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# Virtual Herbal Garden

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***Abstract:** This paper presents how medicinal plants play an important role in traditional healthcare systems such as AYUSH, which includes Ayurveda, Yoga & Naturopathy, Unani, Siddha, and Homeopathy. However, many people lack awareness and easy access to information about these medicinal plants and their health benefits. This paper presents the development of a Virtual Herbal Garden, an interactive digital platform designed to provide knowledge about various medicinal plants and their medicinal properties. The system allows users to explore different herbal plants and learn about their scientific names, uses, and diseases they help treat. The platform also integrates an AI-based chatbot that helps users search for herbal remedies by entering symptoms or diseases. Based on the user input, the system recommends suitable medicinal plants and provides related information. The application is developed using web technologies such as HTML, CSS, JavaScript, and PHP to create a user-friendly and responsive interface. The proposed system aims to promote awareness of traditional medicinal plants and provide an accessible digital resource for learning and healthcare support.*
***Keywords:** Virtual Herbal Garden, Medicinal Plants, AYUSH, AI Chatbot, Herbal Recommendation System.*

## I. INTRODUCTION

Medicinal plants have been used for centuries in traditional healthcare systems to treat various diseases and improve human health. Systems such as AYUSH, which include Ayurveda, Yoga & Naturopathy, Unani, Siddha, and Homeopathy, rely heavily on herbal plants for natural treatment and prevention of illnesses. However, in modern times, many people lack proper knowledge about these medicinal plants and their benefits. With the advancement of digital technology, it has become possible to provide educational and informative platforms that help users learn about herbal medicine in an easy and interactive way. A Virtual Herbal Garden is a digital platform that allows users to explore different medicinal plants and understand their uses, properties, and health benefits without physically visiting a garden.The proposed system aims to develop an interactive Virtual Herbal Garden that provides detailed information about various medicinal plants used in AYUSH systems. The system also integrates an AI-based chatbot that helps users find suitable herbal plants based on diseases or symptoms entered by the user. The application is developed using web technologies such as HTML, CSS, JavaScript, and PHP to provide a user-friendly and accessible platform. The main objective of this project is to promote awareness of medicinal plants, support learning about traditional medicine, and provide an easy way for users to discover herbal remedies through a digital environment.

## II. LITERATURE REVIEW

Several researchers have developed digital platforms and information systems to provide knowledge about medicinal plants and traditional healthcare practices. Many herbal databases and web applications have been created to store and display information about plant species, their medicinal properties, and their uses in treating various diseases. These systems mainly focus on providing basic information about plants through images, descriptions, and classifications. Some studies have introduced the concept of virtual gardens that allow users to explore medicinal plants in an interactive digital environment. Virtual herbal gardens help students and researchers learn about plant species without physically visiting a botanical garden. These systems improve accessibility to information but often lack intelligent features that guide users in selecting appropriate plants for specific diseases. Recent research has also explored the use of Machine Learning techniques to develop recommendation systems in healthcare applications. Machine learning algorithms such as Decision Trees, Random Forest, and classification models can analyze user input such as symptoms or diseases and recommend suitable herbal plants for treatment. These recommendation systems improve the efficiency and accuracy of providing personalized herbal suggestions. In addition, chatbot technology has been widely used in modern web applications to enhance user interaction. AI-based chatbots can understand user queries, process natural language input, and provide relevant responses instantly. The proposed Virtual Herbal Garden system combines a digital medicinal plant database with a Machine Learning–based recommendation system and an AI chatbot.

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## III. PROPOSED SYSTEM

The proposed system aims to develop a Virtual Herbal Garden that provides users with information about medicinal plants used in the AYUSH system. The platform allows users to explore different herbal plants and learn about their medicinal properties, scientific names, and health benefits. The system also includes a Machine Learning–based recommendation system that suggests suitable medicinal plants based on diseases or symptoms entered by the user. Algorithms such as Decision Tree or Random Forest can be used to analyze the input and recommend appropriate herbal remedies. In addition, an AI chatbot is integrated into the system to assist users in interacting with the platform. The chatbot can an swer user queries, provide plant information, and guide users in finding herbal remedies for specific health conditions. The application is developed using web technologies such as HTML, CSS, JavaScript, and PHP, which provide an interactive and user-friendly interface. The system aims to promote awareness about medicinal plants and provide a digital platform for learning about natural healthcare solutions.

## IV. SYSTEM ARCHITECTURE

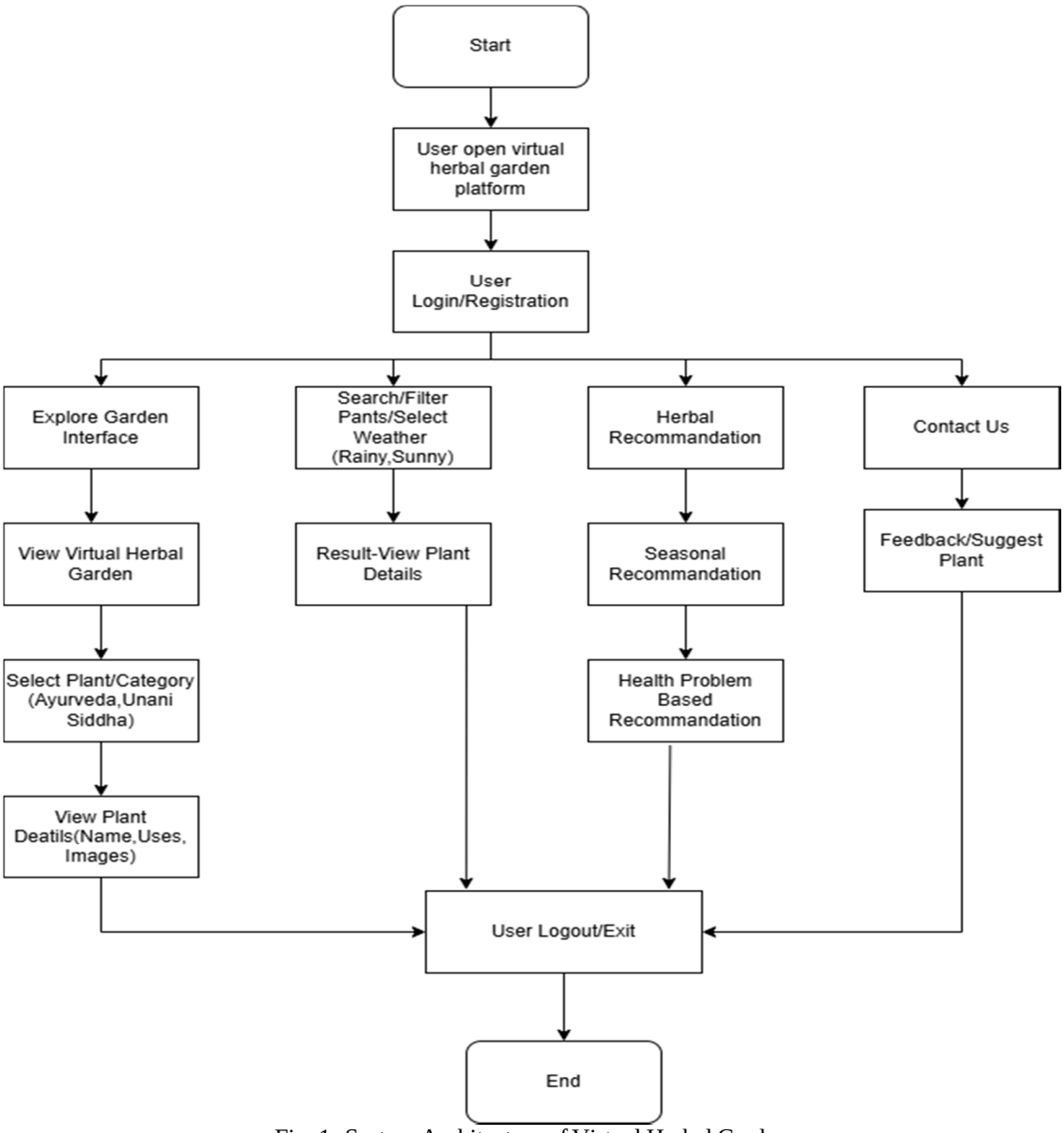


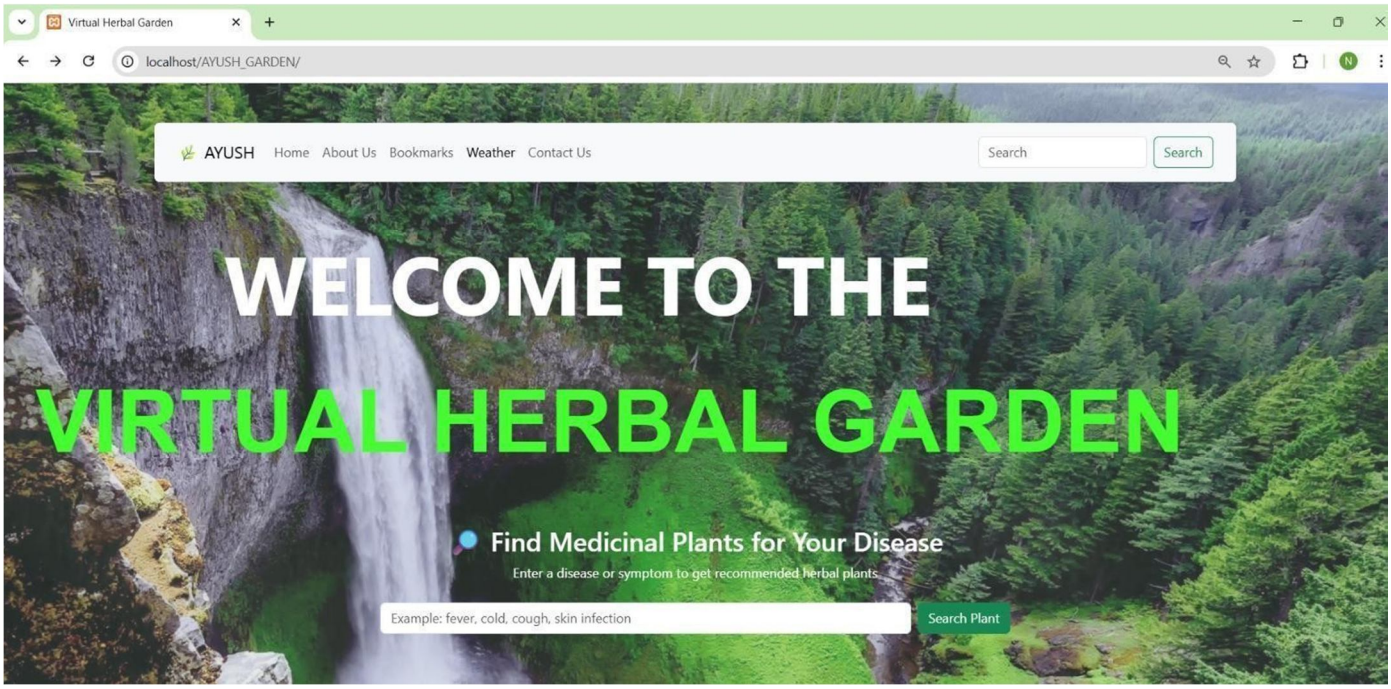

Fig. 1. System Architecture of Virtual Herbal Garden

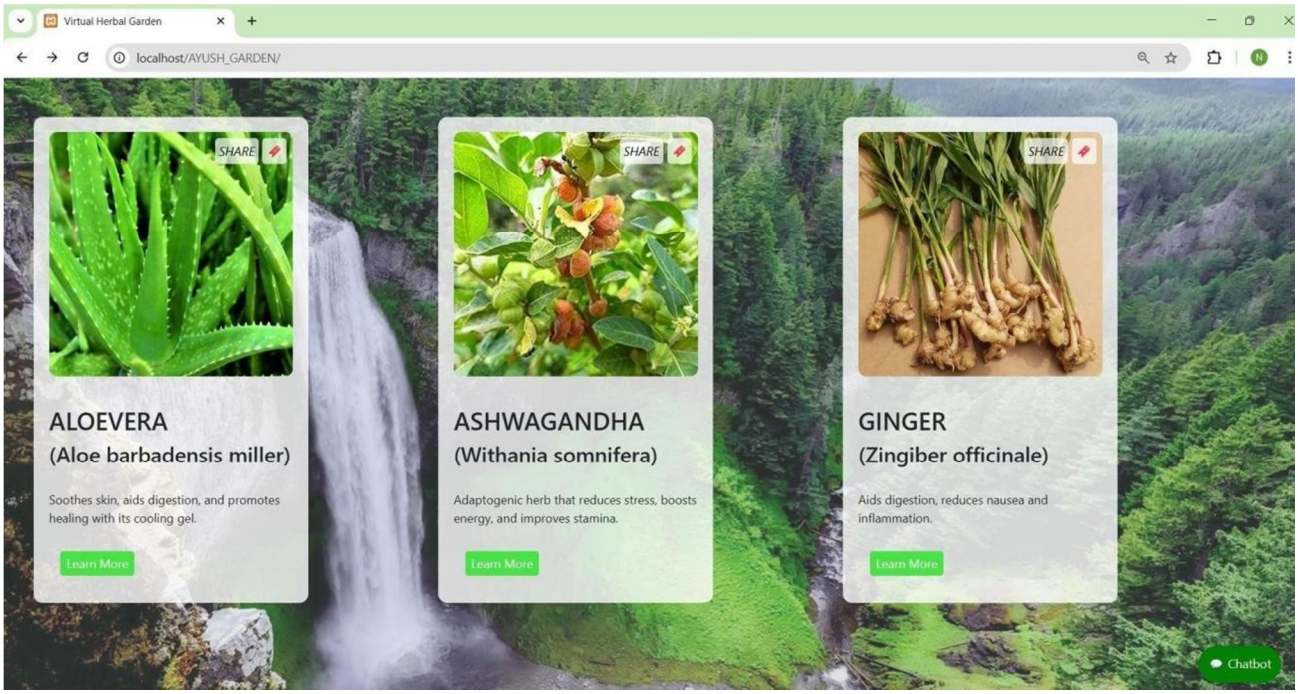
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## V. IMPLEMENTATION

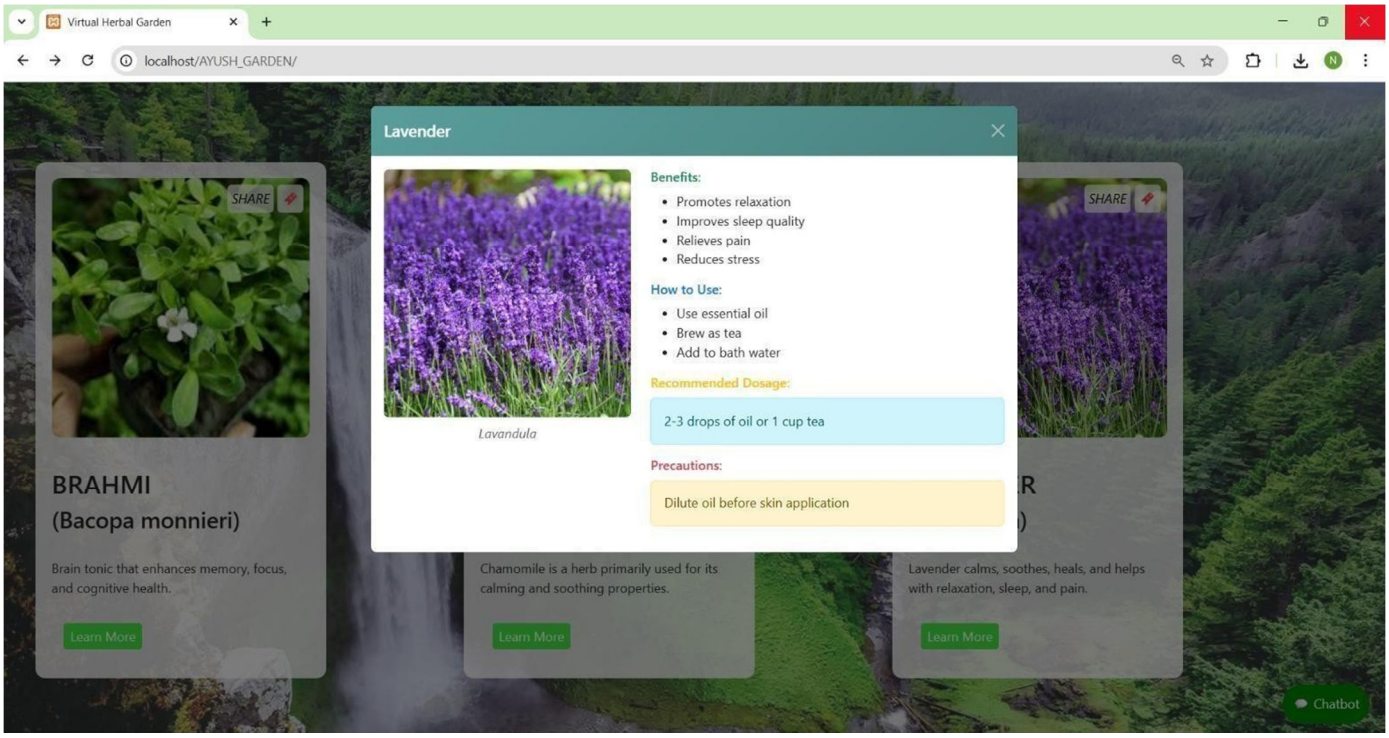
The Virtual Herbal Garden is a web-based system that provides information on medicinal plants and their health benefits. Users can search plants by name, category, or disease. A recommendation module suggests suitable herbal remedies based on user-inputted diseases. The system also allows bookmarking and tracks recent searches, offering a seamless and informative experience.

*1) Virtual Herbal Garden Interface/Platform*

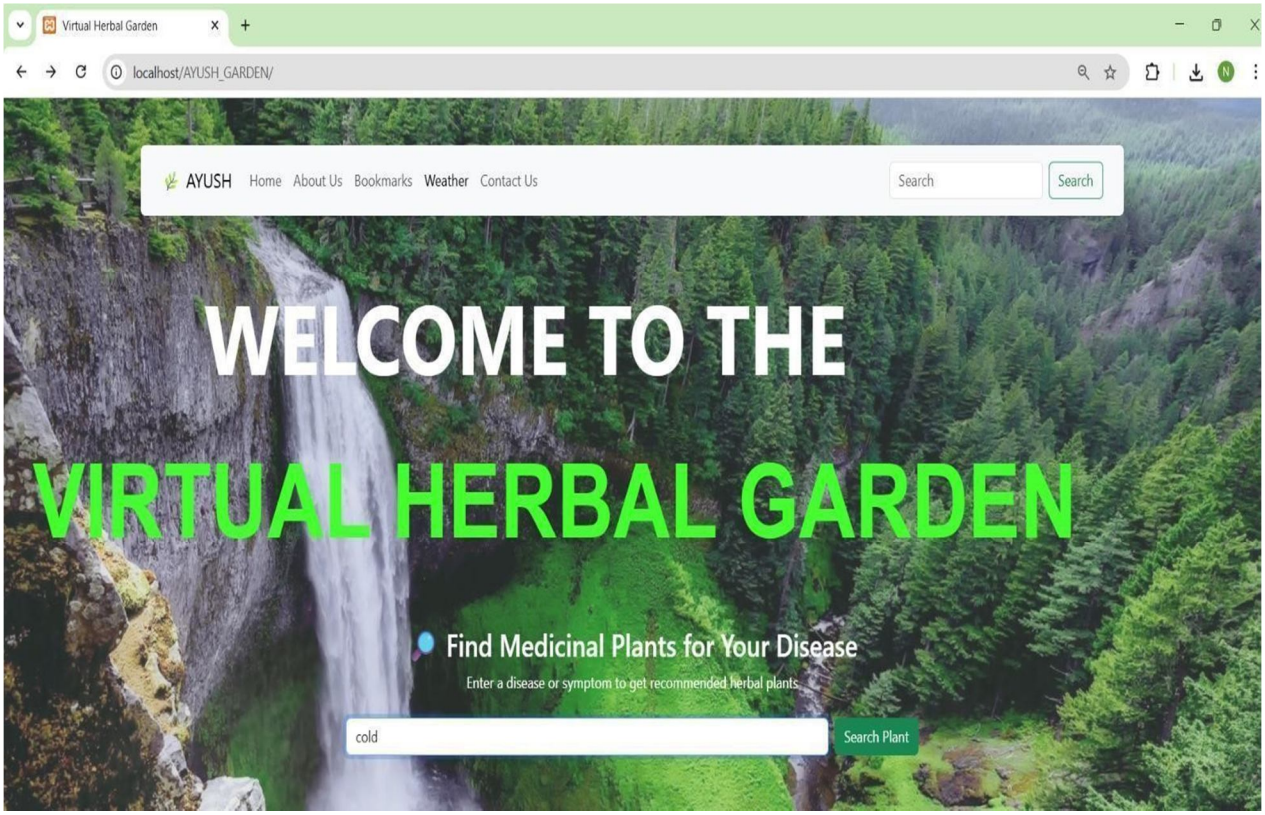


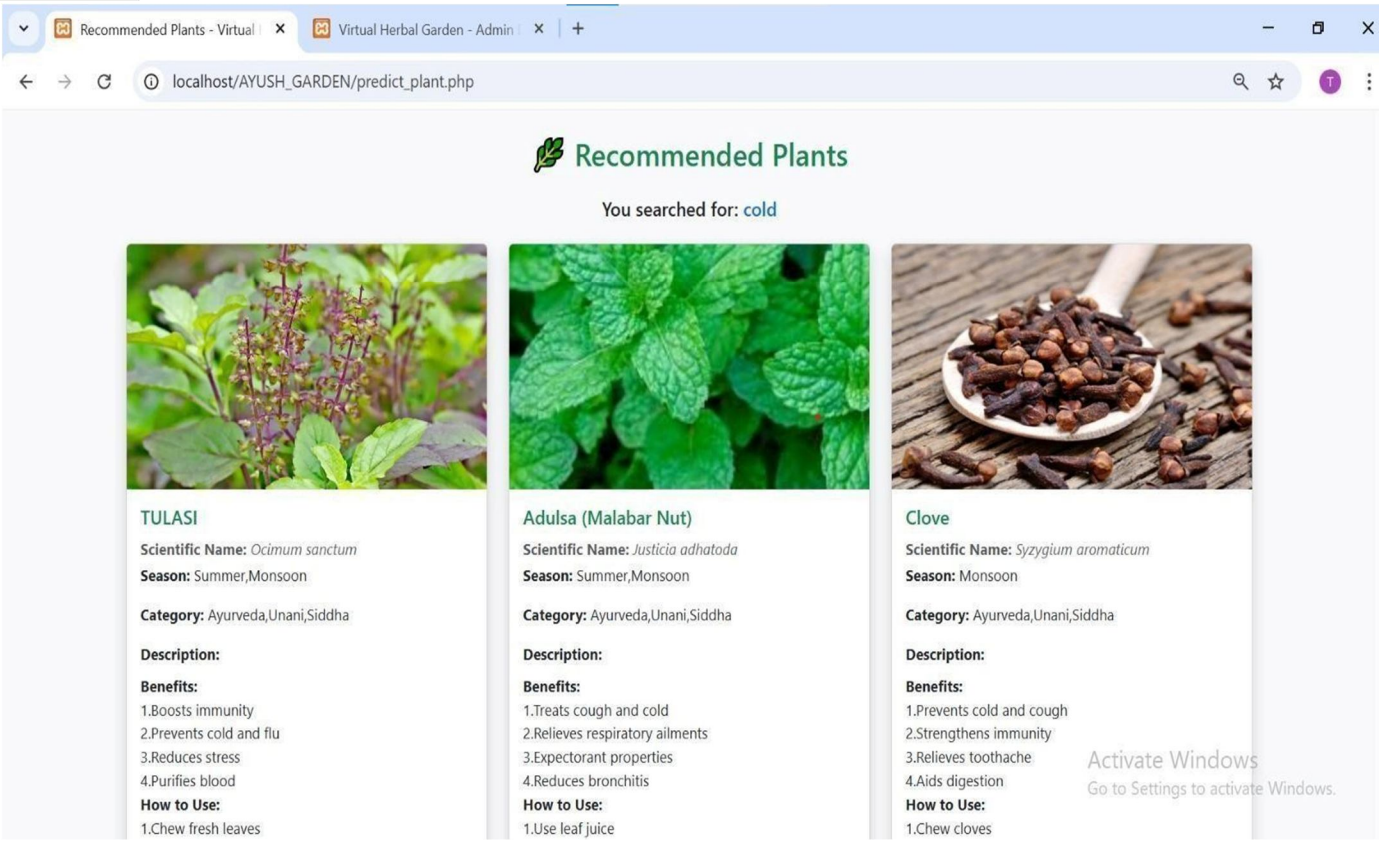



*2) Click on any plant to view its details:*

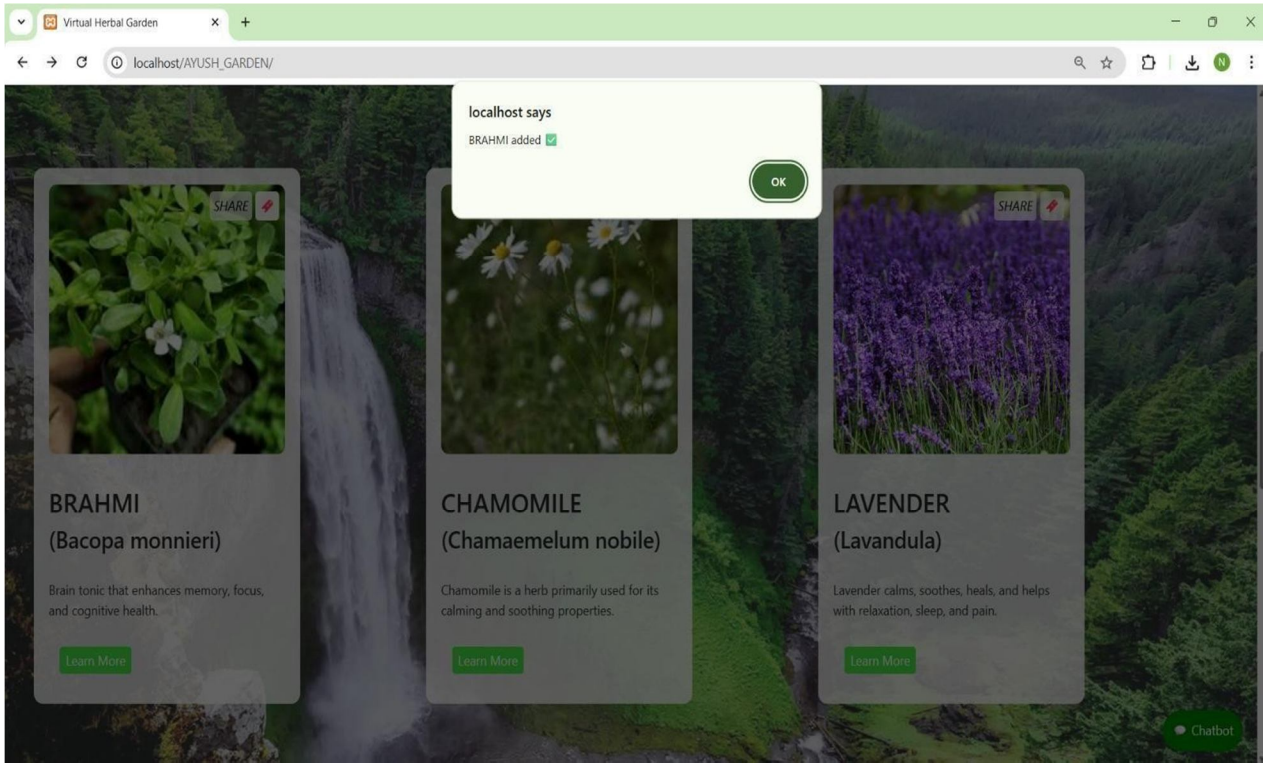



*3) Enter a disease or symptom and click on "Search Plant" to get recommended herbal plants*

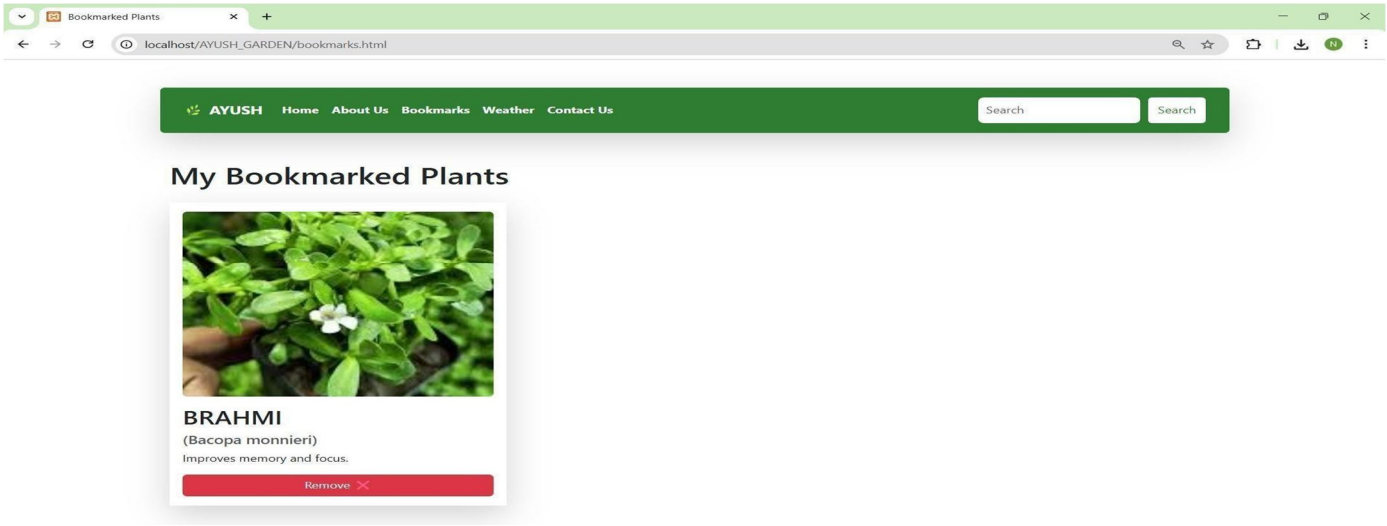




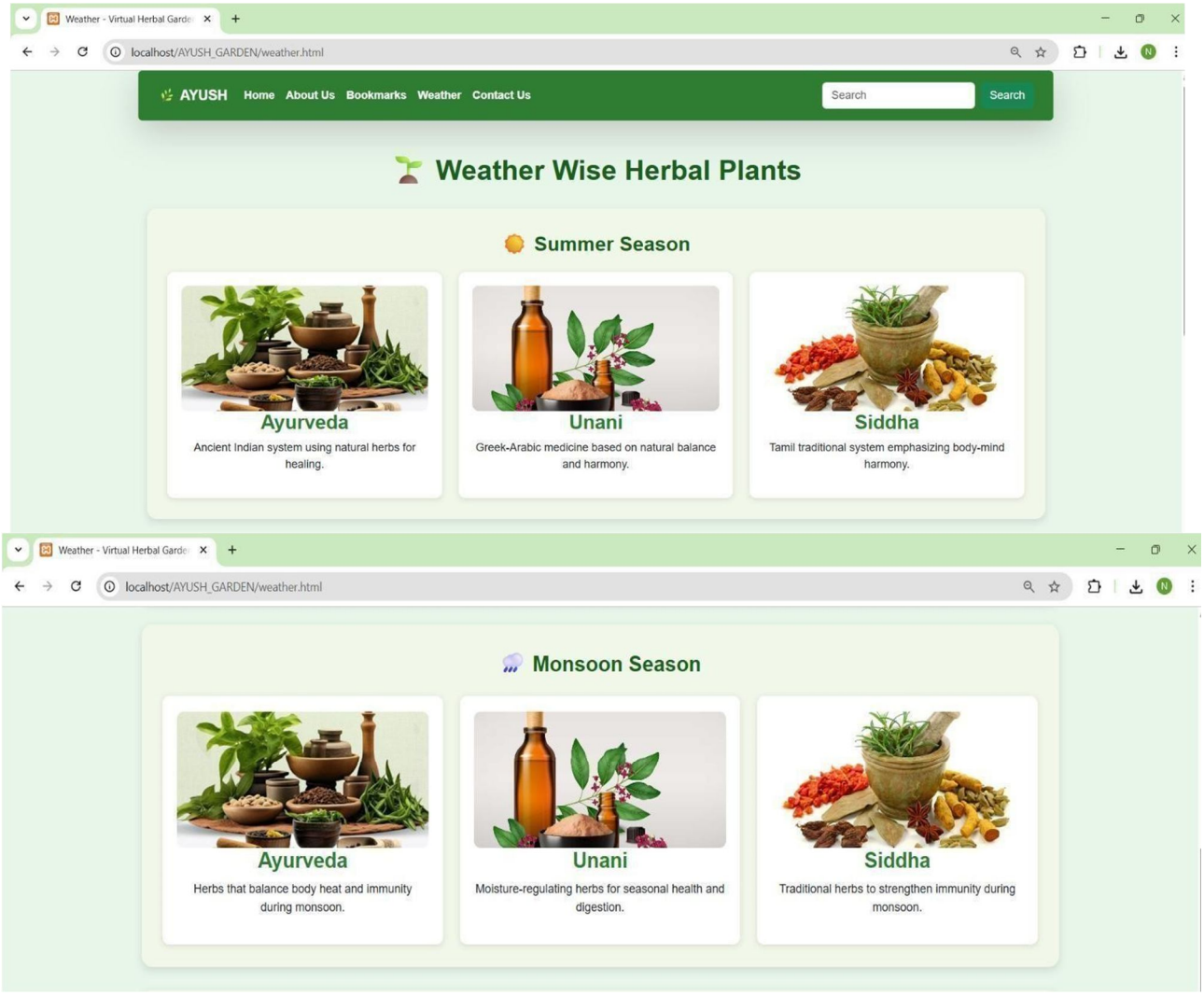

*4) After click on bookmark plant image:*

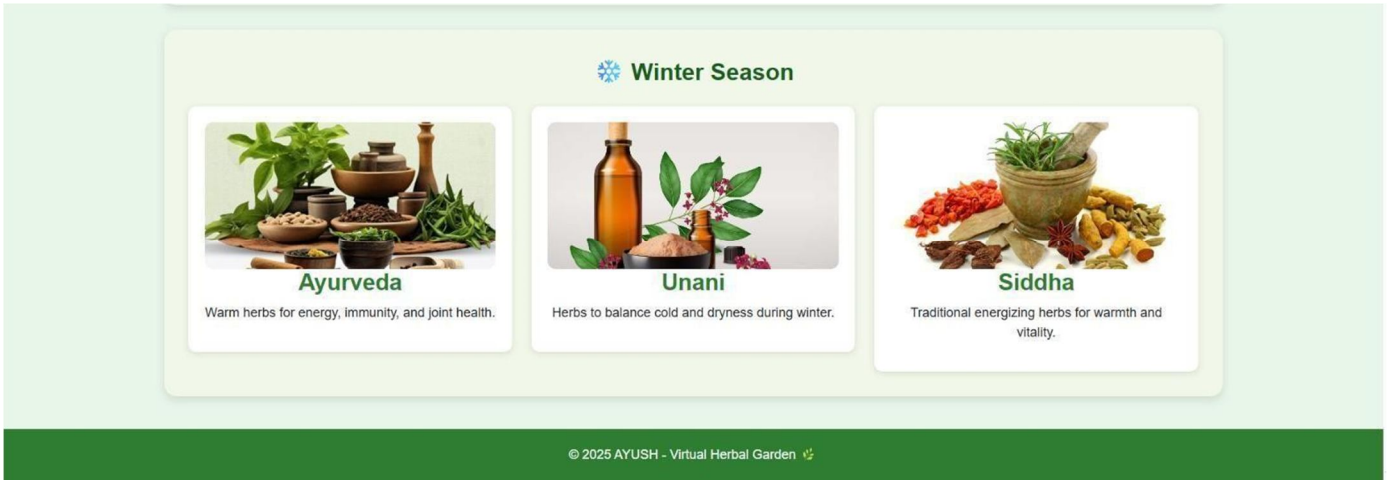


*5) After click on Bookmark navbar*

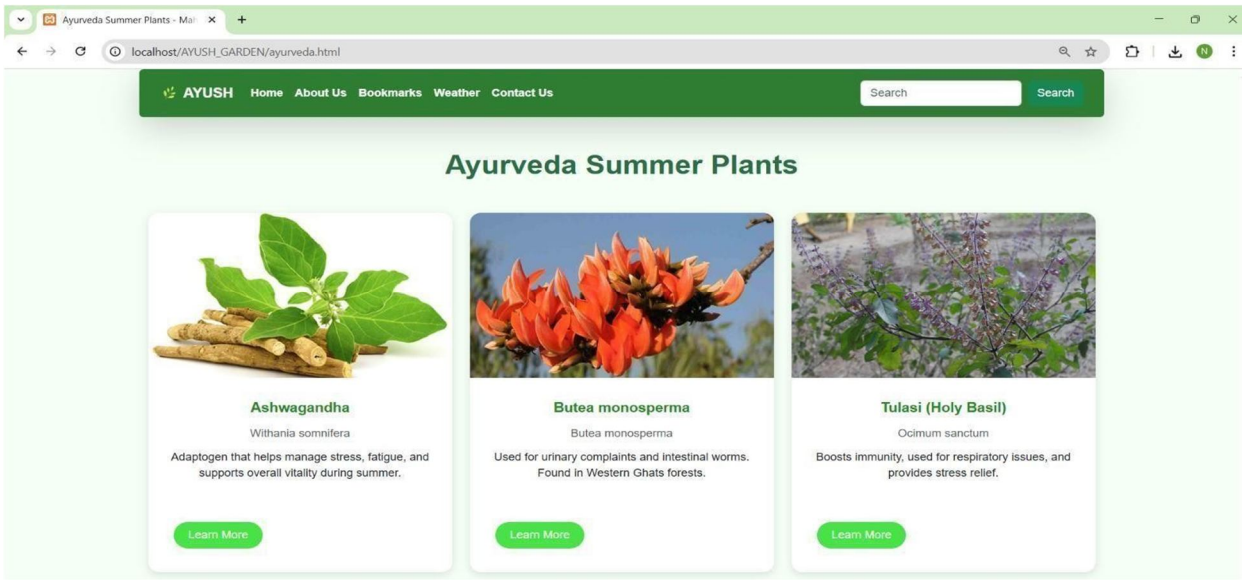



*6) After click on Weather navbar*

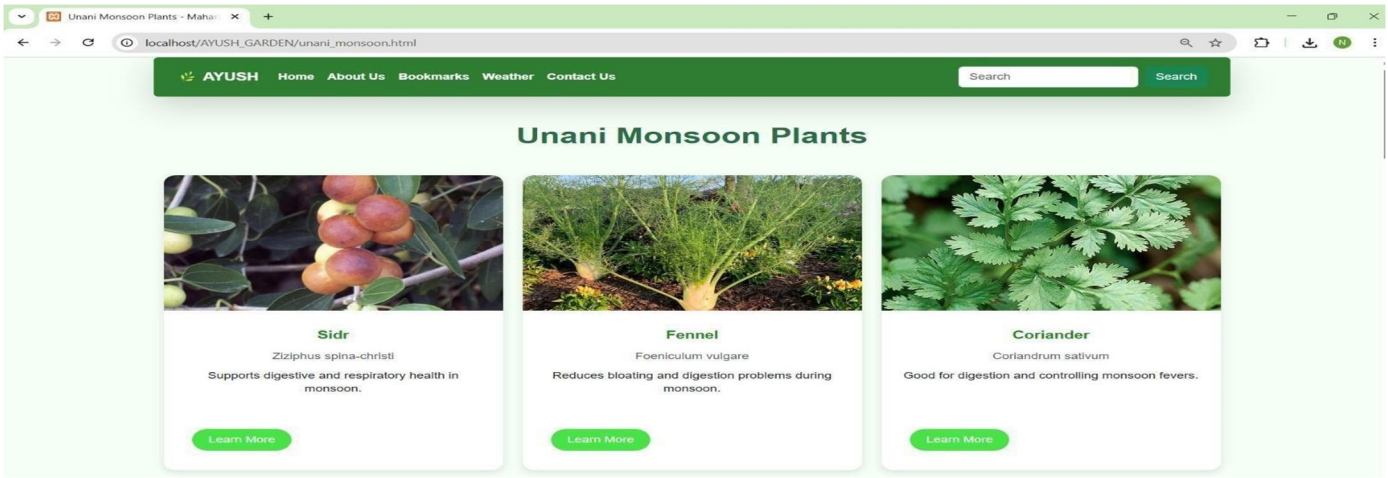




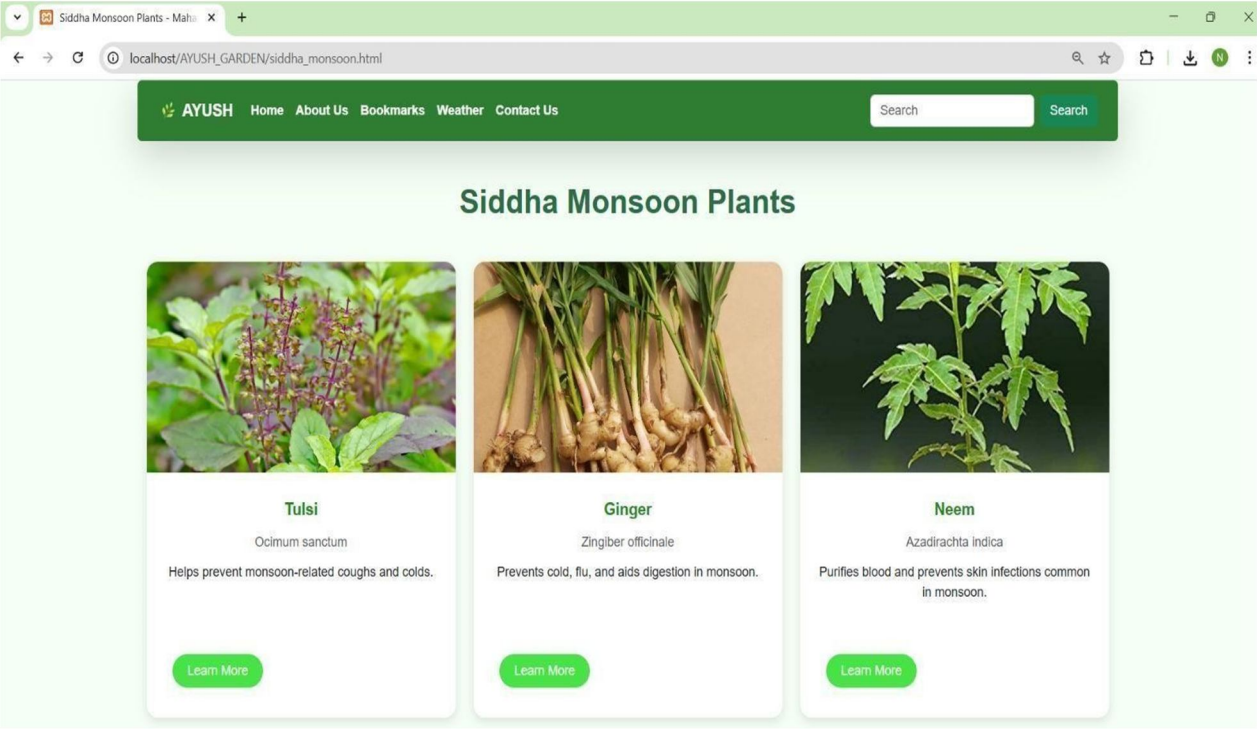

7) *After click on ayurveda in summer season*



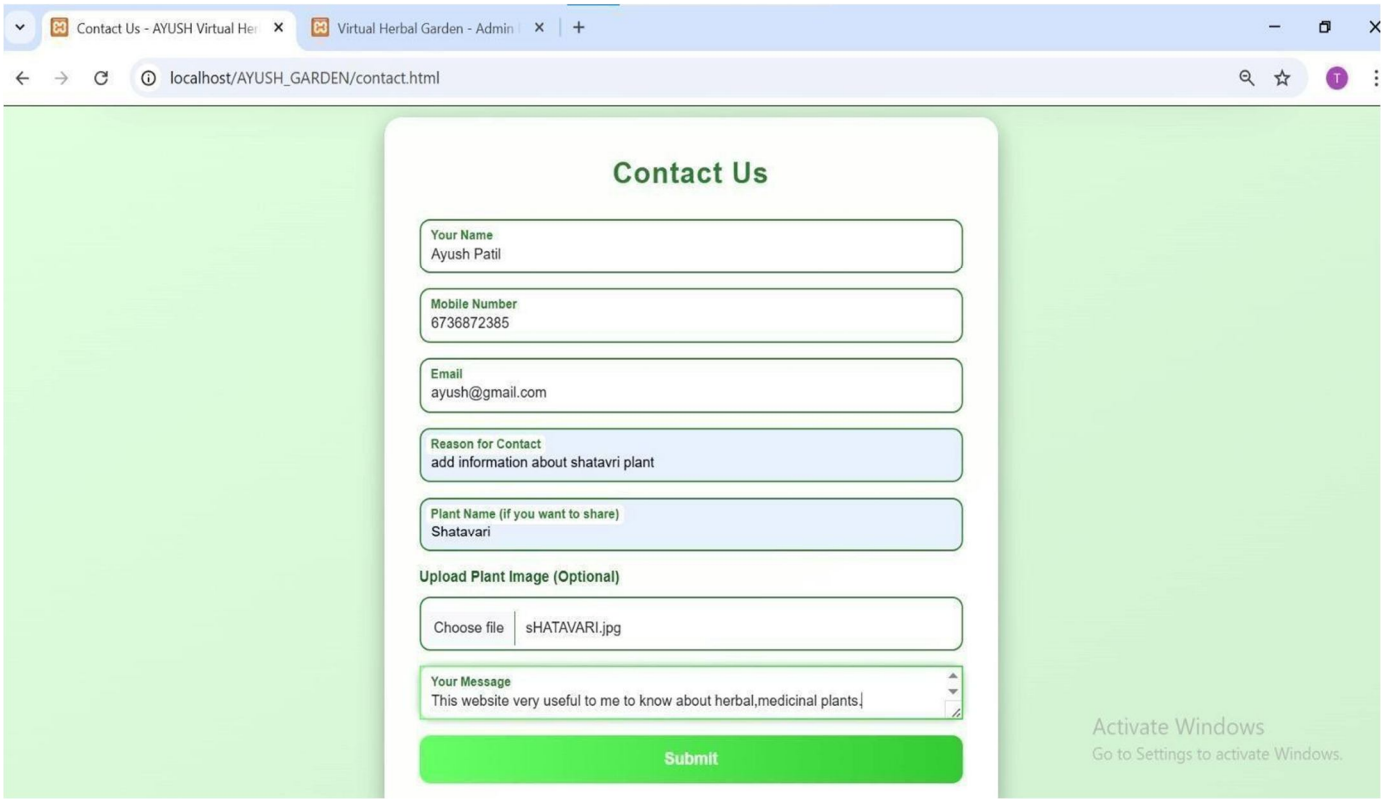

8) *After click on unani in monsoon season*



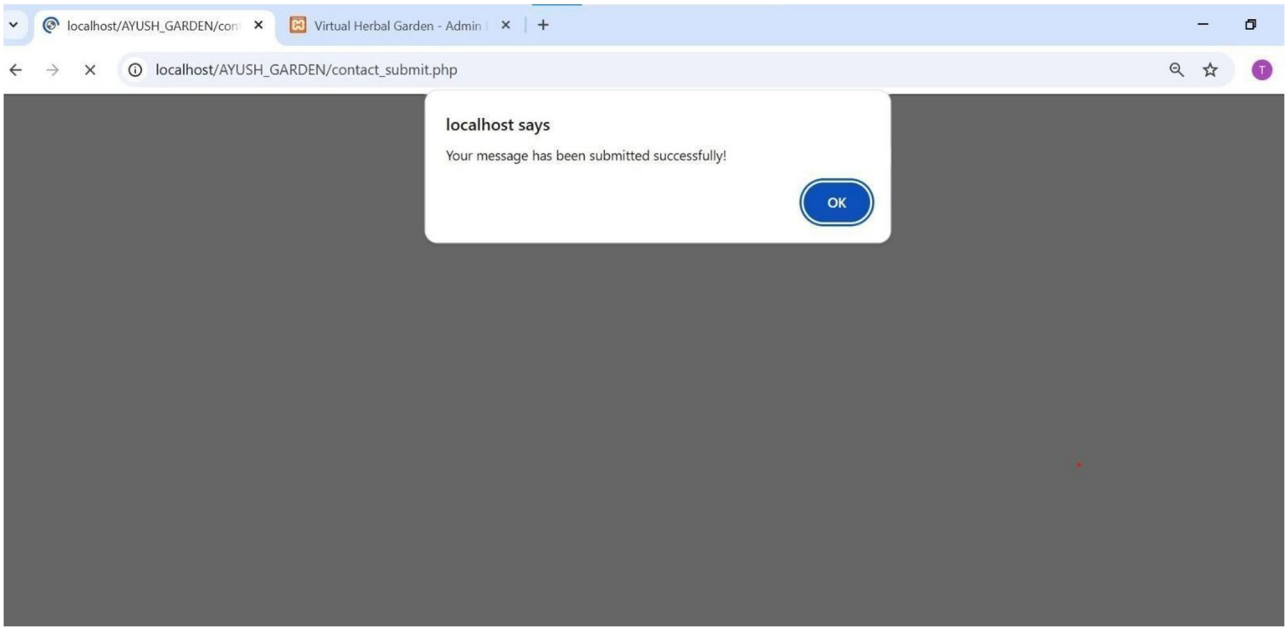
*9) After click on Siddha in Winter Season*



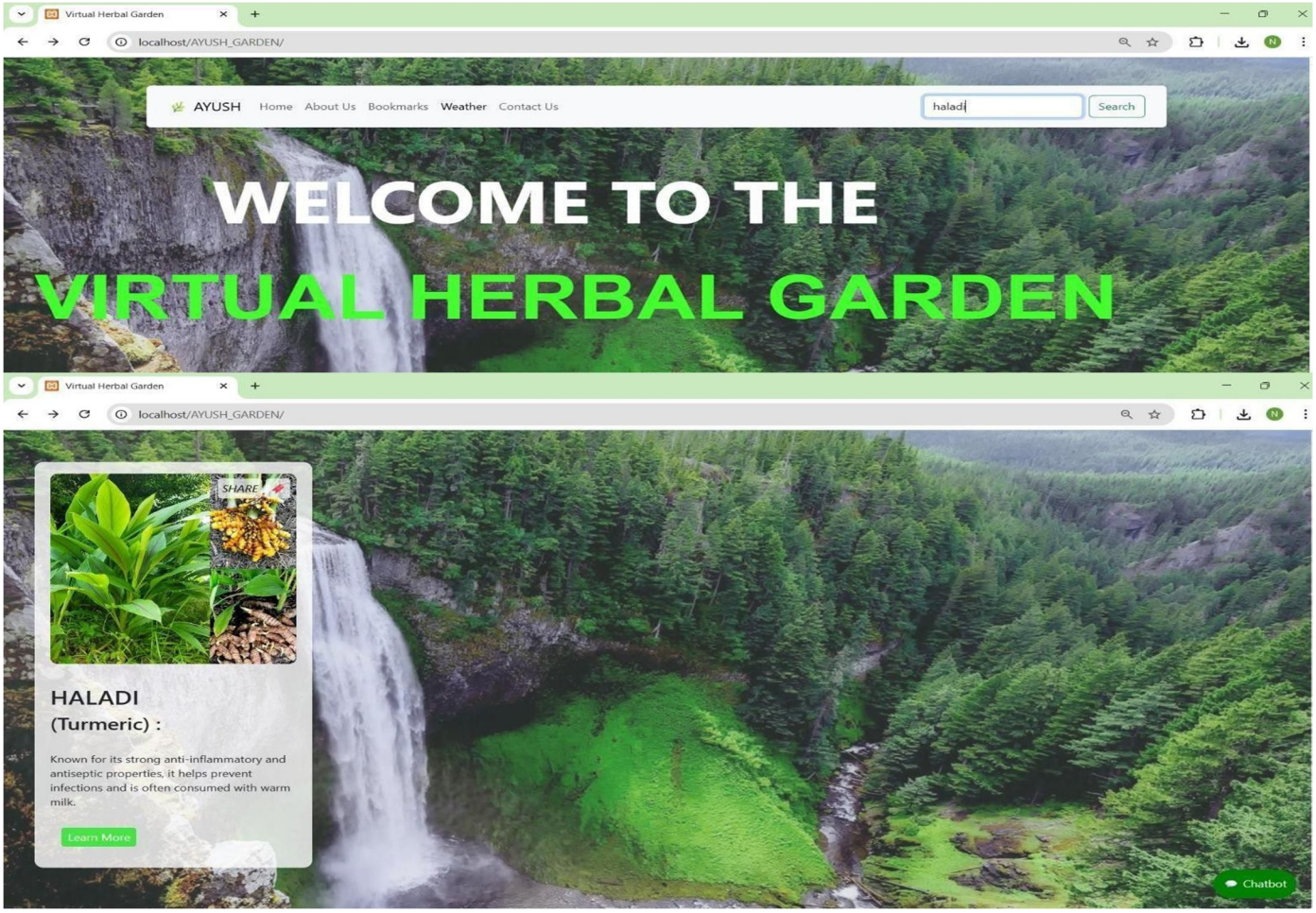

*10) After click in Contact Us navbar*



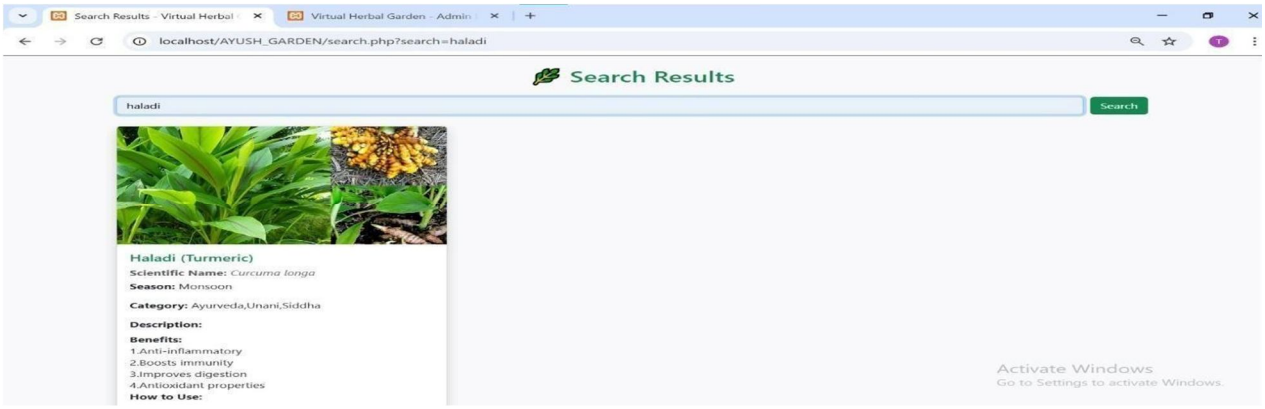
*11) After click on Submit button*



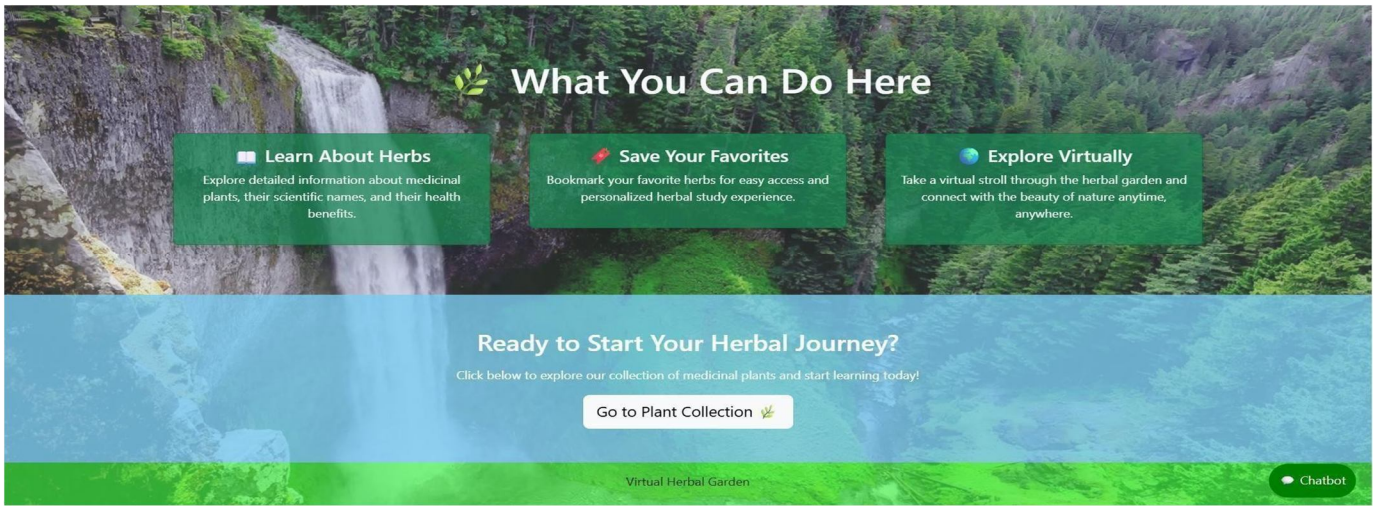

*12) After click on search tag for Haladi Plant:*

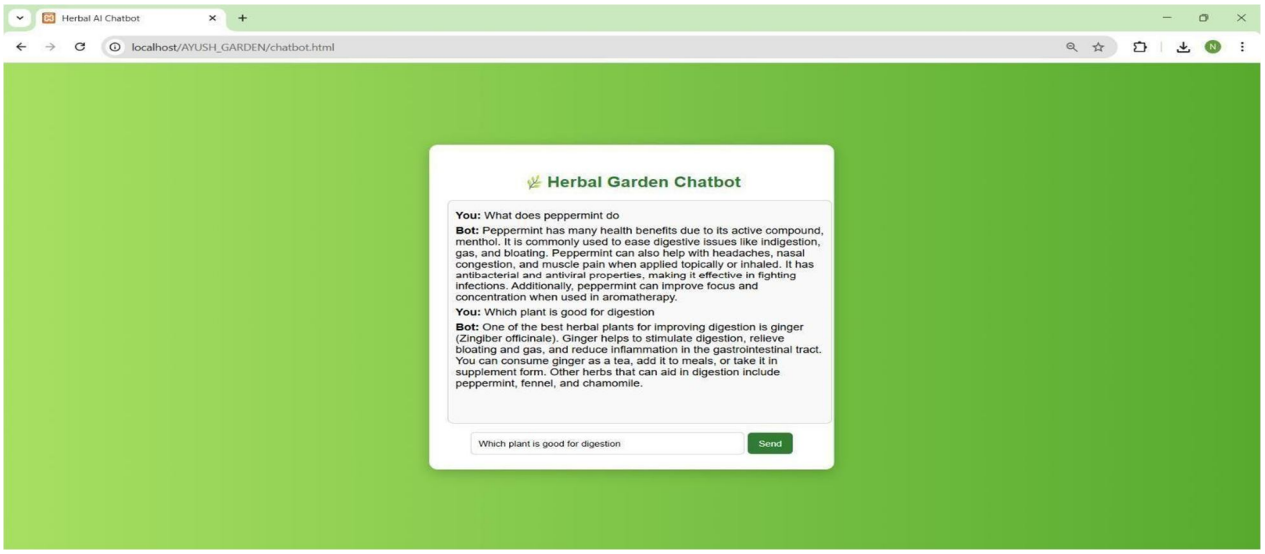


*13) After click on Search:*

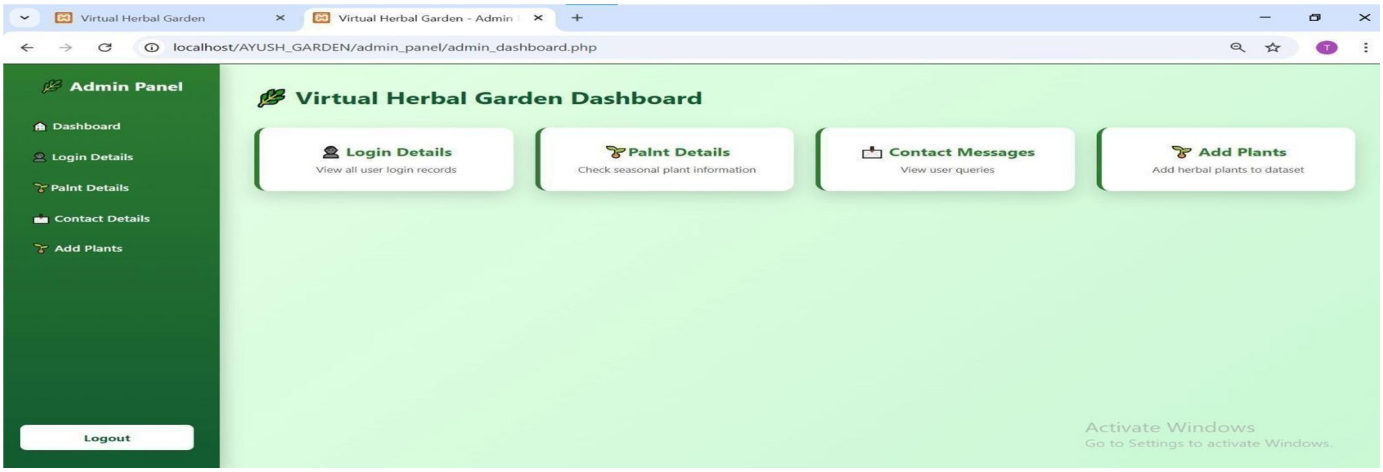



*14) After click on Chatbot*

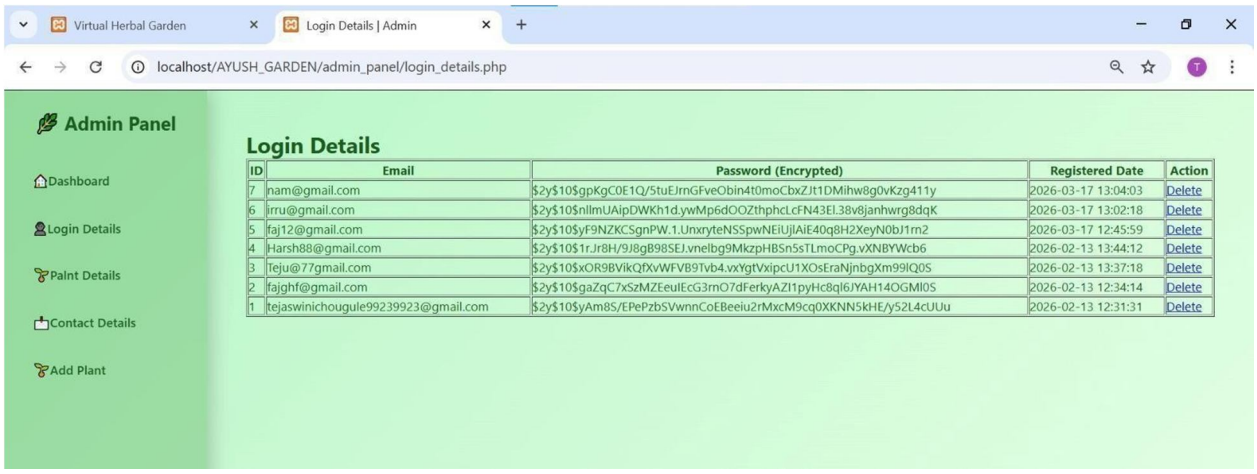


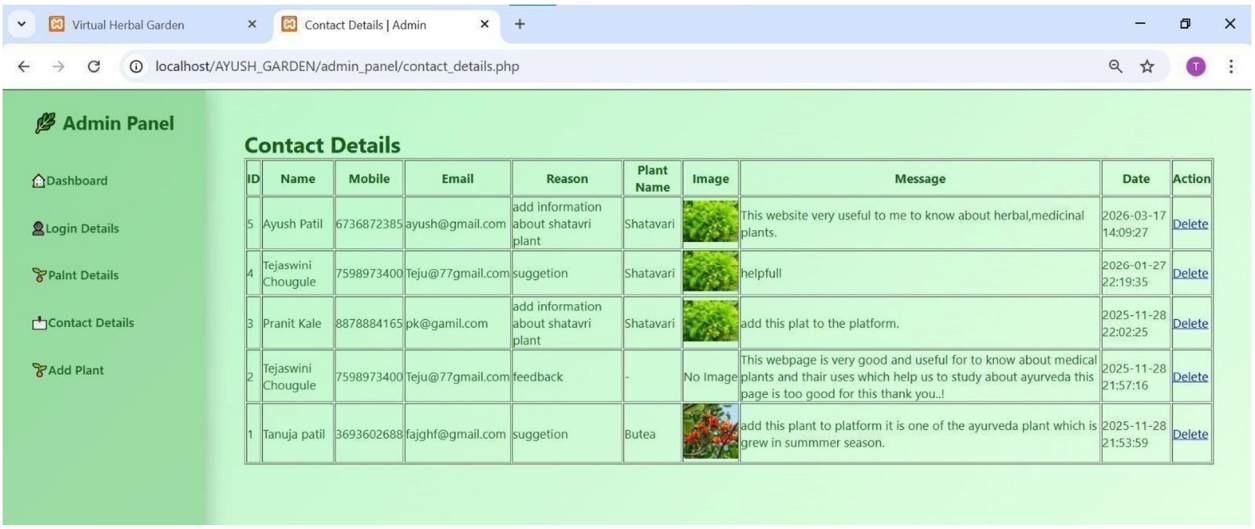
*15) Admin Dashboard:*



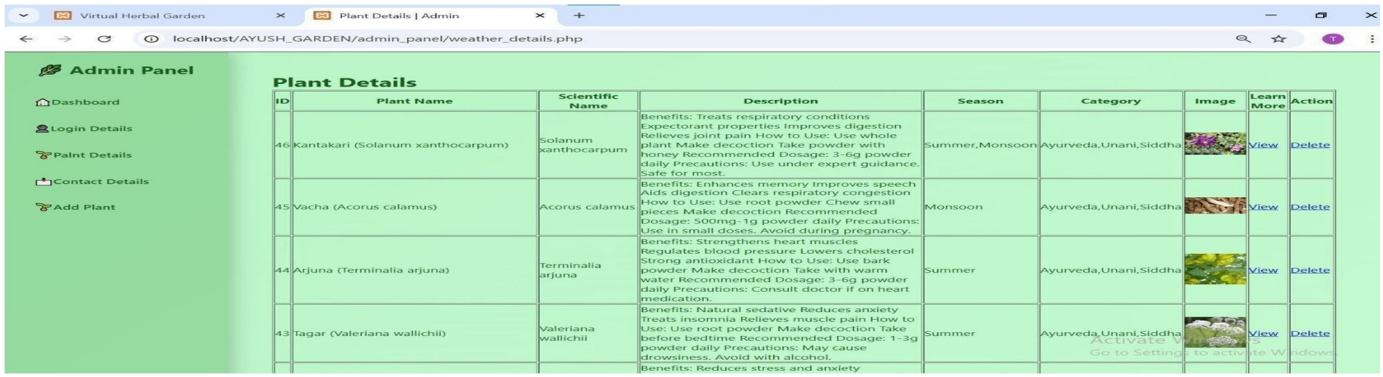

*16) After click on Login Details*



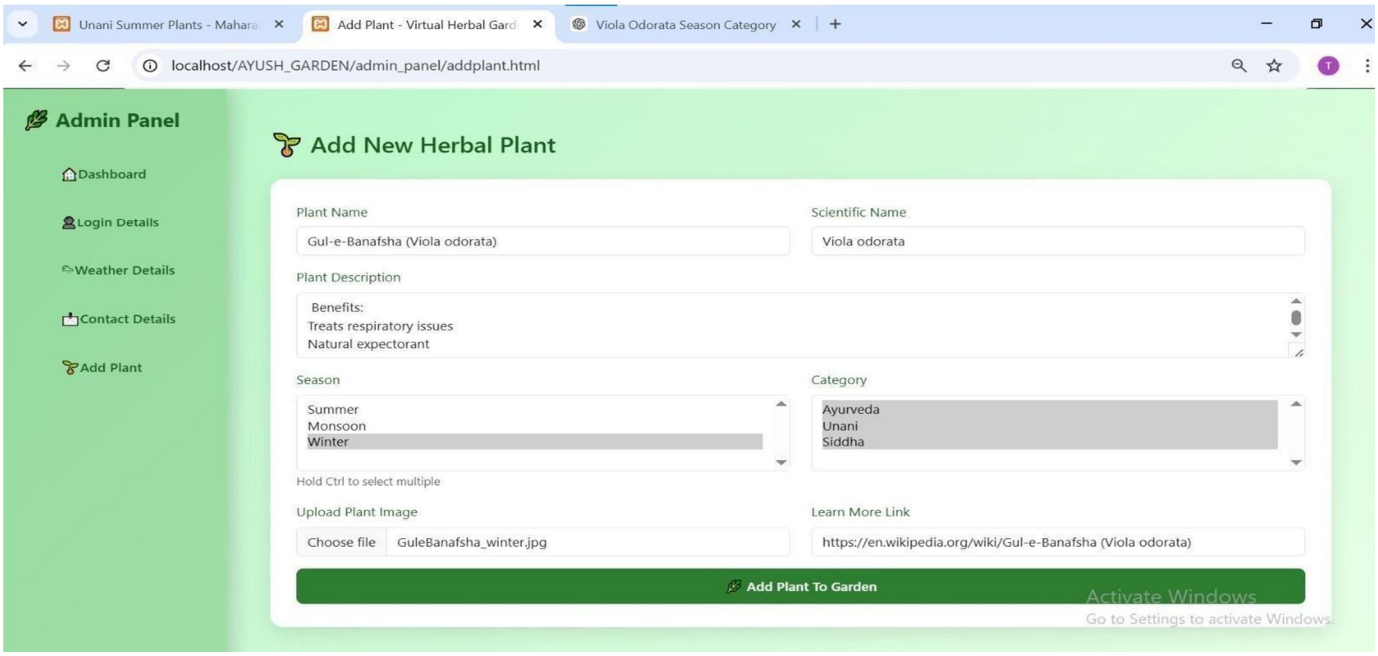

*17) After click on Plant Details*



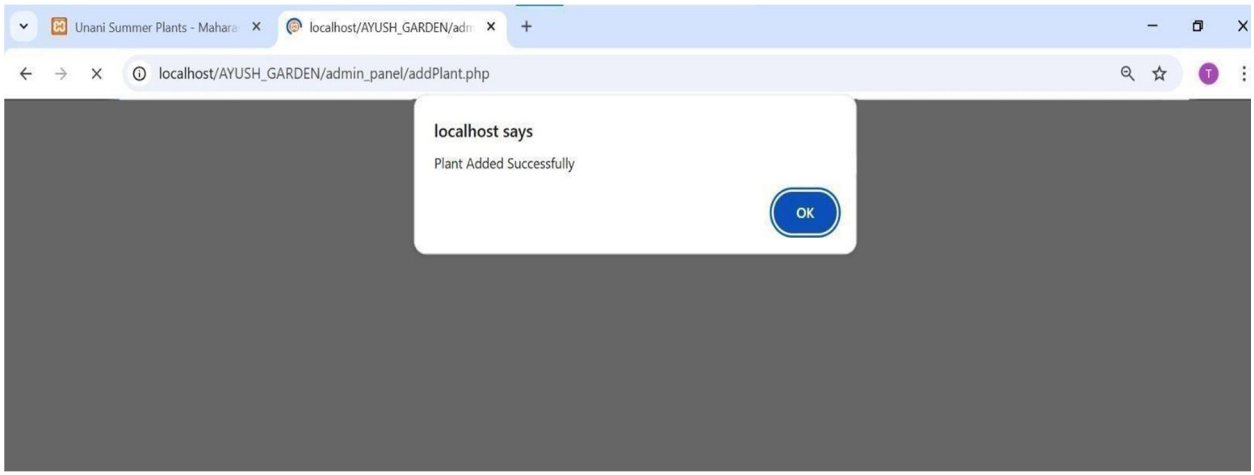
*18) After click on contact details:*



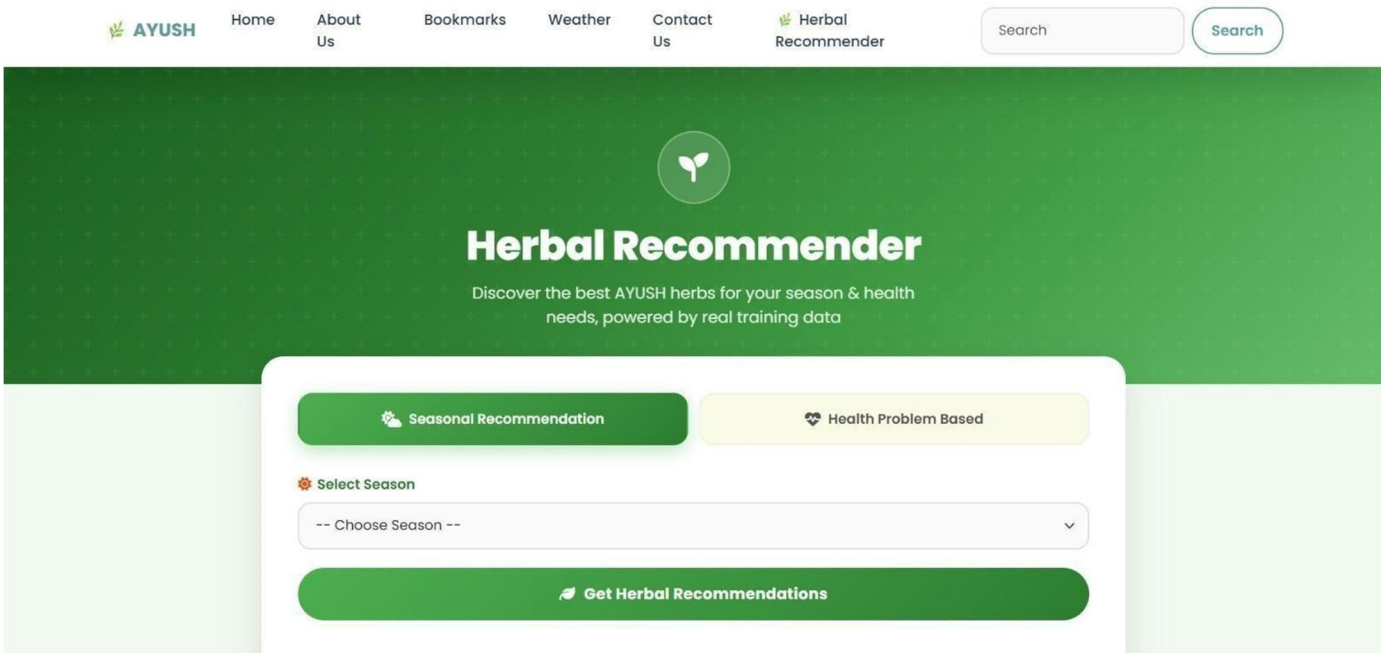

*19) After click on Add Plants*



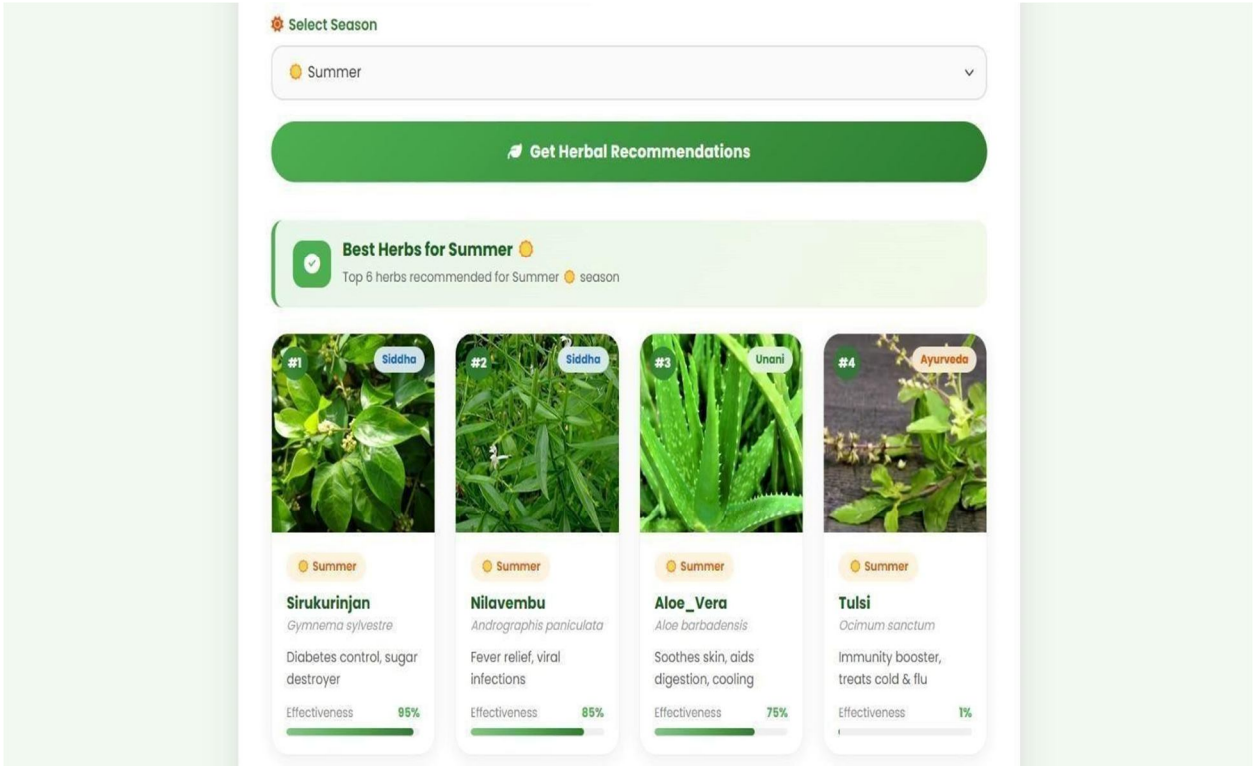

*20) After click on "Add Plant" To Garden button:*



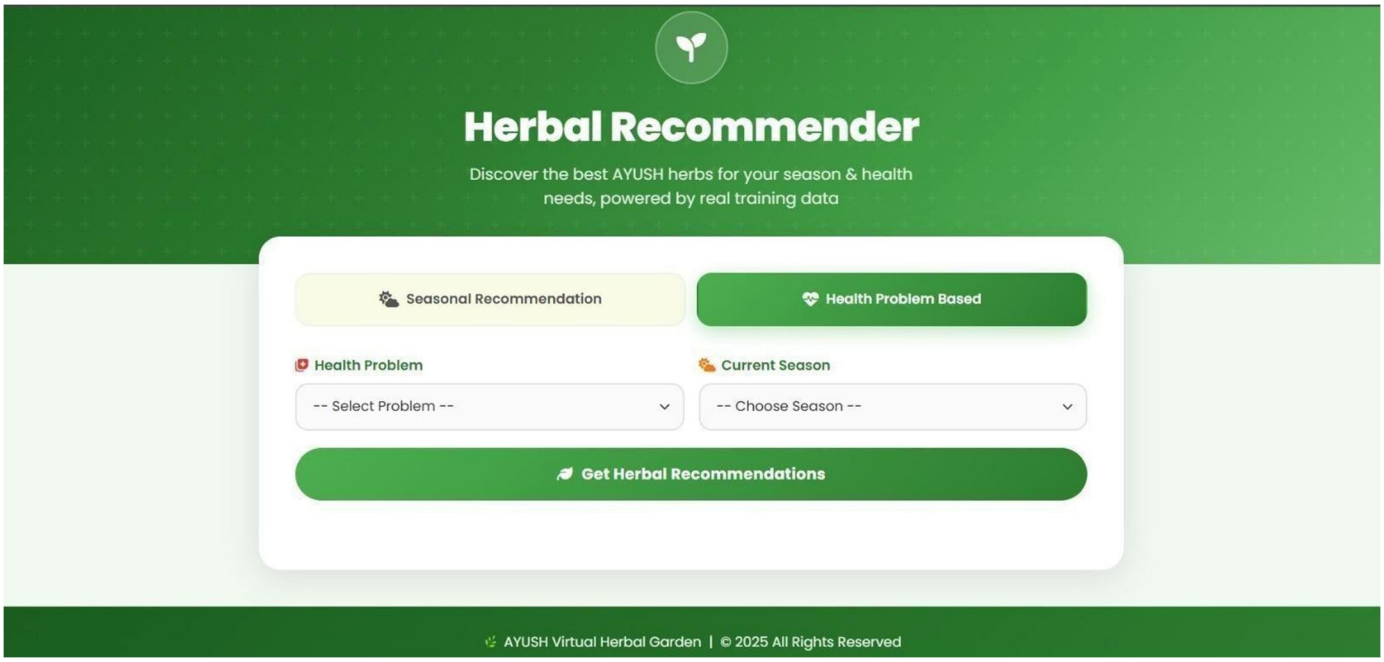
*21) After click on Herbal Recommender navbar*

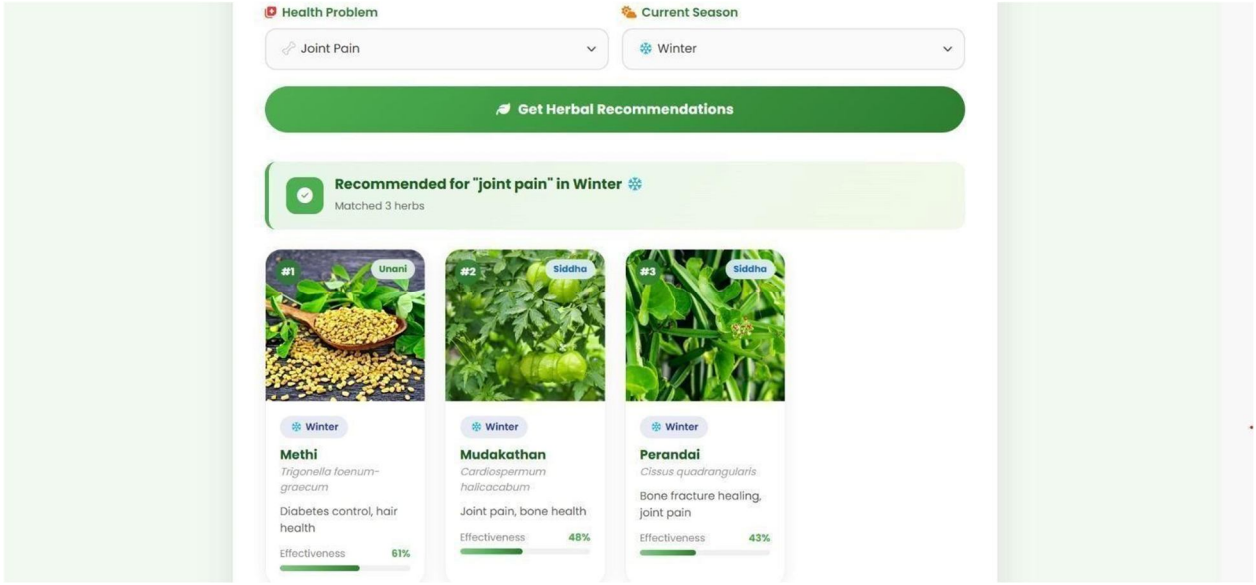



*22) Seasonal Recommendation:*



*23) Health Recommendation:*




## VI. CONCLUSION

The Virtual Herbal Garden is developed as an interactive digital platform that provides information about medicinal plants used in traditional healthcare systems such as AYUSH. The system helps users explore different herbal plants and learn about their medicinal properties, scientific names, and therapeutic uses. The integration of a Machine Learning–based recommendation system allows users to receive suitable herbal plant suggestions based on diseases or symptoms entered by the user. In addition, the AI chatbot improves user interaction by answering queries and guiding users in finding appropriate herbal remedies.

The system is implemented using web technologies such as HTML, CSS, JavaScript, and PHP, which provide a responsive and user-friendly interface. The Virtual Herbal Garden promotes awareness of medicinal plants and makes herbal knowledge easily accessible through a digital platform.

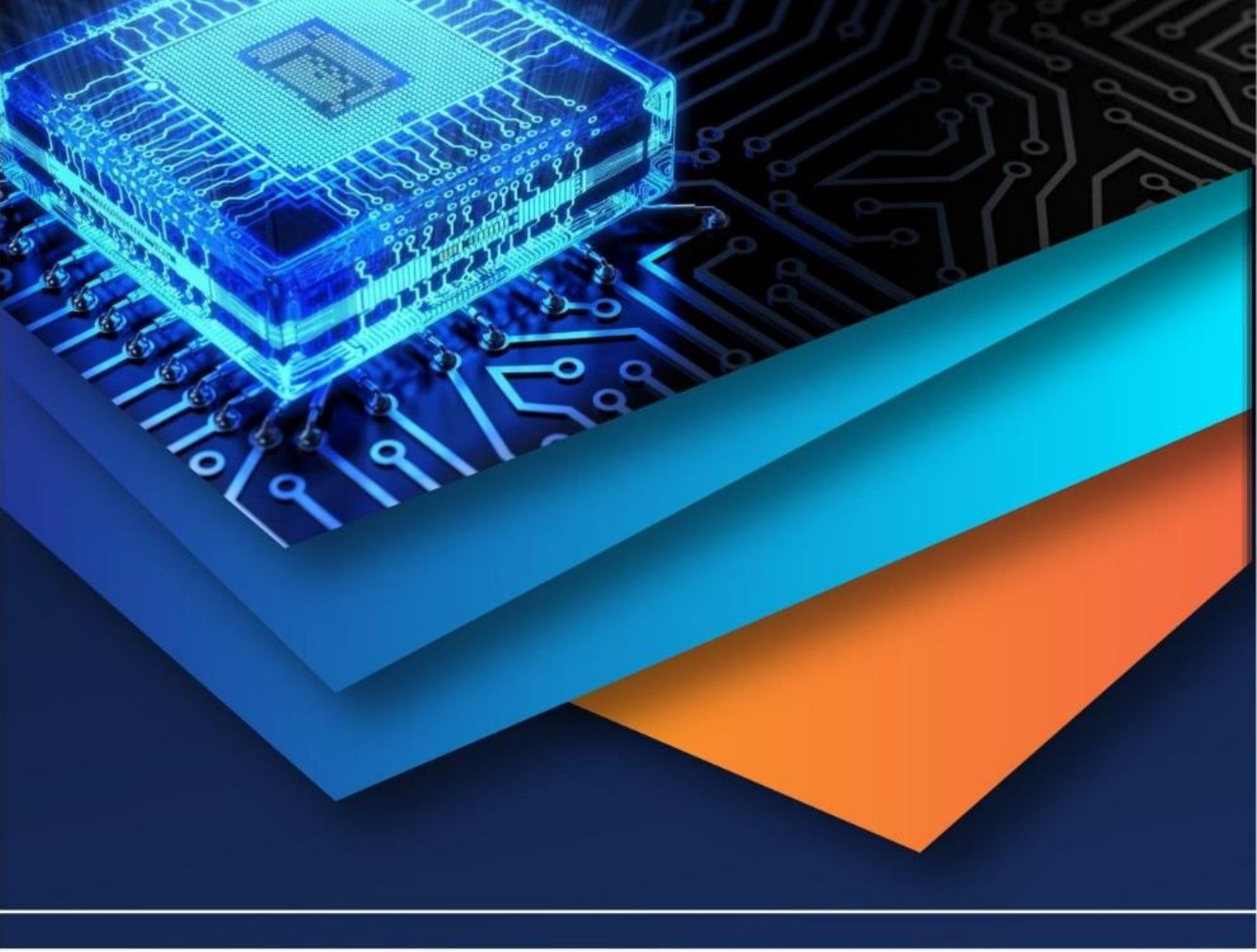
## VII. ACKNOWLEDGMENT

The authors would like to express their sincere gratitude to U. A. Patil for their valuable guidance, encouragement, and support throughout the development of this project. The authors also thank the institution for providing the necessary facilities and resources to successfully complete the Virtual Herbal Garden project. Their continuous support and motivation helped in completing this work successfully.

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