



UNIVERSITY OF SARGODHA CAPSTONE 1 GARDEN VISION AR

(Project Proposal)

Project Code

CMPC- 401

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1. Abstract

- The importance of plants in our lives cannot be overstated. They bring beauty, freshness, and a sense of calm to our surroundings. They create oxygen, remove carbon dioxide, give us food and medicine. They help keep the environment in balance and are essential for our well-being.
- Using AR Model, users can visualize how different plants would look in their own space. It helps them choose the right plants for their environment.
- The process of buying and selling plants can be challenging and time-consuming. It requires careful consideration and effort to navigate the various aspects involved.
- There are few market places that provide the services of buying and selling of plants, but these platforms only sell and buy the plants.
- Our aim is to develop a dedicated market place for the buying and selling plants. This online platform will provide a convenient and efficient way for plant enthusiasts, gardeners, and businesses to connect and engage in transactions.
- Through our platform customer can not only buy and sell the plants but they can also detect the disease in plants and also suggest the medication of these diseases.

2. Background and Justification

- Our web-based project, Green World, is a comprehensive platform designed to provide a simple and smooth shopping experience for plant lovers. With a wide range of features, our platform aims to cater to the needs of users who are passionate about gardening and want to explore, purchase, and care for plants and gardening supplies.
- To begin their journey on our platform, users can easily register and create personalized accounts. This enables them to access a range of features and services tailored to their individual preferences and needs. By providing basic information, users can unlock the full potential of the Green World experience.
- Our extensive product catalog showcases a diverse assortment of plants, from ornamental flowers and succulents to fruit-bearing trees and exotic foliage. Each product listing includes detailed descriptions, high-quality images, and essential information such as sunlight requirements, watering schedules, and growth habits. Users can browse through the catalog, explore different categories, and discover their perfect plant companions.
- Once users find their desired plants, they can effortlessly add them to their shopping carts. The intuitive interface allows for easy customization, enabling users to adjust quantities and explore related products. After completing the purchase, users can

conveniently track their orders and stay updated on the delivery status, ensuring a seamless shopping experience.

- We understand that plant care is vital for the health and longevity of green companions. Our platform offers an extensive plant care guide, providing valuable insights and instructions on watering, fertilization, pruning, and other essential care practices. Whether users are new to plant care or experienced gardeners, our comprehensive guide empowers them to nurture their plants with confidence.
- To help users keep track of their favorite plants or those they aspire to own in the future, our platform offers wish list and favorites features. Users can save their preferred plants, create personalized lists, and easily revisit them at any time. This functionality ensures that users never miss out on the plants that capture their hearts.
- Our platform encourages users to share their experiences and insights by providing a reviews and ratings feature. This fosters a vibrant and trustworthy community where users can benefit from others' feedback and make informed decisions. By reading and contributing to reviews, users can establish a sense of community and build trust within the Green World platform.
- To keep users informed about exclusive offers, restocks, and plant care reminders, our platform incorporates a notification system. Users receive timely updates, ensuring they never miss out on important events or information. Additionally, a chat-bot feature offers immediate assistance, answering frequently asked questions and providing support throughout the users' journey.
- To cater to a broader range of gardening needs, our platform also offers a selection of high-quality seeds, ensuring users can start their plant journey from the very beginning. Additionally, we provide a range of services such as landscaping advice, plant arrangement ideas, and professional consultations. Users can also explore plants based on their location or find nurseries in their vicinity for convenient access.
- Our platform utilizes collaborative filtering algorithms to offer personalized recommendations based on users' preferences and browsing history. This enhances the shopping experience, allowing users to discover new plants that align with their interests. Moreover, users can set up alerts for their preferred plants, receiving notifications when they become available or are restocked.

1. We prioritize exceptional customer support, offering various channels for users to seek assistance or resolve any issues they may encounter. Our dedicated support team is readily available to address concerns and ensure a positive user experience.

3. Project Methodology

1. Sign-up and Login

- Requirement Gathering
- Design
- Implementation
- Testing

2 Product Catalog

2.1 Requirement Gathering

2.2 Design

2.3 Implementation

2.4 Testing

3 Shopping Cart:

3.1 Requirement Gathering

3.2 Design

3.3 Implementation

3.4 Testing

4 Order Tracking and History:

4.1 Requirement Gathering

4.2 Design

4.3 Implementation

4.4 Testing

5 Wish lists and Favorites:

5.1 Requirement Gathering

5.2 Design

5.3 Implementation

5.4 Testing

6 Customer Support:

6.1 Requirement Gathering

6.2 Design

6.3 Implementation

6.4 Testing

7 Services

7.1 Requirement Gathering

7.2 Design

7.3 Implementation

7.4 Testing

8 Online Payment

8.1 Requirement Gathering

8.2 Design

8.3 Implementation

8.4 Testing

9 Disease Detection

9.1 Requirement Gathering

9.2 Design

9.3 Implementation

9.4 Testing

WORK LOAD

➤ Abdul Jabbar	➤ Muhammad Talha Saeed	➤ Qais Ali
➤ Requirement Gathering	➤ Implementation	➤ Design
➤ Design	➤ Requirement Gathering	➤ Testing
➤ Testing	➤ Implementation	➤ Requirement Gathering
➤ Design	➤ Testing	➤ Design
➤ Implementation	➤ Design	➤ Testing
➤	➤	➤
➤	➤	➤

4. Project Scope

AUGMENTED REALITY

- **Virtual Plant Displays**
- Users can visualize how different plants would look in their own space through AR, helping them choose the right plants for their environment.
- **Interactive Plant Care Guides**
- AR can provide step-by-step guides for plant care, overlaying information on the plant itself when viewed through a smartphone or tablet.
- **Plant Identification**
- Users can point their devices at a plant to get instant identification and care tips, creating a more engaging learning experience.
- **Design Simulations**
- Users can experiment with different plant arrangements in a virtual garden setting, allowing for better landscape planning and design.
- **Education and Engagement**

- AR can offer interactive educational content, such as the growth cycle of plants or environmental benefits, increasing user engagement.
 - **Enhanced E-commerce Experience**
- Potential buyers can visualize how plants will fit into their homes or gardens before making a purchase, improving decision-making.

5. High level Project Plan

- Develop an intuitive and user-friendly website interface for easy navigation and plant selection.
- Build a comprehensive product catalog with detailed plant information, including descriptions, images, and pricing.
- Implement a search functionality that allows users to find plants based on various criteria such as species, size, and care requirements.
- Provide personalized plant care guidance, including watering schedules, sunlight requirements, pruning techniques, and pest control measures.
- Enable users to add plants to a shopping cart, adjust quantities, and save favorites for future reference.
- Implement a secure and efficient online payment system to facilitate seamless transactions.
- Integrate order tracking and history functionalities to enable users to monitor the progress of their purchases.
- Develop a plant disease detection feature to assist users in identifying and addressing common plant health issues.
- Implement collaborative filtering techniques to recommend plants based on user preferences, purchase history, and similar profiles.
- Offer customer support channels, including email, live chat, and a dedicated support hotline, to address user inquiries and concerns promptly.
- Enable users to create wish-lists and share their favorite plants on social media platforms for inspiration and engagement.
- Provide notifications to users about order updates, promotions, new arrivals, and plant care tips. Incorporate location-based services to help users find nearby nurseries and plants suitable for their specific climate and growing conditions.

- Ensure the website is responsive and accessible across various devices, including desktops, smart phones, and tablets.
- Conduct regular testing and maintenance to ensure the website's functionality, performance, and security.
- Incorporate location-based services to help users find nearby nurseries and plants suitable for their specific climate and growing conditions.

6. References

- The practice of integrating plants into indoor and outdoor spaces, commonly known as indoor gardening or urban gardening, has gained significant attention in recent years. Numerous studies have highlighted the positive impact of plants on human health, well-being, and productivity. For instance, research conducted by **Lee et al. (2015)** demonstrated that the presence of indoor plants in work environments resulted in reduced stress levels and improved cognitive function among employees.
- Choosing the right plants for a specific environment is crucial for their successful growth. Understanding the light requirements, temperature tolerances, and water needs of different plant species is essential. In their study on the effects of light on plant growth, **Smith et al. (2018)** found that different plants have varying light intensity preferences, and providing adequate lighting is crucial for their overall health and development.
- Once plants are selected, proper care and maintenance are vital to ensure their longevity. Plant care involves various aspects, including watering, fertilizing, pruning, and pest control. Studies by **Johnson and Smith (2017)** emphasized the importance of appropriate watering techniques, as over watering or under watering can lead to detrimental effects on plant health.
- Additionally, understanding the nutritional requirements of plants and using suitable fertilizers can significantly contribute to their overall well-being. Plant health issues, diseases, and pests are common challenges faced by gardeners. Identifying and addressing these problems promptly can prevent the spread of diseases and ensure plant vitality.

- Research conducted by **Brown et al. (2019)** explored natural pest control methods for common indoor plant pests, highlighting the effectiveness of organic remedies in maintaining plant health while minimizing environmental impact.