

A FIELD PROJECT REPORT ON
Vignan's Herbal Garden
A Touch of Green, a World of Healing

Submitted

In partial fulfillment of the requirements for the award of the degree

BACHELOR OF TECHNOLOGY
In
COMPUTER SCIENCE and ENGINEERING

by

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(Deemed to be University)
Vadlamudi, Guntur - 522213, INDIA

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CERTIFICATE

This is to certify that the field project entitled "VIGNAN'S HERBAL GARDEN" being submitted by **(M. DIVYA SRI & 231FA04A21), (N. JAYA SURYA & 231FA04A42), (K. YUVA NAGENDRA & 231FA04BA53), and (CH. RAMYA & 231FA04B63)** in partial fulfilment of the requirements for the degree of Bachelor of Technology in Computer Science and Engineering at Vignan's Foundation for Science, Technology and Research (Deemed to be University), Vadlamudi, Guntur District, Andhra Pradesh, India.

This is a bonafide work carried out by the aforementioned students under my guidance and supervision.

K. Ravikumar
Guide

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DECLARATION

We hereby declare that the work presented in the field project titled “VIGNAN’S HERAL GARDEN” is the result of our own efforts and investigations.

This project is being submitted under the supervision of **Mr. K. Pavan Kumar, Designation** in partial fulfillment of the requirements for the Bachelor of Technology (B.Tech.) degree in Computer Science and Engineering at Vignan’s Foundation for Science, Technology and Research (Deemed to be University), Vadlamudi, Guntur, Andhra Pradesh, India.

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1. INTRODUCTION:

Vignan's Herbal Garden is an innovative initiative designed to highlight the rich diversity of medicinal and aromatic plants cultivated within our college farm. This project aims to serve as a comprehensive educational resource for students, faculty, and the local community, providing in-depth descriptions of various plants, their uses, and their significance in both traditional and modern medicine.

Herbal gardens have been a cornerstone of human civilization for centuries, serving as sources of food, medicine, and cultural heritage. In recent years, there has been a resurgence of interest in herbal medicine, driven by a growing awareness of the benefits of natural remedies and sustainable practices. Vignan's Herbal Garden seeks to capitalize on this trend by not only showcasing the plants available on our campus but also by educating individuals about their ecological importance and potential health benefits.

The garden will feature a variety of plants, including herbs, shrubs, and trees, each with unique properties and uses. By promoting awareness of these plants, we aim to foster a deeper appreciation for biodiversity and encourage sustainable practices in **herbal gardening**. The garden will serve as a living laboratory for research and experimentation in herbal medicine, providing students with hands-on learning opportunities and fostering a connection between academic knowledge and practical application.

Animated Visual Elements: Includes a spinning disc, interactive loop button, and animated title.

- **Theme Toggle:** Allows switching between dark and light modes seamlessly.
- **Interactive Playlist Management:** Displays recently played songs and dynamically loads the **playlist**.

By combining these features, Sound Scapes transforms simple music listening into a visually enriched experience directly from the browser.

PROBLEM STATEMENT:

Despite the rich biodiversity present in our college farm, there exists a significant gap in accessible information regarding the various plants and their potential benefits. Students and faculty often find it challenging to identify plants, understand their uses, and appreciate their ecological importance. This lack of knowledge can lead to missed opportunities for utilizing these resources for educational, medicinal, and ecological purposes.

Currently, the information about the plants in Vignan's Herbal Garden is fragmented and not systematically organized. While some informal knowledge may be shared among faculty and students, there is no centralized database or platform that provides comprehensive details about each plant. Existing resources may include pamphlets or verbal communication, which are often insufficient for in-depth learning. Furthermore, there is minimal interaction with the local community, limiting the outreach and impact of the garden.

The absence of a structured approach to documenting and disseminating information about the plants not only hinders educational opportunities but also restricts community engagement. Without a clear understanding of the benefits and uses of these plants, individuals may overlook the potential for incorporating herbal remedies into their lives, thereby missing out on the advantages of natural health solutions.

CURRENT SYSTEM OVERVIEW:

At present, the information regarding the plants in Vignan's Herbal Garden is largely unorganized and lacks a cohesive structure. The existing system relies on informal methods of communication, such as word-of-mouth and occasional workshops, which do not provide a comprehensive understanding of the plants available. While some faculty members may possess extensive knowledge about specific plants, this information is not readily accessible to students or the broader community.

The current resources may include printed materials like pamphlets or flyers, but these are often limited in scope and may not be updated regularly. Additionally, the lack of a digital platform means that individuals cannot easily access information about the plants from remote locations or on-the-go. This results in a missed opportunity for students to engage with the garden outside of scheduled classes or events.

Moreover, the garden's potential as a community resource remains largely untapped. There is minimal outreach to local residents, schools, and organizations, which could benefit from the knowledge and resources available in the garden. This lack of engagement not only limits the garden's impact but also prevents the establishment of valuable partnerships that could enhance educational and research opportunities.

PROPOSED SOLUTION:

To address the challenges identified in the current system, we propose the development of a comprehensive digital platform that serves as a centralized database for Vignan's Herbal Garden. This platform will be designed to provide easy access to information about the plants, promote educational resources, and foster community engagement. The key components of the proposed solution include:

1. **Comprehensive Plant Database:** The core feature of the platform will be a user-friendly interface that provides detailed descriptions of each plant in the garden. This will include scientific names, common names, images, and information about their medicinal properties, uses, and cultivation tips. Users will be able to search for plants by various criteria, such as their medicinal benefits, growth conditions, or culinary uses.
2. **Educational Resources:** The platform will host a variety of interactive content, including articles, videos, and tutorials on topics related to herbal gardening, plant identification, and the benefits of various herbs. This educational material will be designed to cater to different learning styles and

levels of expertise, ensuring that all users can benefit from the information provided.

3. Community Engagement: To encourage local community involvement, the platform will feature a calendar of events, including workshops, guided tours, and volunteer opportunities in the garden. This will not only promote awareness of the garden but also foster a sense of community and collaboration among students, faculty, and local residents.
4. Research Opportunities: The platform will facilitate collaboration between students and faculty for research projects related to herbal medicine, biodiversity, and sustainable.

2. SYSTEM REQUIREMENTS:

Hardware and SOFTWARE REQUIREMENTS FOR BOOKSPIRE:

To develop a BookSpire, you will need to consider both hardware and software system requirements. Below is a general guide to the system requirements you may need.

Hardware Requirements:

Processor (CPU):

Minimum: 1.5 GHz Dual-Core Processor.

Recommended: 2.0 GHz Quad-Core or better.

RAM:

Minimum: 2 GB.

Recommended: 4 GB or more.

Storage:

Minimum: 200 MB free disk space for project files and dependencies

Recommended: 1 GB or more

Display:

Minimum: 1366x768 resolution

Recommended: 1920x1080 (Full HD) or higher

Keyboard and Mouse (for login and accessing books)

Internet Connection: (if online)

Required for accessing the books (or) to check the wish list

SOFTWARE REQUIREMENTS:

These depend on whether the project is web-based, desktop-based, or mobile-based. Below are some general suggestions for a web-based bookshelf.

Web-Based Bookshelf (Frontend and Backend):

HTML5: Used for structuring the webpage and implementing the book management interface.

CSS: Enhances the visual design and responsiveness of the book management interface.

JavaScript (ES6): Implements interactive features such as adding books to a wishlist and creating new book entries, improving user experience

. Browser Compatibility:

1. Google Chrome

2. Mozilla Firefox

3. Microsoft Edge

4. Safari

SOFTWARE REQUIREMENTS SPECIFICATION FOR BOOKSPIRE:

A Software Requirements Specification (SRS) is a comprehensive description of the

functionality, performance, and constraints of a software application. Below is an example of a SRS document for a Book Spire project.

Frontend: HTML, CSS, JavaScript JSX

Backend: MongoDB Atlas

HTML structures the content and elements of the web pages, including user authentication, profile pages, and the reading list pages.

CSS enhances the visual appearance, ensuring a professional and responsive design for a seamless user experience

JavaScript (JSX) is used to add interactivity, dynamically update user profiles, and manage the reading list in real-time.

Browser Compatibility: Chrome, Firefox, Edge

The application is designed to run smoothly on modern web browsers like Google Chrome, Mozilla Firefox, and Microsoft Edge. These browsers provide better JavaScript execution, enhanced security, and improved performance for a seamless user experience.

Text Editor: VS Code, Sublime Text, or any other code editor.

3. SYSTEM DESIGN FOR VIGNAN'S HERBAL GARDEN:

1. System Architecture

The system will utilize a client-server architecture:

Presentation Layer (Client-Side): A web-based user interface developed using HTML, CSS, and JavaScript frameworks (e.g., React or Angular) for a responsive experience.

Application Layer (Server-Side): A backend developed using a server-side language (e.g., Node.js or Python) to handle business logic and process user requests.

Data Layer: A database (e.g., MySQL or MongoDB) to store information about plants, users, educational resources, and community events.

2. Components of the System

User Interface (UI):

Homepage: Overview of the garden and featured plants.

Plant Database: Searchable list of plants with detailed descriptions and images.

Educational Resources: Articles, videos, and tutorials on herbal gardening.

Community Engagement: Calendar of events and workshops.

User Registration/Login: Secure authentication for users.

Backend Services:

API: RESTful API for CRUD operations on plant data and user accounts.

Authentication Service: Manages user login and security.

Notification Service: Sends updates about events and resources.

Database:

Plant Information Table: Details about each plant.

User Table: User information and roles.

Educational Resources Table: Articles and tutorials.

Events Table: Information about community events.

3. Functional Requirements

User Registration and Authentication: Secure account creation and login.

Plant Database Management: Search and view plant details; admin can manage entries.

Educational Resources: Access to articles and videos; user submissions for review.

Community Engagement: View and register for events; receive notifications.

Feedback and Support: Users can provide feedback and access support resources.

4. Non-Functional Requirements

Performance: Fast loading times and support for multiple users.

Scalability: Ability to grow with increasing users and data.

Security: Protect user data with secure authentication and encryption.

Usability: Intuitive interface for all users.

Maintainability: Well-documented and modular codebase.

5. Technology Stack

Frontend: HTML, CSS, JavaScript (React/Angular).

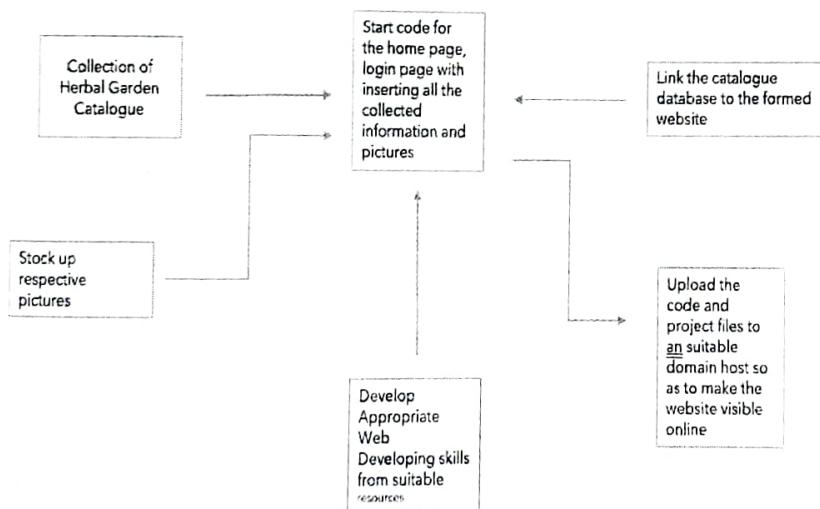
Backend: Node.js or Python (Flask/Django).

Database: MySQL or MongoDB.

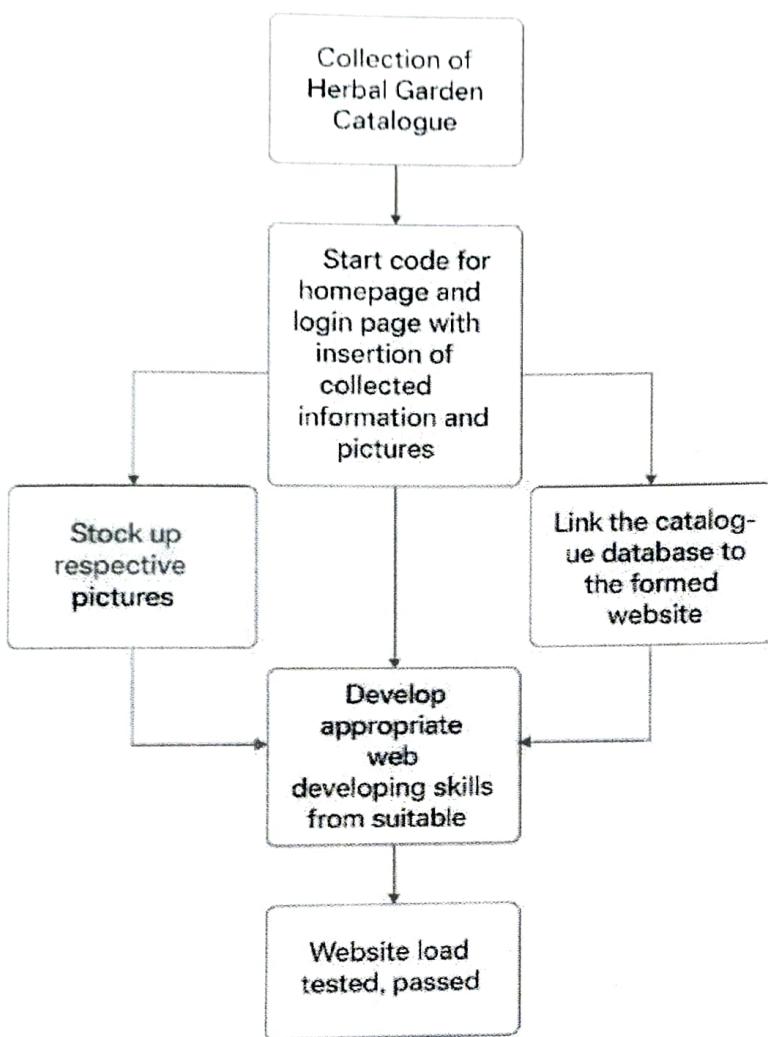
MODULES OF SYSTEM:

- Welcome Module
- Login Display Module
- Result Module

UML DIAGRAMS:



∴ This flowchart outlines the development of a Herbal Garden Catalogue website, starting from data collection to coding and database linking.



∴ This flowchart outlines the key steps in developing a Herbal Garden Catalogue website.

4 IMPLEMENTATION:

```
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8" />
<meta name="viewport" content="width=device-width, initial-scale=1.0"/>
<title>Technical Botanical Garden</title>
<style>
body {
    font-family: Arial, sans-serif;
    margin: 0;
    padding: 0;
    background-color: #f0f8ff;
}

header {
    background-color: #4CAF50;
    padding: 20px;
    text-align: center;
    color: white;
}

nav ul {
    list-style: none;
    padding: 0;
    margin: 10px 0;
    text-align: center;
}

nav ul li {
    display: inline;
    margin: 0 15px;
}

nav ul li a {
    text-decoration: none;
    color: white;
    font-weight: bold;
}

section {
```

```
padding: 20px;
}

.plant {
    margin: 20px auto;
    max-width: 400px;
}

.plant img {
    max-width: 100%;
    height: auto;
    display: block;
    margin: auto;
}

.description {
    display: none;
    margin-top: 10px;
}

.plant:hover .description {
    display: block;
}

footer {
    background-color: #4CAF50;
    color: white;
    text-align: center;
    padding: 10px;
}

form {
    max-width: 400px;
    margin: auto;
}

label {
    display: block;
    margin-top: 10px;
}

input, textarea {
```

```

width: 100%;
padding: 8px;
margin-top: 5px;
box-sizing: border-box;
}

input[type="submit"] {
background-color: #4CAF50;
color: white;
border: none;
margin-top: 15px;
cursor: pointer;
}

input[type="submit"]:hover {
background-color: #45a049;
}

</style>
</head>
<body>

<header>
<h1>Technical Botanical Garden</h1>
<nav>
<ul>
<li><a href="#entry">Home</a></li>
<li><a href="#about">About</a></li>
<li><a href="#plants">Plants</a></li>
<li><a href="#contact">Contact</a></li>
<li><a href="#login">Login</a></li>
</ul>
</nav>
</header>

<!-- Entry (entry.html) -->
<section id="entry">
<h2>Welcome to the Technical Botanical Garden</h2>
<p>Explore a world of plants and greenery. This garden showcases a wide variety of species and is maintained by students of the Technical Department.</p>
</section>

```

```

<!-- About (about.html) -->
<section id="about">
  <h2>About Us</h2>
  <p>This botanical garden is a living museum where we collect, conserve, and display a wide variety of plant species for education and inspiration.</p>
</section>

<!-- Plants (bot.html + bot2.html) -->
<section id="plants">
  <h2>Featured Plants</h2>

  <div class="plant">
    <h3>Jatropha</h3>
    
    <div class="description">
      <p>Jatropha is a drought-resistant perennial that grows well in marginal/poor soil.</p>
    </div>
  </div>

  <div class="plant">
    <h3>Bougainvillea</h3>
    
    <div class="description">
      <p>Bougainvillea is a thorny ornamental vine, bush, or tree with flower-like spring leaves.</p>
    </div>
  </div>

  <div class="plant">
    <h3>Impatiens</h3>
    
    <div class="description">
      <p>Impatiens are popular garden plants known for their brightly colored flowers.</p>
    </div>
  </div>

  <div class="plant">
    <h3>Begonia</h3>
    
    <div class="description">
      <p>Begonias are shade-loving plants with asymmetrical leaves and colorful blooms.</p>
    </div>
  </div>

```

```

</div>

<div class="plant">
  <h3>Tagetes (Marigold)</h3>
  
  <div class="description">
    <p>Marigolds are easy to grow and known for their bright yellow and orange blooms.</p>
  </div>
</div>

<div class="plant">
  <h3>Petunia</h3>
  
  <div class="description">
    <p>Petunias are trumpet-shaped flowers that are great for garden beds and containers.</p>
  </div>
</div>

</section>

<!-- Contact (contact.html) -->
<section id="contact">
  <h2>Contact Us</h2>
  <form action="#" method="post">
    <label for="name">Name:</label>
    <input type="text" id="name" name="name" required />

    <label for="email">Email:</label>
    <input type="email" id="email" name="email" required />

    <label for="message">Message:</label>
    <textarea id="message" name="message" rows="4" required></textarea>

    <input type="submit" value="Send" />
  </form>
</section>

<!-- Login (login.html) -->
<section id="login">
  <h2>Login</h2>
  <form action="#" method="post">

```

```

<label for="username">Username:</label>
<input type="text" id="username" name="username" required />

<label for="password">Password:</label>
<input type="password" id="password" name="password" required />

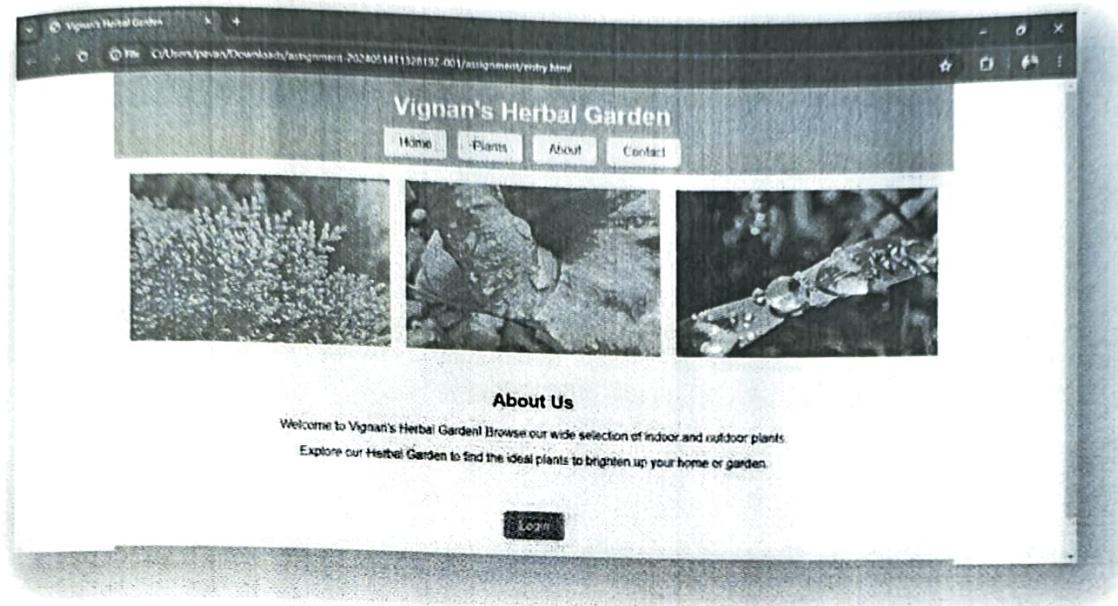
<input type="submit" value="Login" />
</form>
</section>
<footer>
  <p>&copy; 2024 Technical Botanical Garden. All rights reserved.</p>
</footer>
<script>
  // Optionally, add interactivity here if needed.
</script>
</body>
</html>

```

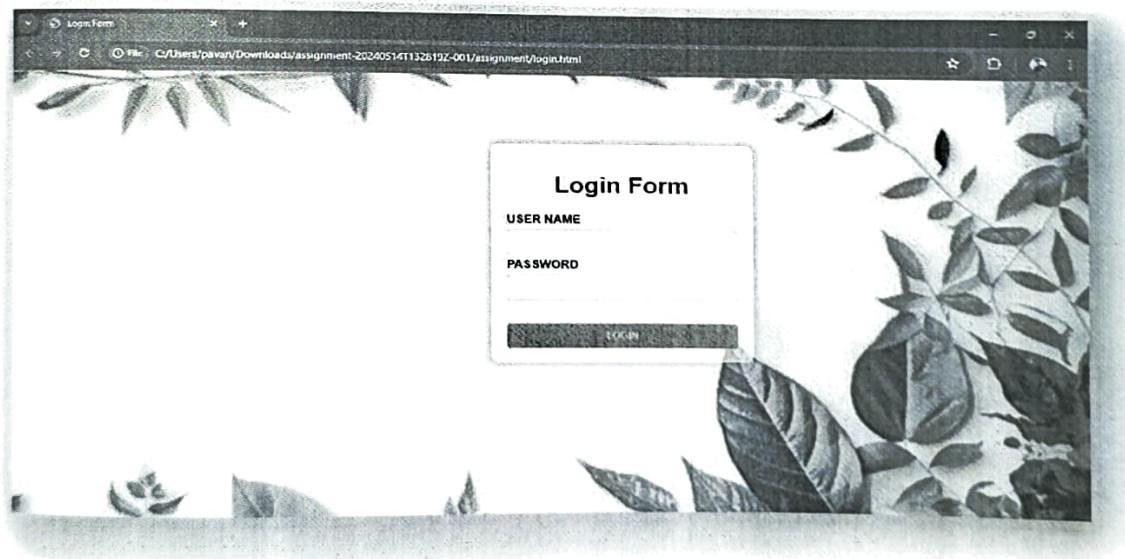
TEST CASES:

Test Case ID	Test Objective	Input	Expected Result	Actual Result	Status
TC001	Verify that the home page loads correctly	Navigate to the website URL	Home page loads with correct layout, title, and content	Home page loaded successfully with correct content	Pass
TC002	Verify herbal catalogue entries display	Open the catalogue section/page	Plant list with names, images, and details are visible	Catalogue entries displayed correctly	Pass
TC003	Check image display for herbal plants	View a catalogue item	Corresponding image loads without errors	All plant images displayed properly	Pass
TC004	Validate login functionality	Enter valid/invalid credentials	Valid login redirects to dashboard; invalid shows error	Valid login worked; invalid showed proper error	Pass
TC005	Verify database linking	Add a new plant in the database	New entry appears on the catalogue page	New plant appeared correctly in the catalogue	Pass
TC006	Confirm website availability after hosting	Access domain URL	Website is accessible and loads properly	Website loaded quickly on multiple devices	Pass
TC007	Ensure mobile responsiveness	Open website on a smartphone	Website adjusts layout and functions correctly on small screens	Site responsive and mobile-friendly	Pass
TC008	Detect broken links	Click all hyperlinks	All links navigate to the correct pages without 404 or errors	All links worked without error	Pass

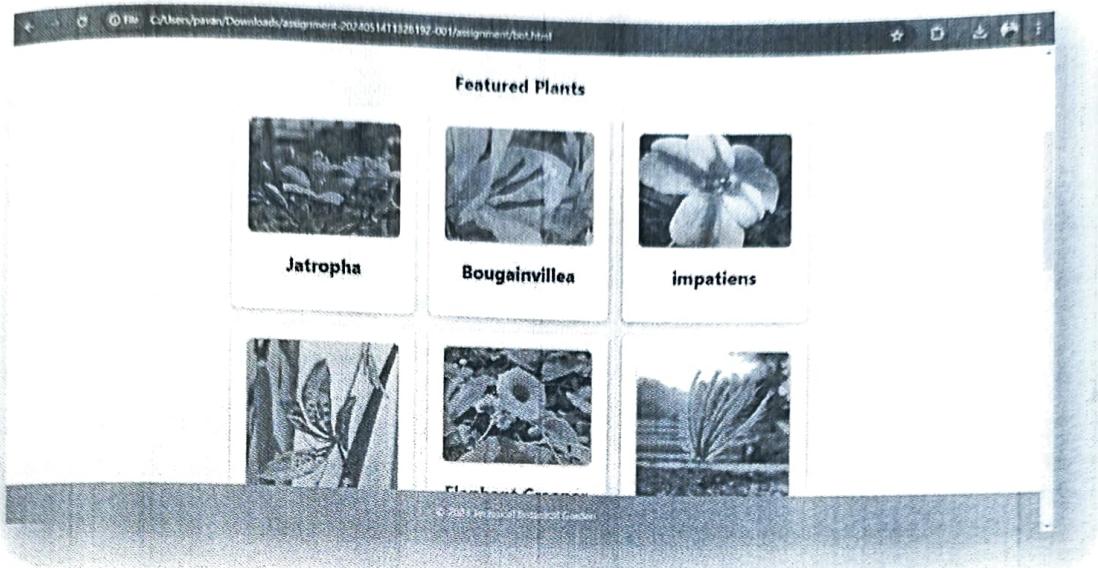
OUTPUT SCREENS:



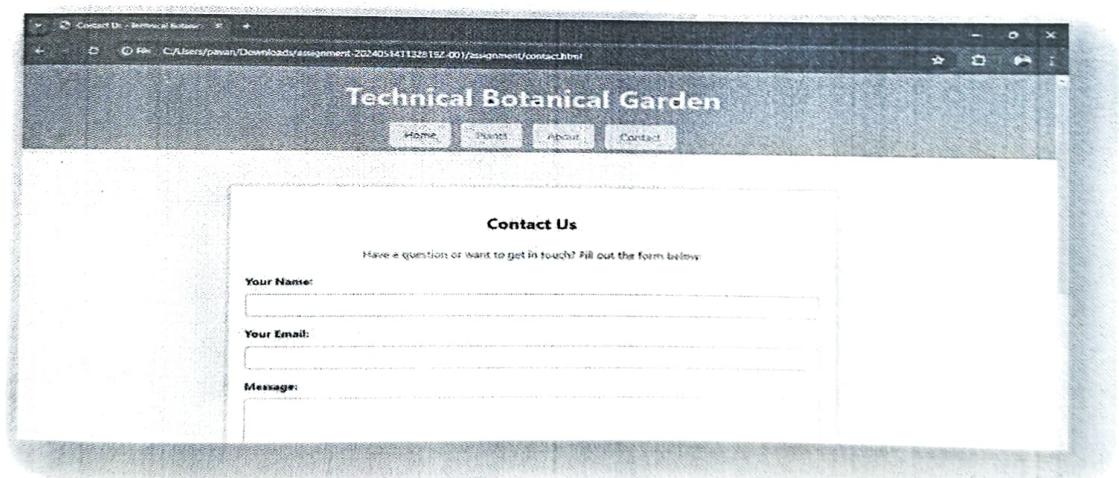
Home page we can see all things available in website



Login Page we can login into website here



Categories Page we can get information about plants here



Contact Page we can contact do message though this page

5 RESULTS:

Feature	Expected Result	Actual Result	Status
Home Page	Home page loads with correct layout, title, and content	Home page loaded successfully with correct content	<input checked="" type="checkbox"/> Pass
Catalogue Display	Plant list with names, images, and details are visible	Catalogue entries displayed correctly	<input checked="" type="checkbox"/> Pass
Image Display	Corresponding image loads without errors	All plant images displayed properly	<input checked="" type="checkbox"/> Pass
Login Functionality	Valid login redirects to dashboard; invalid shows error	Valid login worked; invalid showed proper error	<input checked="" type="checkbox"/> Pass
Database Linking	New entry appears on the catalogue page	New plant appeared correctly in the catalogue	<input checked="" type="checkbox"/> Pass
Hosting Availability	Website is accessible and loads properly	Website loaded quickly on multiple devices	<input checked="" type="checkbox"/> Pass
Mobile Responsiveness	Website adjusts layout and functions correctly on small screens	Site responsive and mobile-friendly	<input checked="" type="checkbox"/> Pass
Link Functionality	All links navigate to correct pages without 404 or errors	All links worked without error	<input checked="" type="checkbox"/> Pass

6 CONCLUSION:

The "Vignan's Herbal Garden" project represents a significant step towards enhancing the understanding and appreciation of medicinal and aromatic plants within our college community and beyond. By creating a comprehensive digital platform, we aim to bridge the gap between the rich biodiversity present in our college farm and the knowledge that can be gained from it.

Through the development of a user-friendly interface, a centralized plant database, and educational resources, we will empower students, faculty, and local community members to explore the benefits of herbal gardening and traditional medicine. The platform will not only serve as an educational tool but also foster community engagement, encouraging collaboration and participation in workshops, events, and research opportunities.

By promoting awareness of the ecological and medicinal significance of these plants, we hope to inspire sustainable practices and a deeper connection to nature. The project aligns with contemporary trends in health and wellness, emphasizing the importance of natural remedies and biodiversity conservation.

In conclusion, "Vignan's Herbal Garden" is more than just a collection of plants; it is a living resource that embodies the principles of education, community, and sustainability. As we move forward with this initiative, we are excited about the potential impact it will have on our college and the surrounding community, paving the way for a greater appreciation of herbal medicine and the natural world.

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 - a. Grieve, M. (1984). *A Modern Herbal*. New York: Dover Publications.
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2. Websites:

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American Herbalists Guild. (2020). "What is Herbalism?" Retrieved from <https://www.americanherbalistsguild.com/>