

COM3504: The Intelligent Web Assignment

By: Ethan Watts, Daniel St-Gallay, Lucy Slater, M Tahir Khan

Introduction:

This is a brief high level description of the main features of the CactHi, a progressive web application for "Plant Recognition" which could facilitate recording and viewing of plant species. The application promotes community engagement, learning about plant species, sharing knowledge, and helping to identify plants in the wild.

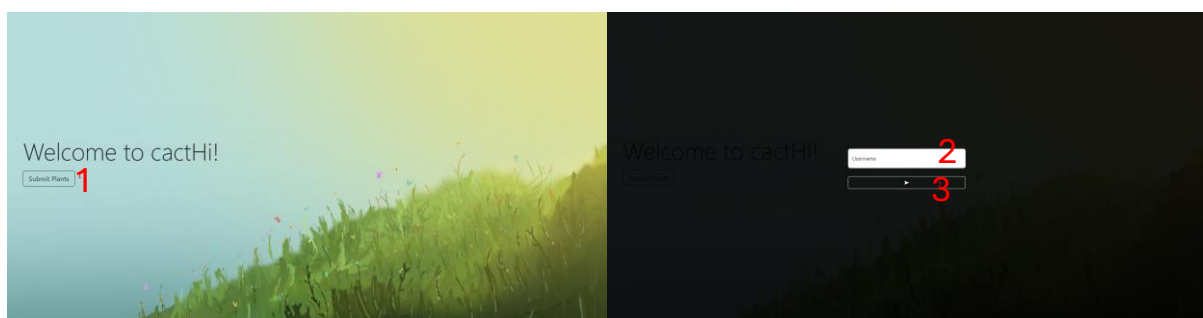
Please note that all images used within these screenshots, including the logo, have been produced internally by the CactHi team.

Overview of the implemented features:

1. Landing Page for entering the application with your username
2. Home Page with a brief description of the application
3. Create a new plant sighting with the plant information, live geolocation, and option to upload or capture the plant image with the device's camera
4. View all the plant sightings with the plant information, location, and image and the ability to filter the sightings by closest distance, farthest distance, earliest seen, latest seen, identification status, and plant features. Also sort it by plants created by the current user.
5. View a particular plant sighting in more details, and access the chat room for that individual plant for the users to discuss plant species, sightings, and identification
6. Plant name suggestions for identification, and approval by the plant creator
7. Offline support for the application, with the ability to create, view plant sightings, and send messages in the chat room of a particular plant sighting without an internet connection

Landing Page


This page is loaded when you first open the application.



- 1) This button loads the enter username screen.
- 2) A text box to enter the username that will be used across the website and chatrooms.
- 3) A button to continue to the home page once a username has been entered.

Home Page

The home page is the hub for the website. After entering a username in the landing page, the user is able to navigate the website through the homepage. This page has 3 links within it. These 3 links are locked within the header and appear on all pages. This enables the user to go to one of these pages at any given time.

 cactHi

Home New Plant View Plants


Hi, tom!

1

2

3

Welcome to cactHi!



Got a plant to identify?

Click on 'New Plant' to upload your own plant, and allow other people to help you figure out its name! You'll need a few pieces of information including:

Location you found the plant

Details about the plant - did it have flowers? How big was it?

When you saw the plant

Add a new plant!

Want to help other people identify their own plants?

You can try offering your skills to other people, and help them figure out the names of plants they've seen too! Why not try:

Suggesting names for uploaded plants!

Chatting about your thoughts on the plant and its name

Searching for plants in your local area!

Help other people!

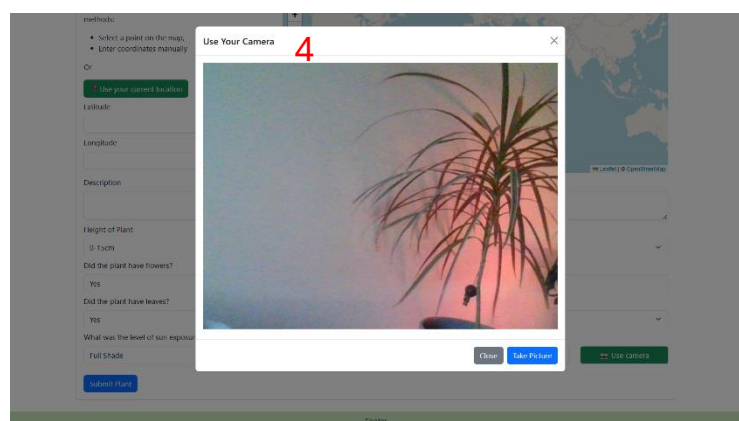
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- 1) A link back to the homepage.
- 2) A link to the “add plants” page, which allows the user to add a plant to the database.
- 3) A link to the “view plants” page, which allows the user to browse other plants that themselves and other users have uploaded.

Create New Plant Sighting

This page allows the user to add a new entry in to the plant database.

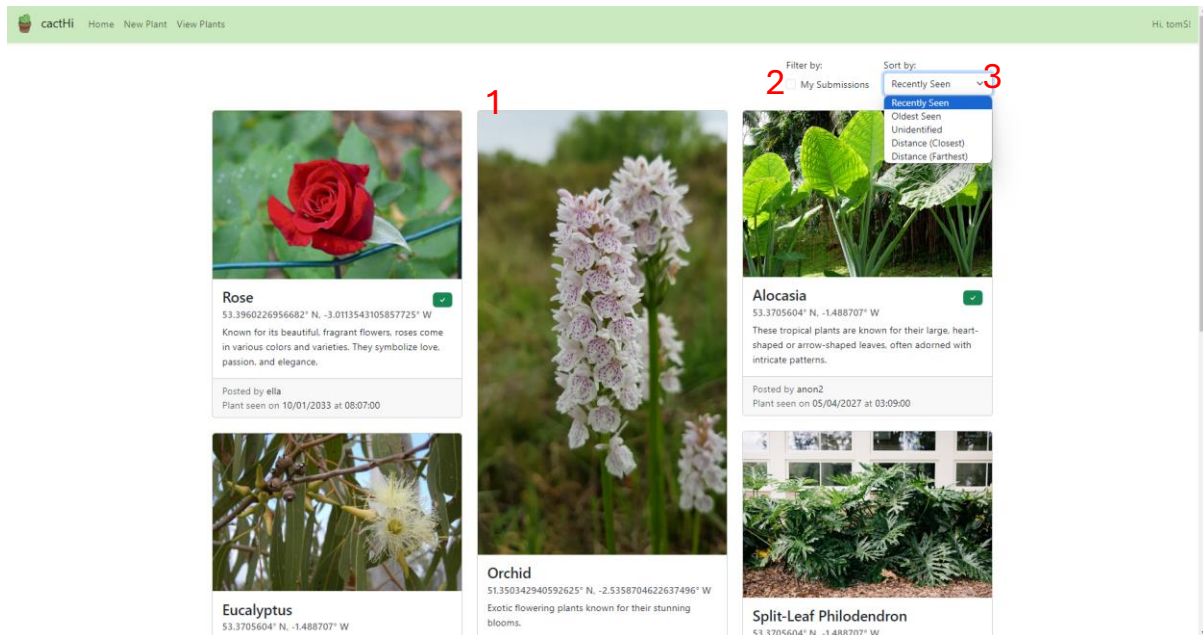
The screenshot shows the 'Create New Plant' form. At the top, a green navigation bar contains the 'cactHi' logo and links to 'Home', 'New Plant', and 'View Plants'. The user is logged in as 'Hi, tomS!'. The form itself is titled 'Create New Plant' and contains several sections. The 'Username' field is pre-filled with 'tomS' and has a red '1' next to it. Below it is the 'Name of Plant' field. The 'Date and Time of Sighting' field has a placeholder 'dd/mm/yyyy --:--' and a calendar icon. A section for location entry offers two methods: 'Select a point on the map' (with a world map) and 'Enter coordinates manually'. A red '3' is next to the 'Or' text. Below this is a green button 'Use your current location'. The 'Latitude' and 'Longitude' fields are empty. The 'Description' field is a large text area. The 'Height of Plant' and 'Spread of Plant' fields are dropdown menus, both with '0-15cm' selected. A red '2' is next to the 'Height of Plant' dropdown. Below these are more dropdowns for 'Did the plant have flowers?' (Yes), 'Did the plant have leaves?' (Yes), and 'What was the level of sun exposure in the area?' (Full Shade). There are also text fields for 'If so, what colour were the flowers?' and 'Were there visible seeds or fruit?' (Yes). A 'Photo of plant' section has a 'Choose file' button, a 'No file chosen' status, and a green 'Use camera' button. A blue 'Submit Plant' button is at the bottom left.



- 1) The name of the user adding plant to the database.
- 2) Extra data about the plant such as name, colour and date sighted.
- 3) A geolocation feature that lets the user select where the plant was located, there is also a feature that lets the user select their current location as well.
- 4) Take picture with webcam

View All Plant Sighting & Filtering/Sorting

This page allows users to browse all the plant entries in the system and filter by various classifications



- 1) Each plant in the database gets its own “card” that gives a brief description of that plant. These cards act as portals which provide more details of the plant when clicked on.
- 2) A checkbox filter that when enabled, shows only plants that the user has uploaded themselves.
- 3) A sort function that allows the user to sort by Recently Seen, Oldest Seen, Closet distance, Farthest distance, and Identification status.

View Individual Plant Sighting & Chat Room

This page exists for every plant within the database. Each plant's page can be accessed by clicking on the corresponding card within the "View all plants" page.

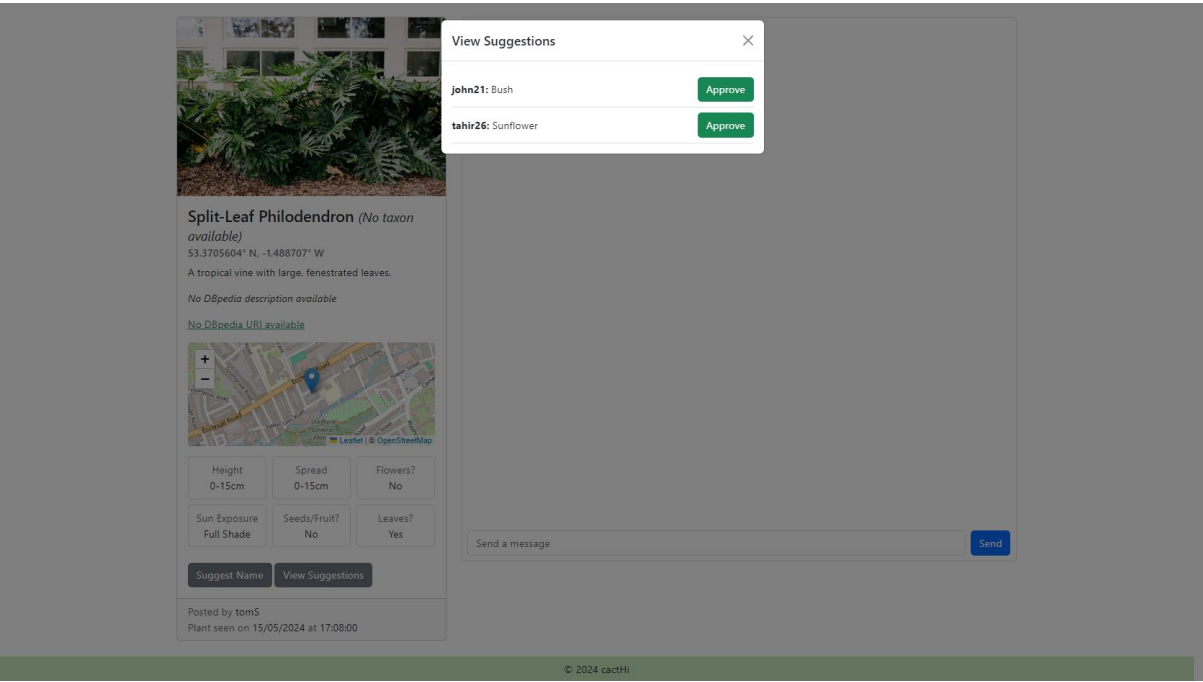
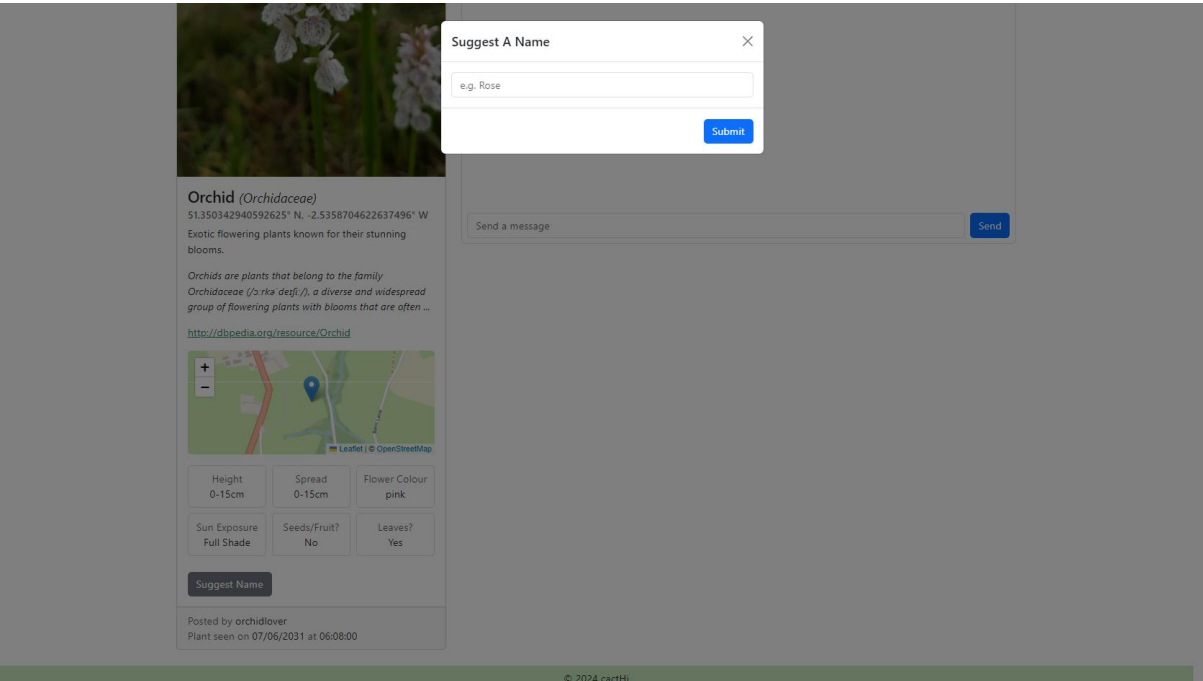
The screenshot shows the 'View Individual Plant Sighting & Chat Room' page for a Rose (Rosa). The page layout includes a green header with the 'cactHi' logo and navigation links (Home, New Plant, View Plants). The main content area is divided into two columns. The left column displays a photo of a red rose, the title 'Rose (Rosa)' with a green checkmark, coordinates (53.3960226956682° N, -3.0113543105857725° W), a description from DBpedia, a map showing the location, and a table of plant characteristics. The right column contains a chat room interface with a message history, a text input field, and a 'Send' button. Red numbers 1 through 4 are overlaid on the image to highlight specific features:

- 1) Information about the specified plant and a map to show its geographic location.
- 2) A brief description loaded from DBpedia and a link to the corresponding DBpedia page.
- 3) A chat room that is unique for each plant so other users can discuss topical information for the plant.
- 4) Check mark for whether the identification of the plant is completed.

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Plant Name Suggestion Forms

This feature allows users to suggest plant names to the plant creator, which they can approve for completing identification.

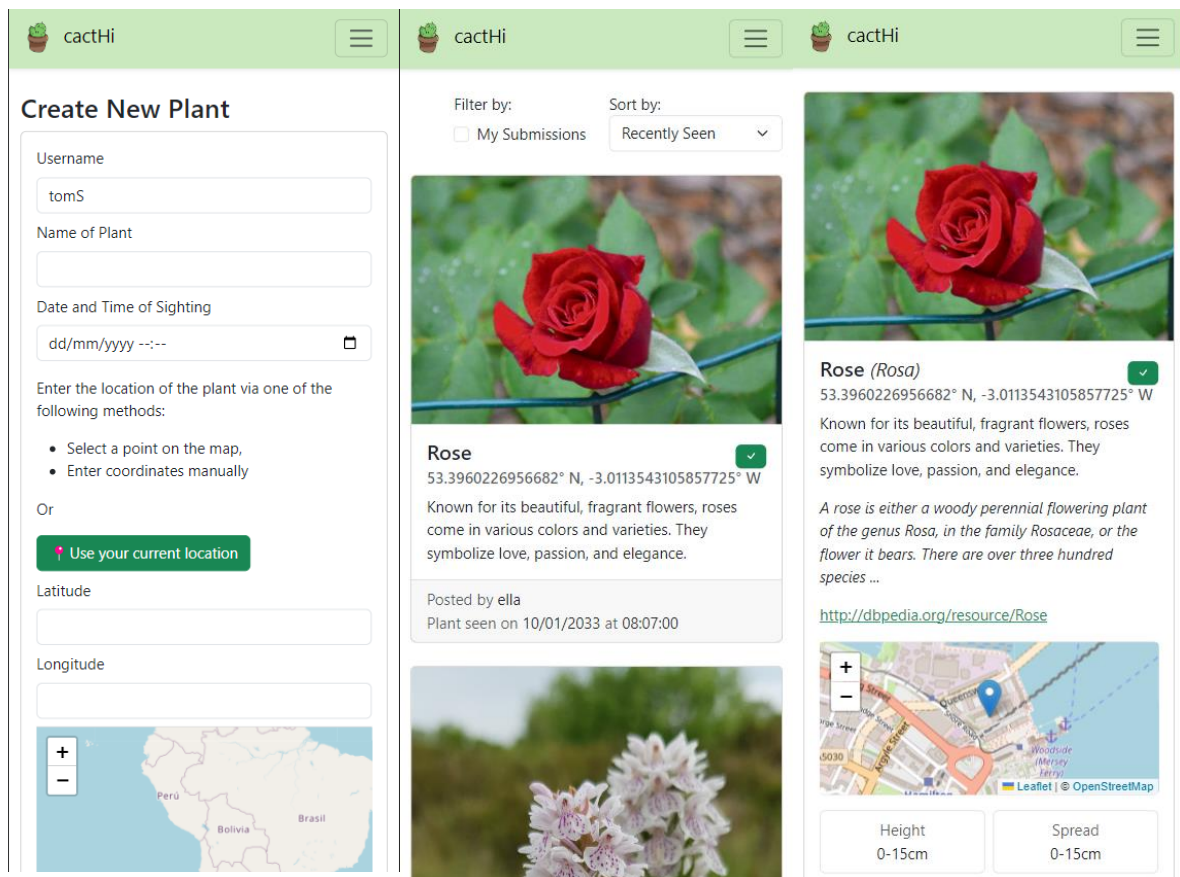


Plant suggestion form for unidentified plants, that other users can use to submit a name suggestion.

View suggestion box for the plant creator to see the suggestions and approve the name they like the most to complete the identification of the plant.

Mobile Screenshots

The web app is responsive and can be accessed through the desktop and mobile. Some of the main pages (create new plant, view plants, view individual plant) of the website on a mobile screen are shown below. Other pages such as landing, home, etc. are also responsive and can be accessed on a mobile screen.



Offline Support

Website can support plant creation, plant viewing, and sending chat when offline.