MySQL Database if the user already has an account they do not need to establish a new one, simply input their username and password. The admin can remove the unauthorized products. Figure 4 shows the Admin module

- **FARMER MODULE:**

In this module the farmers can sell their product online just by adding their products category wise .Figure 2 shows the Login module and Figure 3 shows farmers module.

- **CUSTOMER MODULE:**

The customer registers himself with proper details. After logging in he is redirected to the homepage where he/she is able to see all the products which are uploaded by the farmers as well as he can buy those product with preferred quantity. Figure 14 shows the Customer module.

- **CART MODULE:**

In the cart module the system adds the selected products to cart and total amount is displayed. Figure 7 shows the Cart Module.

- **CHECKOUT MODULE:**

In the checkout module the details of the customers to be given. Then place the order. Figure 8 shows the checkout module

- **ORDER MODULE:**

In the order module the details of the orders are displayed with the delivery date. Figure 9 shows the order module

#### **B. Modules of CHATBOT Implementation:**

- **Data Collection:**

Gather the scheme and subsidy information from the corresponding government websites to be stored on the data sheets. Also, collect and store the location details of the direct purchase centers and soil testing labs.

- **Data Preparation:**

The data that has been identified in the previous stage is unstructured. We need to organize and validate the collected data into a structured and desired format so that it can be stored on to the data sheets.

- **Design the workflow:**

For each entity i.e, customer and farmer decide on their needs that we are going to satisfy. Based on the identified requirement, design the flow of the chatbot conversation.

**Farmers:** The basic requirements for the farmers include getting to know about current weather details, direct purchase center and soil testing lab location details, schedule, reschedule or cancel an appointment with the experts and most importantly to register to sell their crops to consumers by providing the necessary details such as quantity, price, their name and location.

So, in the initial interface, farmers will be shown the options given below,

- a. Expert Sessions
- b. Register crops
- c. Weather Forecast
- d. Soil Testing Labs
- e. Direct Purchase Centers

**Customers:** The only requirement for the customers is to buy the commodity from the list of available ones. If the desired crop is not available, then we'll get the email to send a notification if it is available in future. For customer, the initial interface will have,

- a. Buy Crop
- b. Available Product list

## V.IMPLEMENTATION AND DEPLOYMENT

Code the identified workflow and make the necessary integrations with external apps using API. Integrations with the external and internal services are done using webhook. Finally, deploy the web app using any deployment platform.

**LOGIN:**

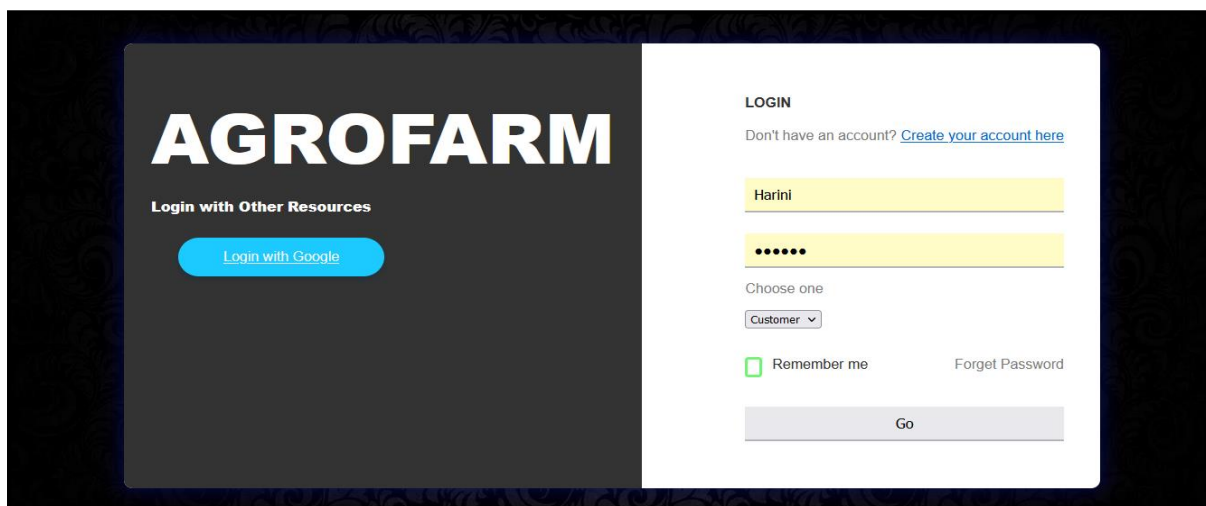


Figure 2 Login Module

**FARMER'S MODULE:**

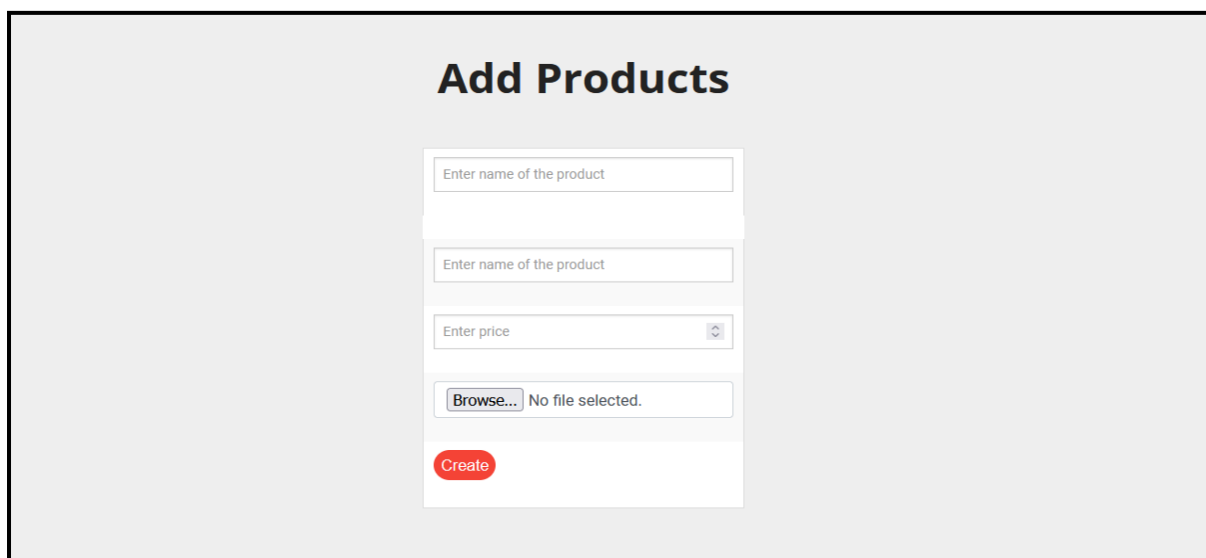


Figure 3 Farmer's Module

**ADMIN MODULE:**

### Manage Settings

S.No	Farmer Id	Name	Price	Status	
1	105	Orange	150.00	1	Delete Farmer
2	106	Strawberry	100.00	1	Delete Farmer
3	108	Blueberry	55.00	1	Delete Farmer
4	107	Mango	40.00	1	Delete Farmer
5	0	Green Apple	40.00	1	Delete Farmer
6	0	Grapes	40.00	1	Delete Farmer
7	0	Pine Apple	160.00	1	Delete Farmer

Figure 4 Admin Module

**HOME PAGE:**

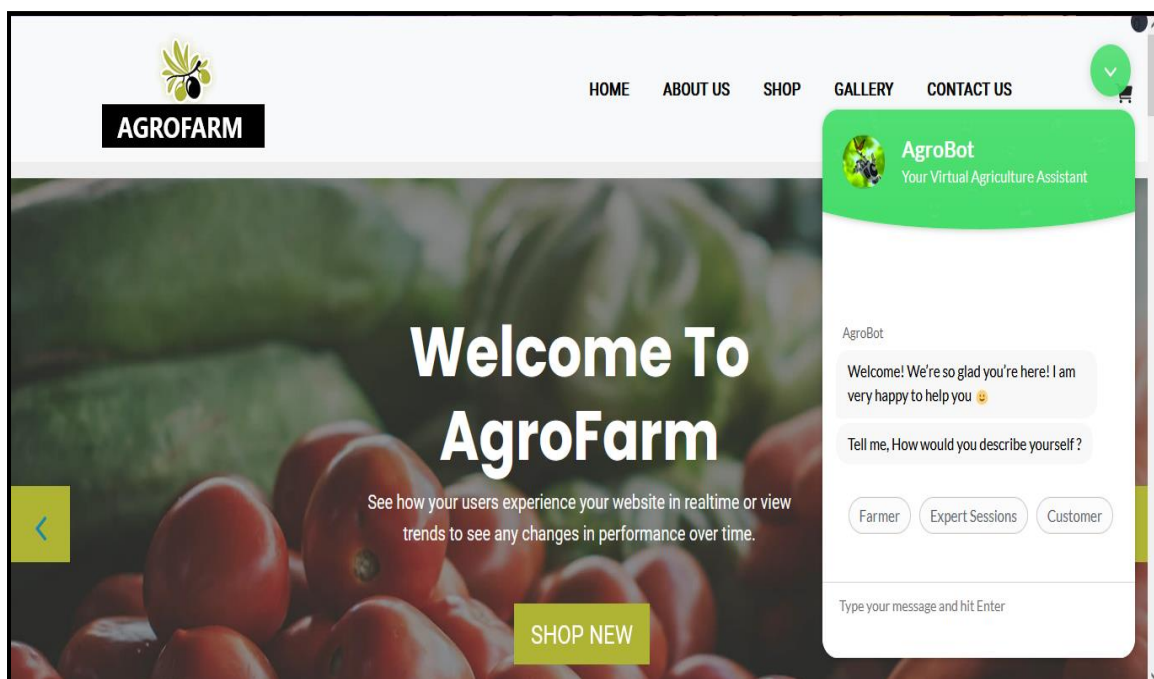


Figure 5 Home Page



SHOP MODULE:

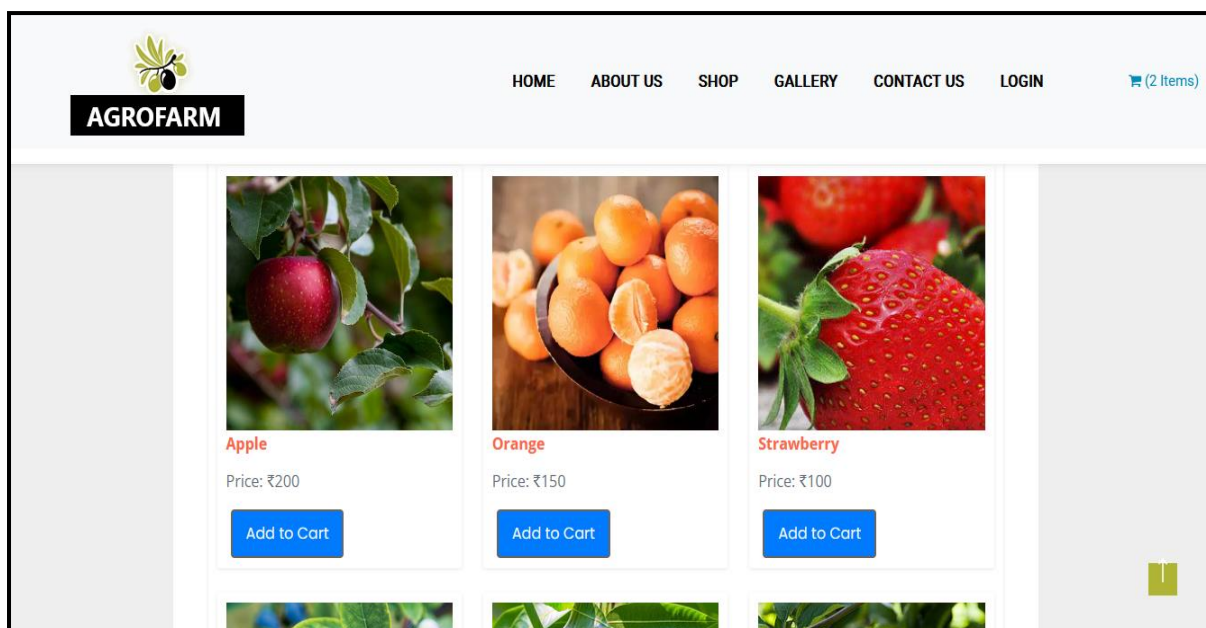


Figure 6 Shop Module

CART MODULE:

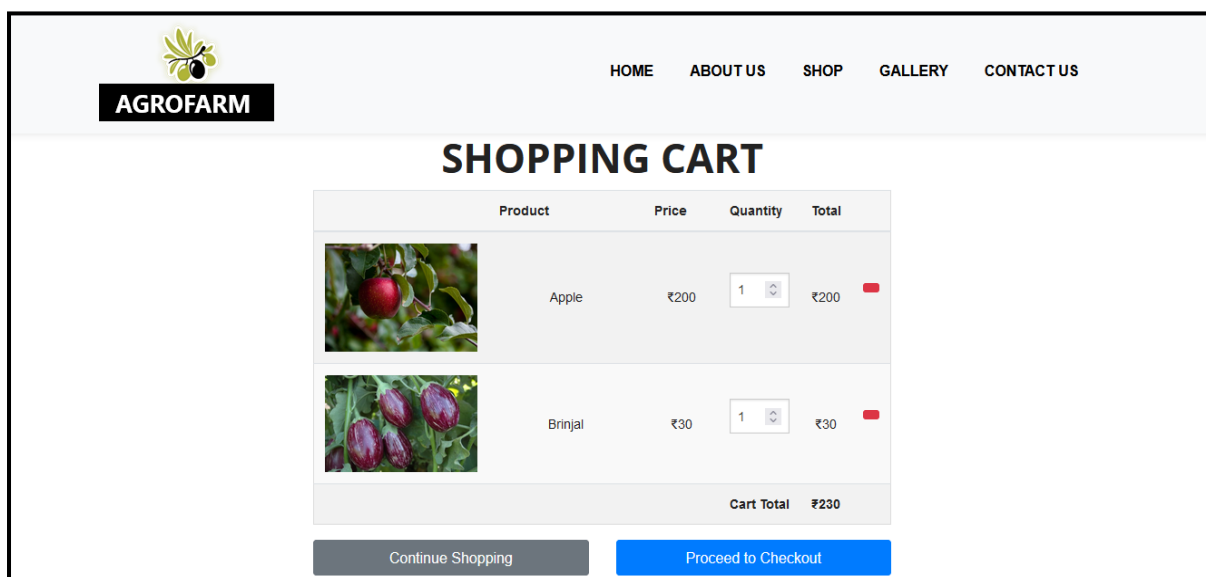
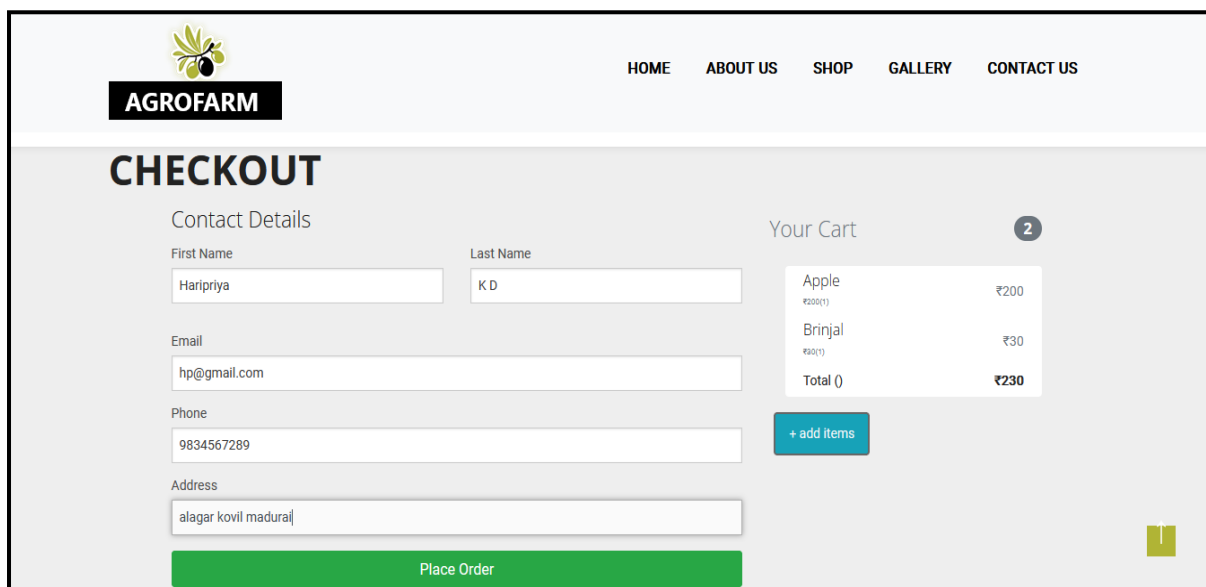


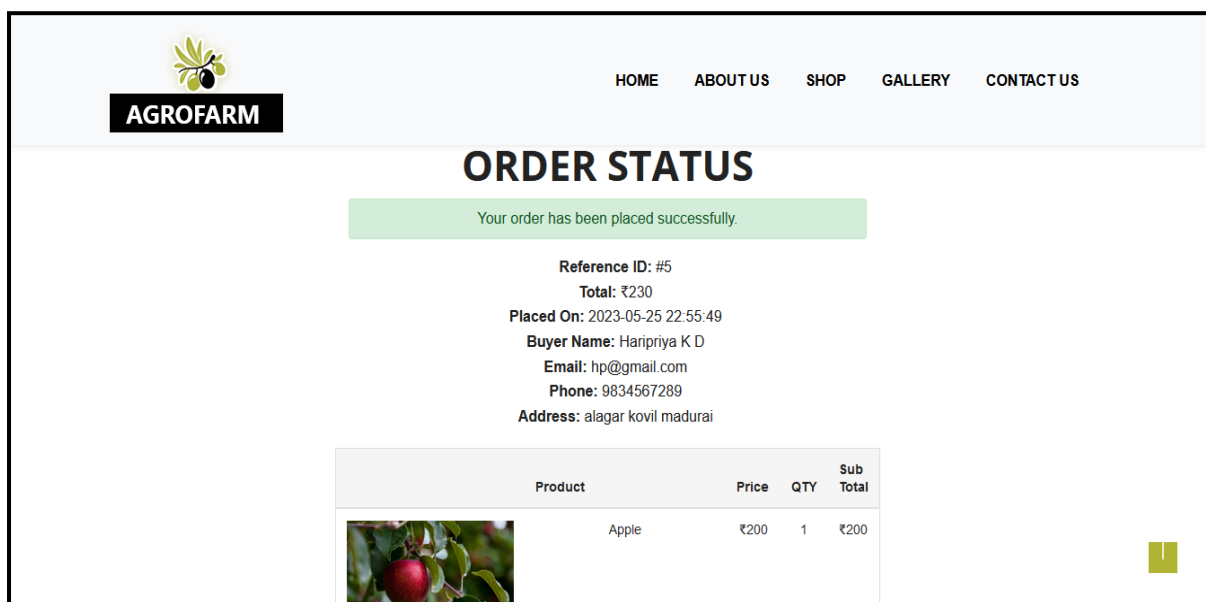
Figure 7 Cart Module

**CHECKOUT MODULE:**



**Figure 8 Checkout Module**

**ORDER MODULE:**



**Figure 9 Order Module**

**CONTACT US PAGE:**

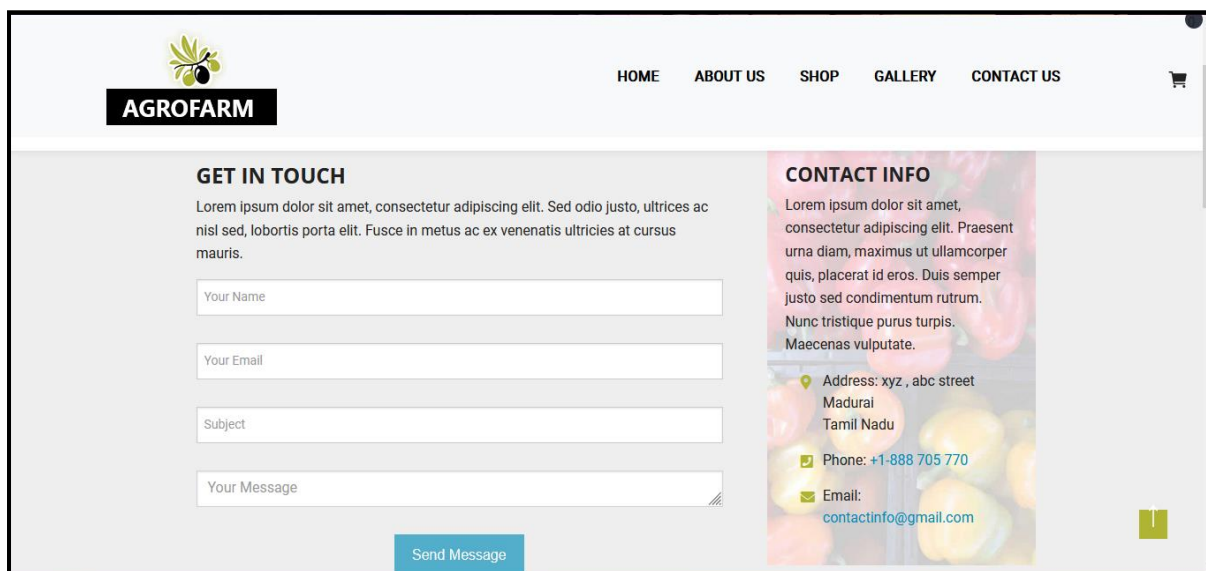


Figure 10 Contact us Page

**CHATBOT:**

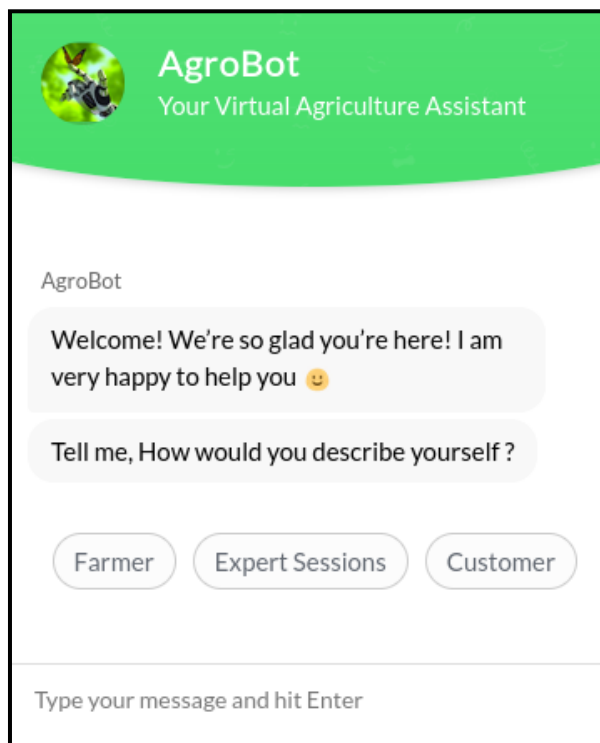


Figure 11 ChatBot

**FARMERS:**

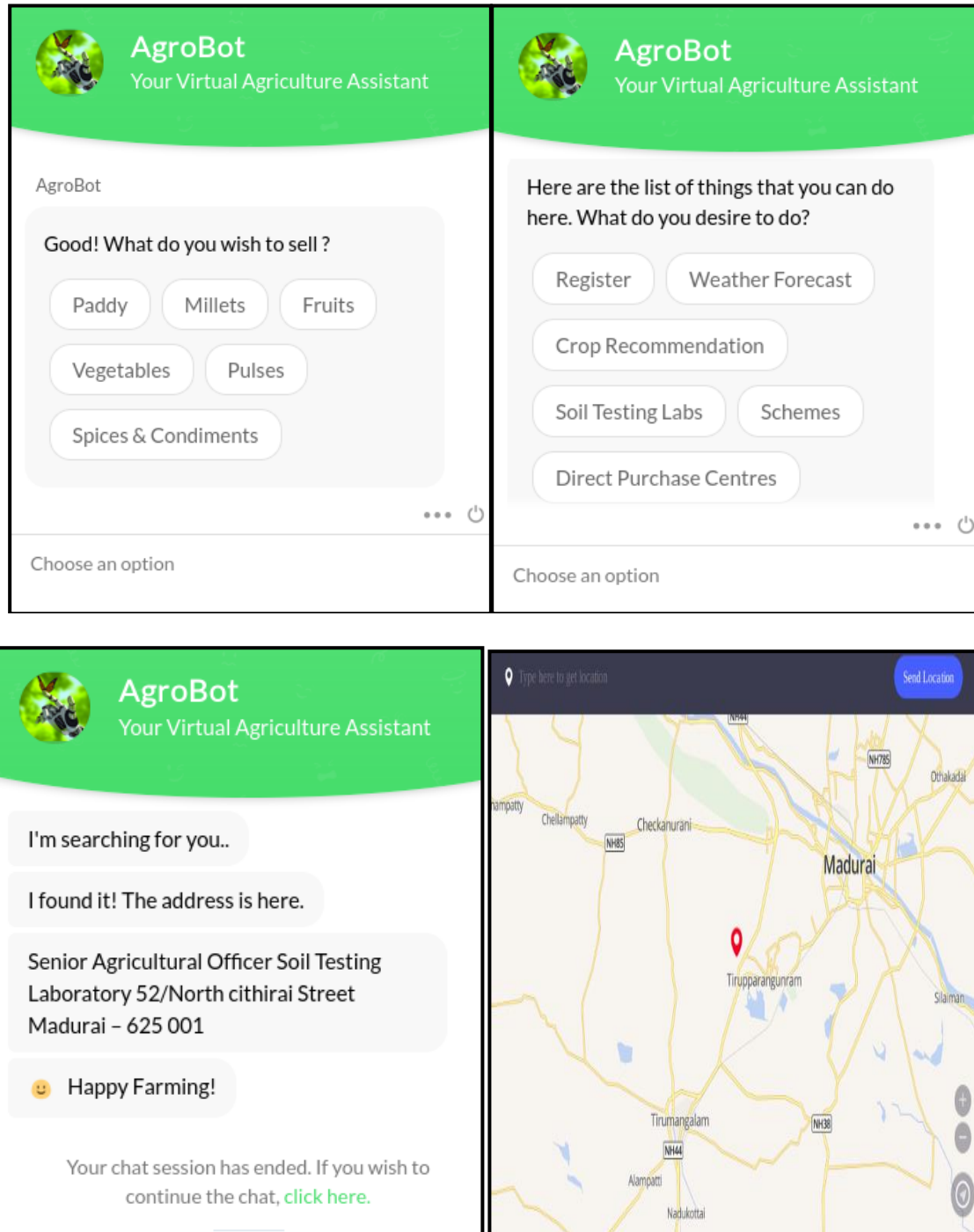


Figure 12 Farmers Page

**EXPERT SESSIONS:**

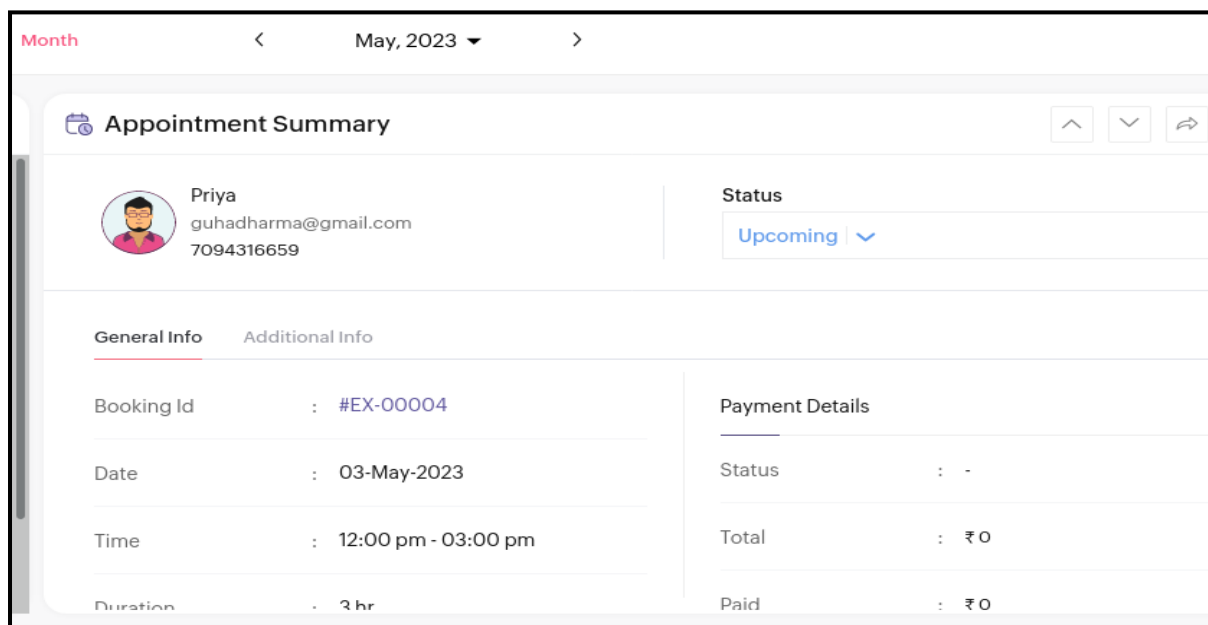
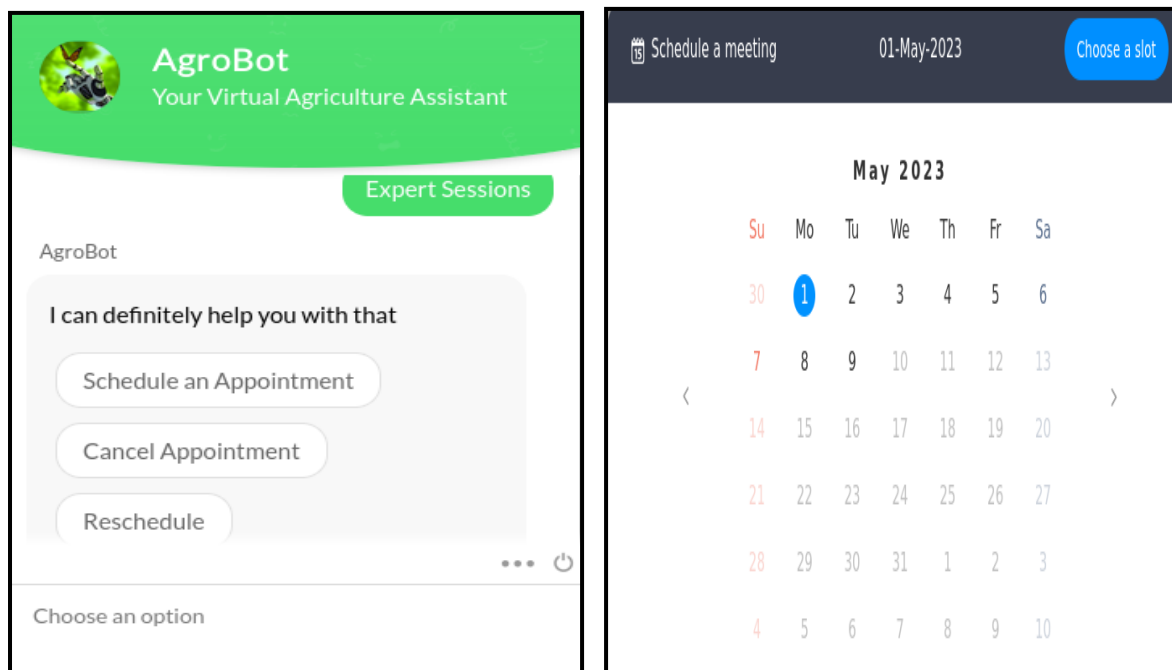


Figure 13 Expert Sessions

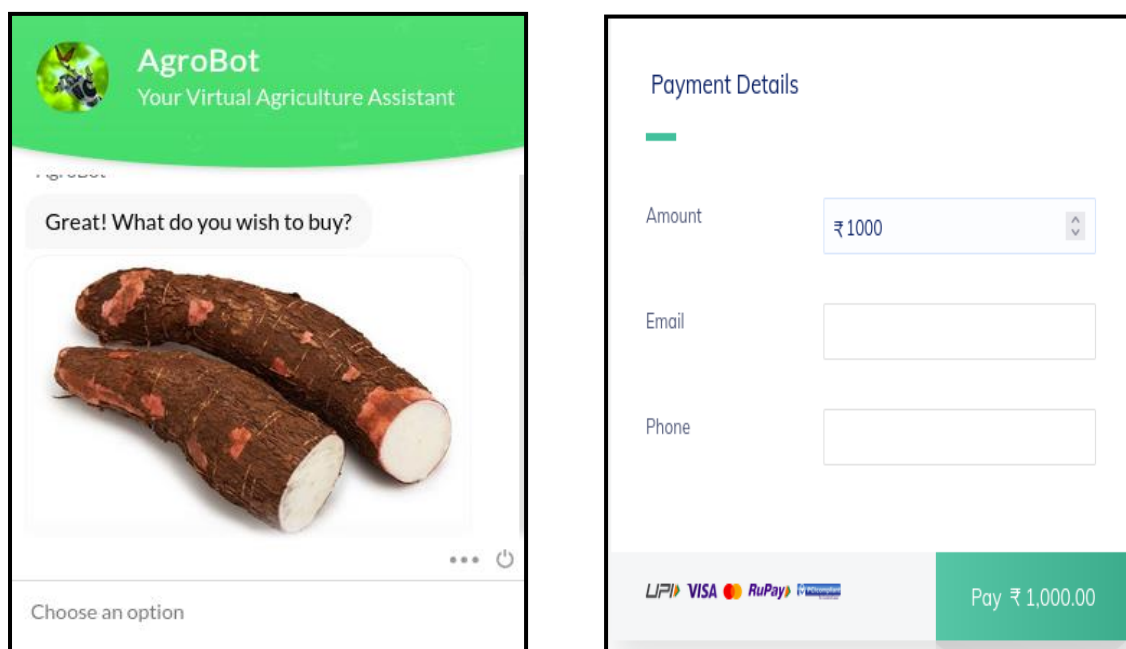
**CUSTOMERS:**

Figure 14 Customers

**VI CONCLUSION**

An interactive Chatbot connected to an Agricultural website which helps in providing efficient communication between farmers and agricultural experts. Most of the farmers do not have proper knowledge of sites and applications. they often don't have an idea of online product posting ,web applications etc ,but our proposed system is much easier to access by them without the involvement of third party and middlemen .Through this portal farmers can get much profit by selling their products online.If farmer has any doubts they can clarify it by receiving personalized advice from agricultural experts on issues such as soil quality, pests and disease control through chatbot. It also enhances customer service by helping farmers build stronger relationships with their clients and increase customer satisfaction. The location of nearest soil testing labs can also be viewed by farmers and crop recommendation for the particular type of soil will also be suggested. The information about various schemes provided by government can also be viewed. The details about Direct Purchase Centres and Open Weather Forecast with real time weather updates which helps in making decisions about planting, harvesting and other activities are also available. Overall chatbot have the potential to transform the agriculture industry by providing farmers with quick and efficient access to agricultural advice and information. Hence, in order to avoid the drawbacks of the

currently available systems we are developing an Chatbot connected to an agricultural website that will be more efficient to use.

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