

NATIONAL INSTITUTE OF TECHNOLOGY KARNATAKA

SURATHKAL DEPARTMENT OF INFORMATION

TECHNOLOGY

IT351 - Human-Computer Interaction

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OBJECTIVE -

- 1) User interface for forest tree census (web app and android app)
- 2) Analyse on the two interfaces
- 3) Evaluate the time efficiency of the two interfaces with expert users

HCI GUIDELINES -

- 1) Users need to be able to do the same thing the same way that they have been doing
- 2) Wide range of the user-design process considered for all types of user
- 3) Control is given to the user
- 4) Every error prevention should be done
- 5) Device is flexible and efficient to use
- 6) Relevancy, simplicity, minimum amount of labels and uncluttered graphics are given.
- 7) Users can easily recognize options in the system rather than recall them.
- 8) User control and freedom.
- 9) Support undo and redo operations
- 10) Overall, the interface is very simple and easy to use.

Screenshots:

Web app

1) User interface

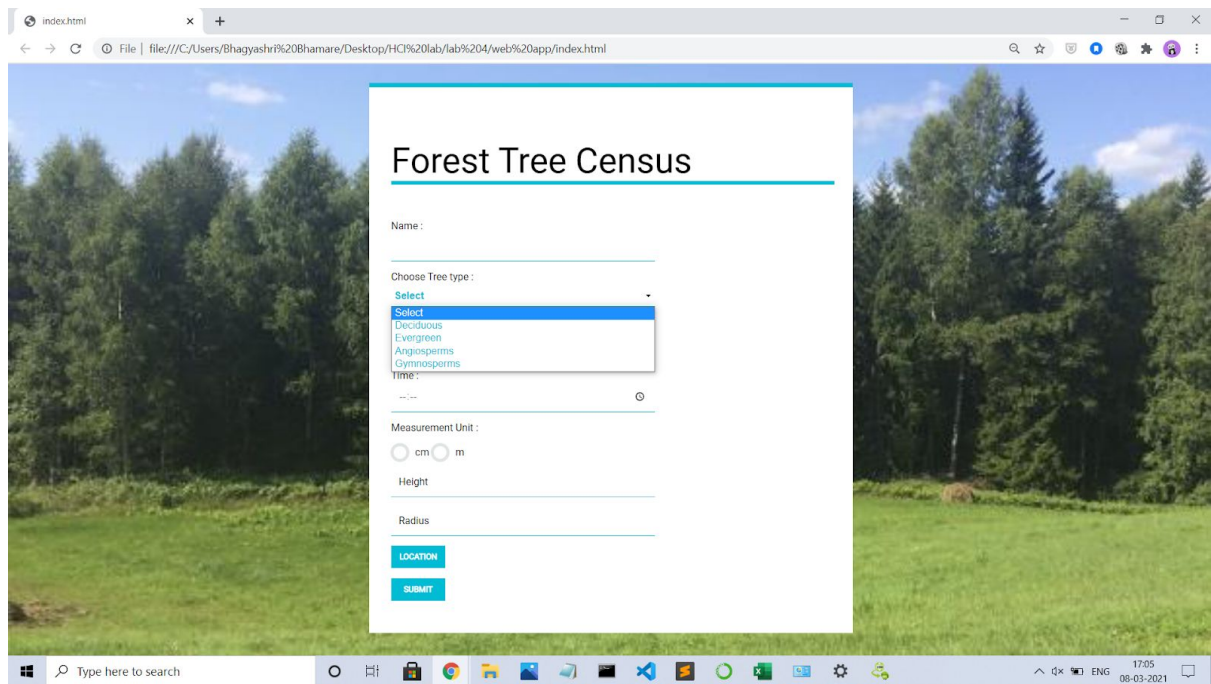
Text box is created for user

The screenshot displays a web browser window with a single tab titled 'index.html'. The address bar shows the file path: 'file:///C:/Users/Bhagyashri%20Bhamare/Desktop/HCI%20lab/lab%204/web%20app/index.html'. The web application, 'Forest Tree Census', is centered on the page against a background image of a forest. The form contains the following elements:

- Name :** A text input field.
- Choose Tree type :** A dropdown menu with 'Select' as the placeholder.
- Date :** A text input field with a calendar icon on the right.
- Time :** A text input field with a clock icon on the right.
- Measurement Unit :** Two radio buttons labeled 'cm' and 'm'.
- Height :** A text input field.
- Radius :** A text input field.
- LOCATION :** A blue button.
- SUBMIT :** A blue button.

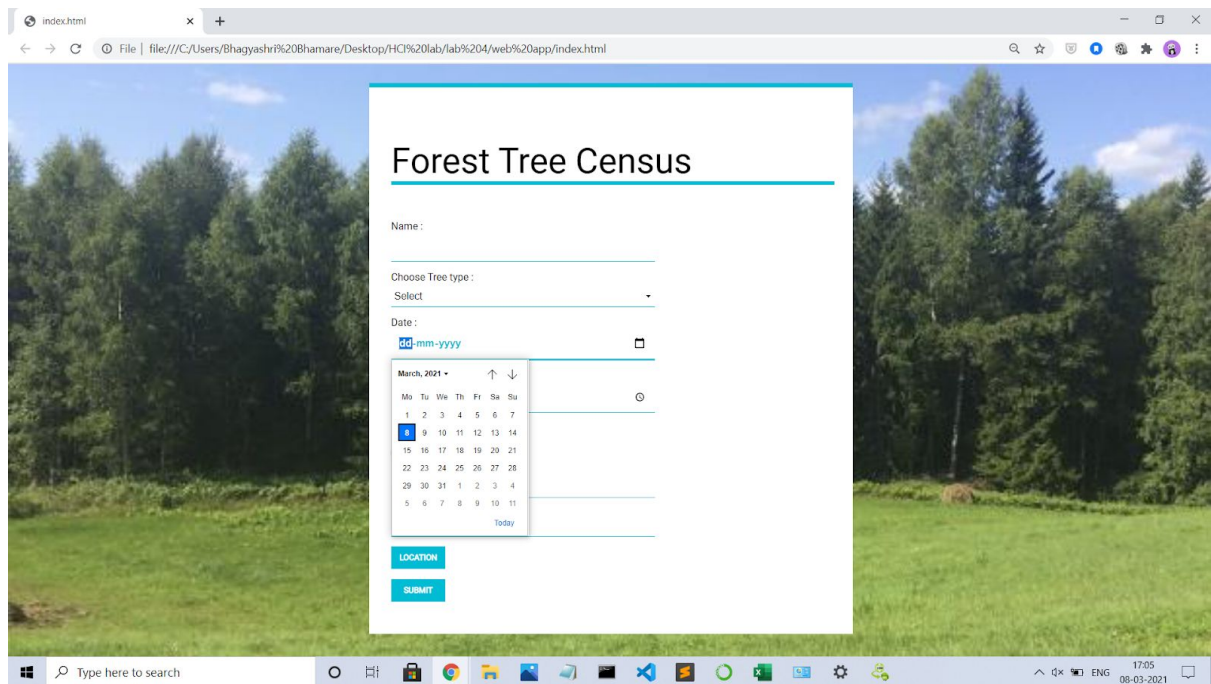
The Windows taskbar at the bottom shows the search bar, task view button, and several application icons. The system tray on the right indicates the time is 17:05 and the date is 08-03-2021.

2) Tree Type (Options are given to user)



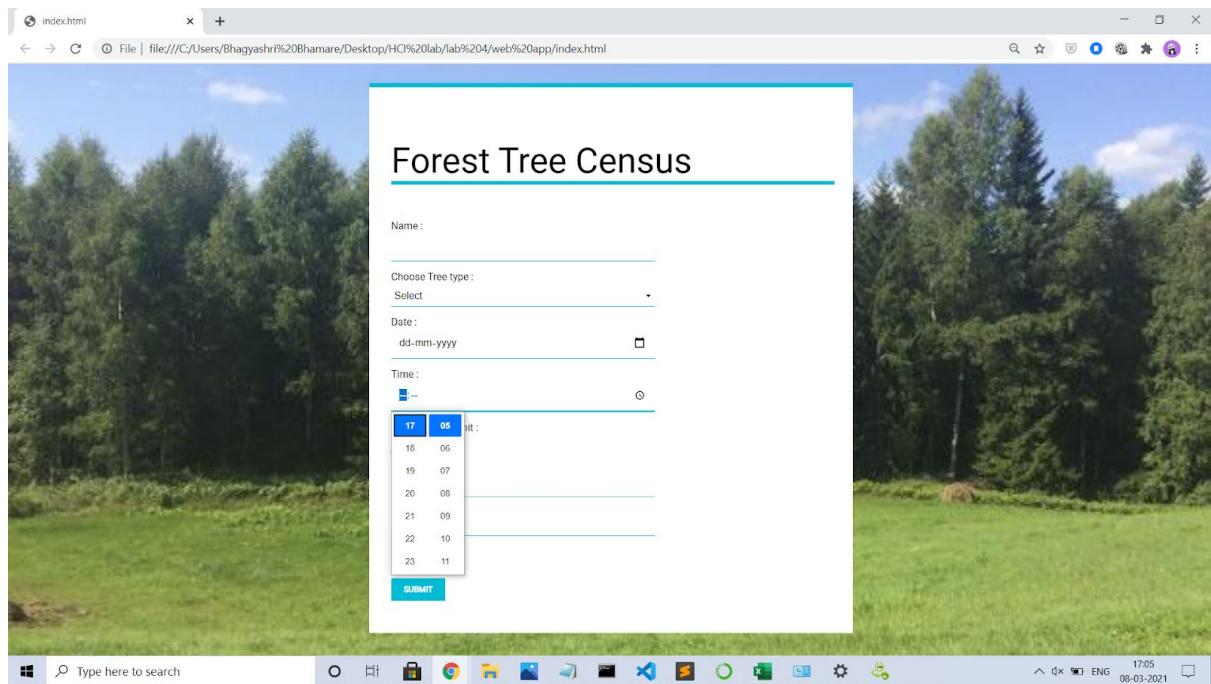
The screenshot shows a web browser window with the URL `file:///C:/Users/Bhagyashri%20Bhamare/Desktop/HCI%20lab/lab%204/web%20app/index.html`. The page is titled "Forest Tree Census" and features a form for data entry. The form includes a "Name:" field, a "Choose Tree type:" dropdown menu, a "Time:" field, a "Measurement Unit:" section with radio buttons for "cm" and "m", and "Height" and "Radius" input fields. The "Choose Tree type:" dropdown is open, showing the following options: "Select", "Deciduous", "Evergreen", "Angiosperms", and "Gymnosperms". The "LOCATION" and "SUBMIT" buttons are at the bottom of the form. The background of the page is a photograph of a forest.

3) Date selection for user



The screenshot shows the same web browser window as before, but the "Date:" field is now active. A calendar dropdown menu is open, showing the month of "March, 2021". The calendar displays the days of the week (Mo, Tu, We, Th, Fr, Sa, Su) and the dates (1 through 31). The date "9" is highlighted. The "LOCATION" and "SUBMIT" buttons are at the bottom of the form. The background of the page is a photograph of a forest.

4) Time selection for user



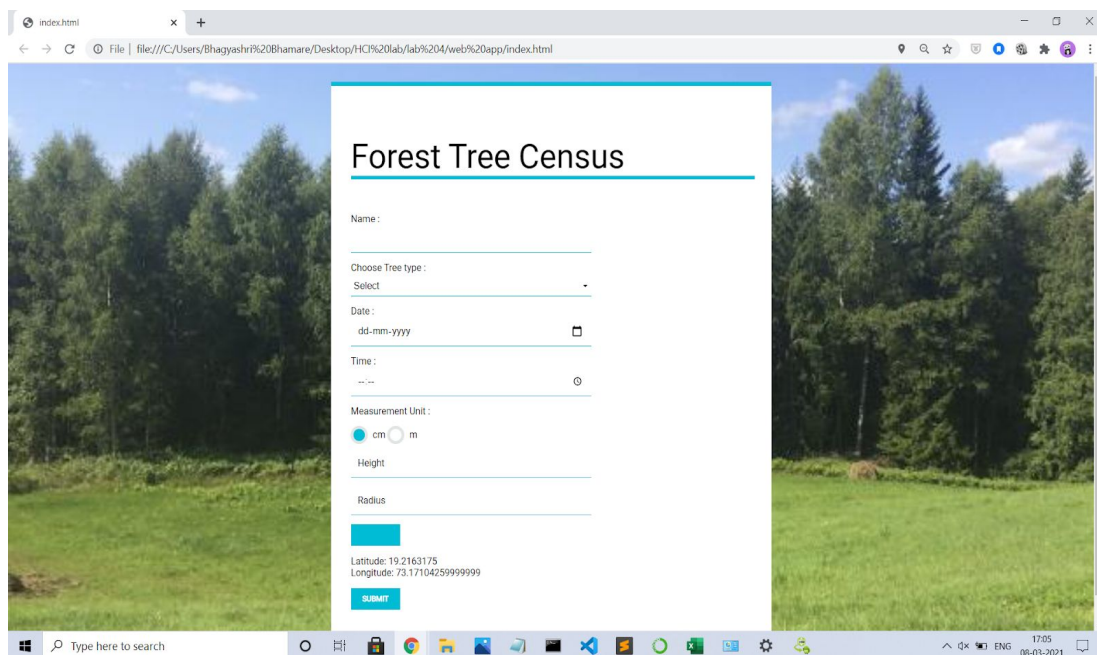
The screenshot shows a web browser window with the URL `file:///C:/Users/Bhagyashri%20Bhamare/Desktop/HCI%20lab/lab%204/web%20app/index.html`. The page features a background image of a forest and a central white form titled "Forest Tree Census". The form includes the following fields:

- Name:
- Choose Tree type:
- Date: with a calendar icon
- Time: with a clock icon

A time selection dropdown is open, showing a list of times from 17:06 to 23:11. The "SUBMIT" button is at the bottom of the form.

5) Location

After clicking on location button location will be displayed



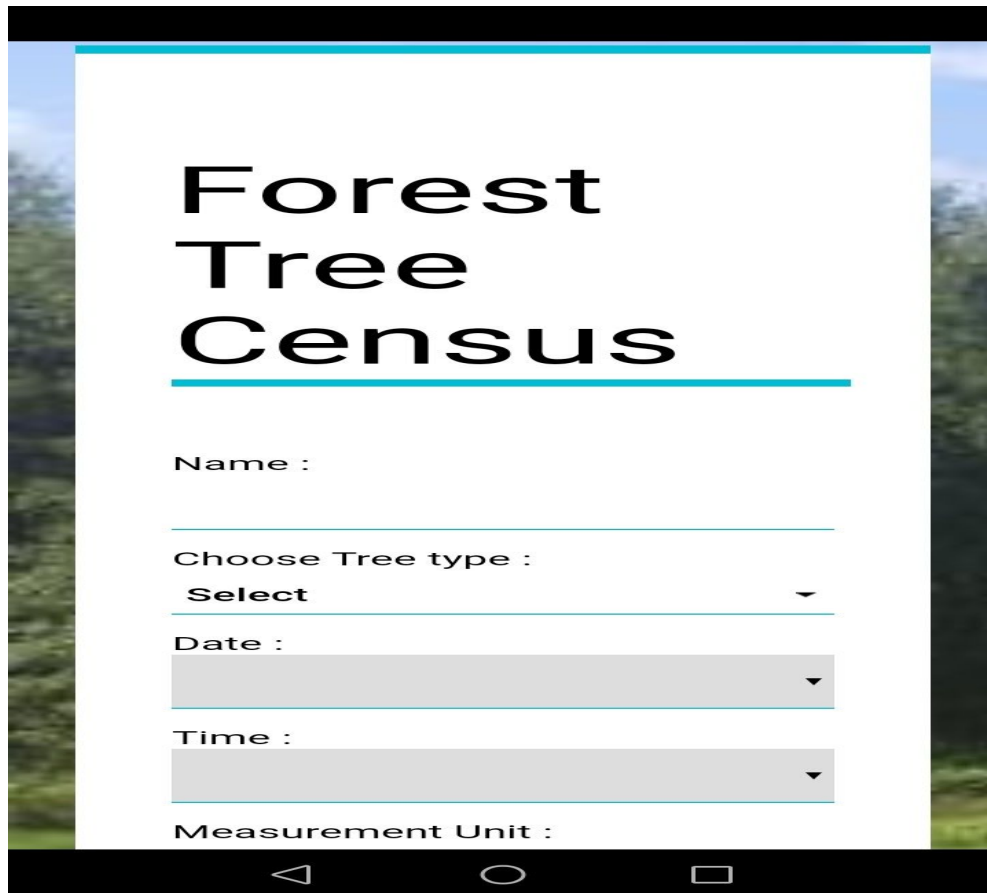
The screenshot shows the same web browser window as before, but the form now includes additional fields for location selection:

- Measurement Unit: ☒ cm ☐ m
- Height:
- Radius:
- Latitude: 19.2163175
- Longitude: 73.17104259999999

The "SUBMIT" button remains at the bottom of the form.

Android app

1)User interface



The screenshot displays the user interface of an Android application titled "Forest Tree Census". The title is prominently displayed at the top in a large, bold, black font, underlined with a thick blue line. Below the title, the interface features several input fields and dropdown menus, all set against a white background with a blurred forest image in the background. The fields are labeled "Name :", "Choose Tree type :", "Date :", "Time :", and "Measurement Unit :". The "Choose Tree type :" field shows a dropdown menu with the word "Select" and a downward arrow. The "Date :" and "Time :" fields show greyed-out dropdown menus with downward arrows. The "Measurement Unit :" field is currently empty. The bottom of the screen shows the standard Android navigation bar with back, home, and recent apps icons.

**Forest
Tree
Census**

Name :

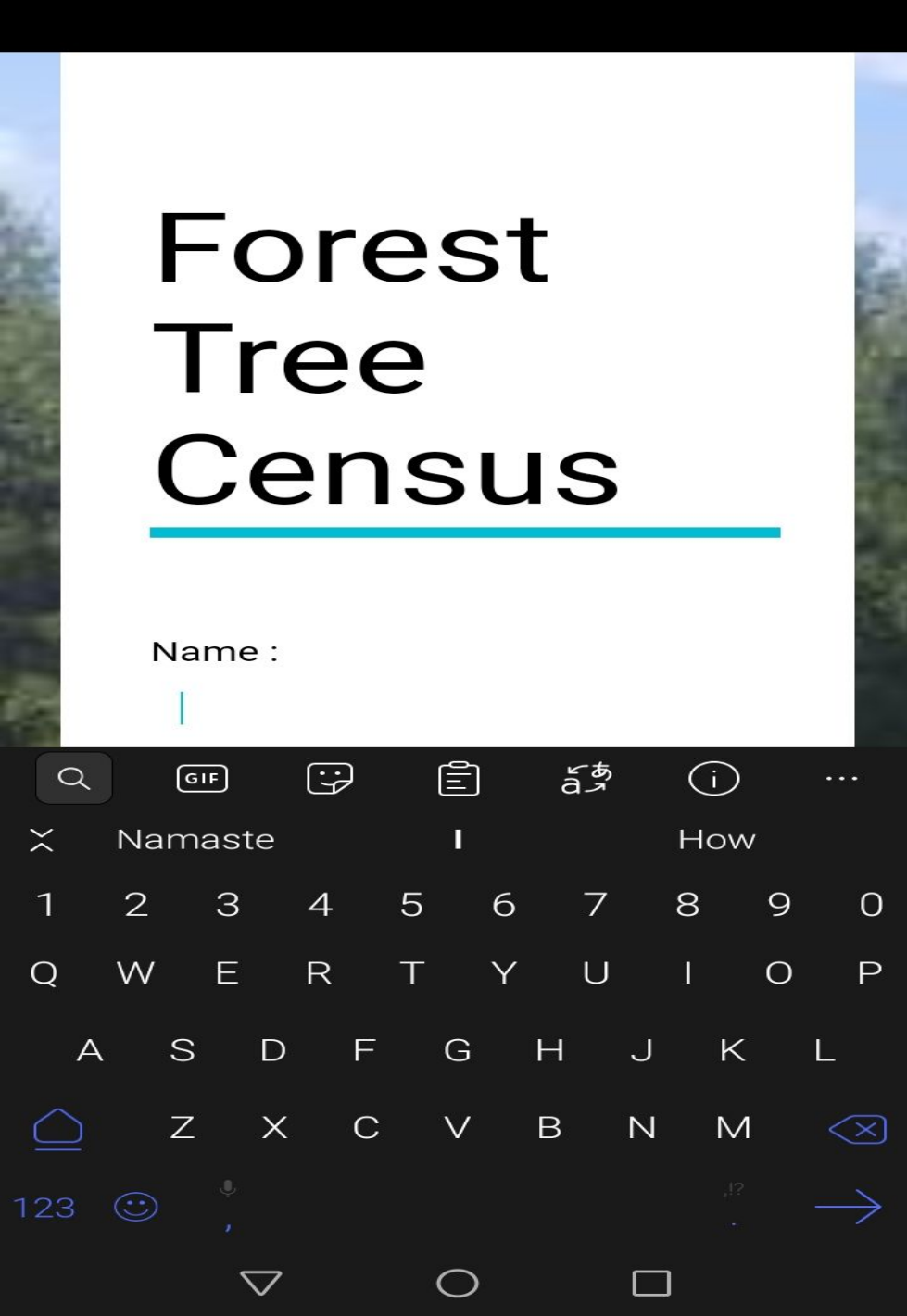
Choose Tree type :
Select ▼

Date :
▼

Time :
▼

Measurement Unit :

2)Name of the tree in text form



The image shows a mobile application interface for a 'Forest Tree Census'. The title 'Forest Tree Census' is displayed in a large, black, sans-serif font, underlined with a thick blue line. Below the title is a text input field with the placeholder text 'Name :'. A blue vertical line indicates the cursor position at the start of the input field. The bottom of the screen shows a standard Android keyboard with a dark theme. The keyboard includes a search icon, a GIF button, a speech bubble icon, a list icon, a language switcher (a/a), an information icon (i), and a more options icon (three dots). The keys are arranged in a standard QWERTY layout. The background of the app is a blurred image of green trees.

Forest Tree Census

Name :

123 1 2 3 4 5 6 7 8 9 0

Q W E R T Y U I O P

A S D F G H J K L

Z X C V B N M

123 123 123 123 123 123 123 123 123 123

3) Options given to the user to select tree type

The screenshot shows a mobile application interface with a grey background. At the top, there is a text input field labeled "Name :". Below it is a dropdown menu labeled "Choose Tree type :". The dropdown menu is open, showing five options: "Select", "Deciduous", "Evergreen", "Angiosperms", and "Gymnosperms". Each option has a radio button next to it. The "Select" option is currently selected, indicated by a purple dot in the center of its radio button. Below the dropdown menu, there is a text input field labeled "Radius". At the bottom of the form, there are two buttons: "LOCATION" and "SUBMIT". The "LOCATION" button is teal and the "SUBMIT" button is dark teal. The entire form is overlaid on a background image of a tree.

Name :

Choose Tree type :

Select

Deciduous

Evergreen

Angiosperms

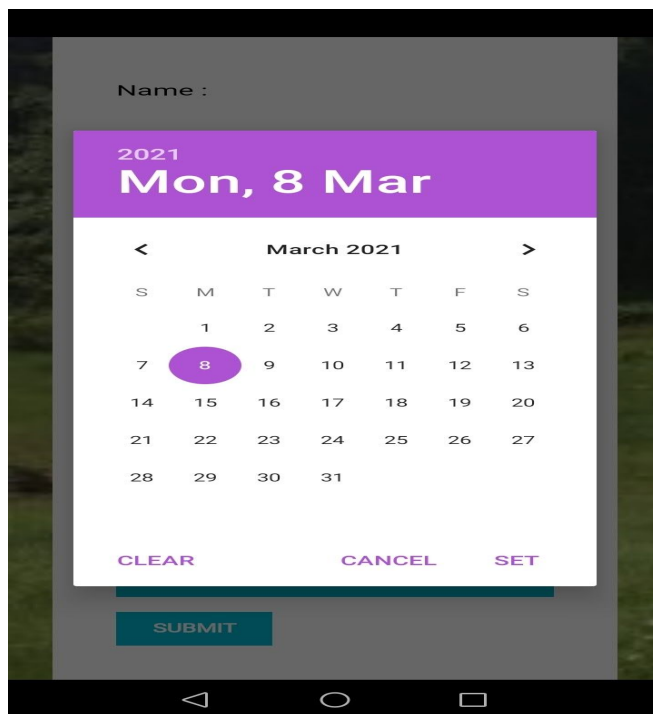
Gymnosperms

Radius

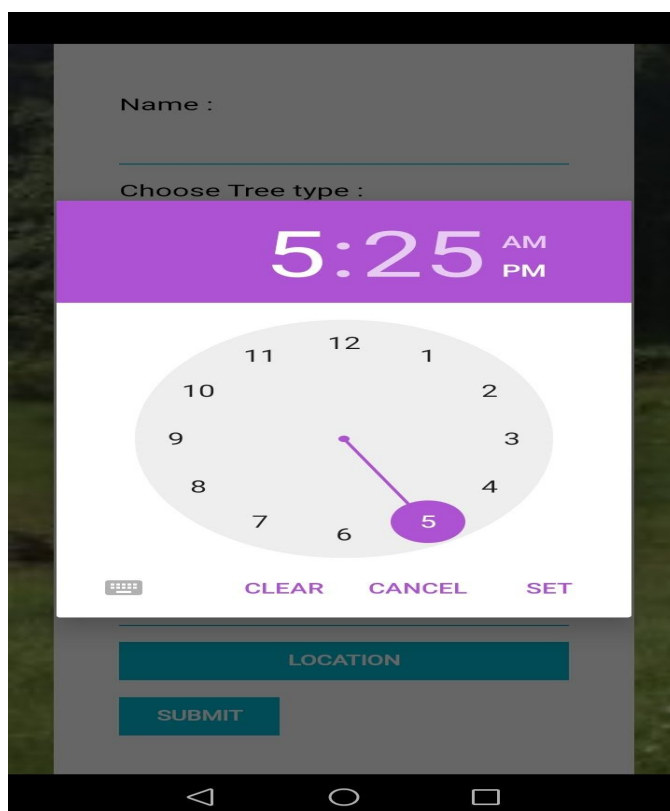
LOCATION

SUBMIT

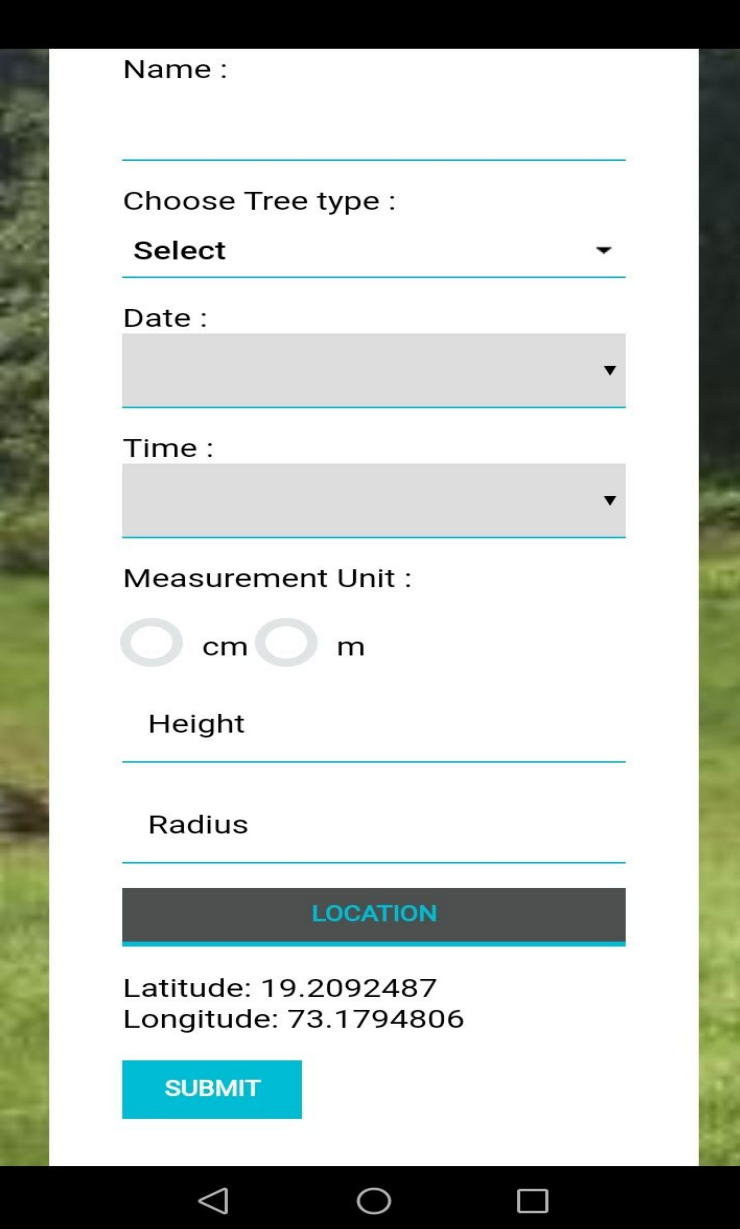
4) Date selection given to the user



5) Time selection is given the user



6)After clicking on location -location of the current place will be displayed



The image shows a mobile application interface for entering tree data. The form is set against a background image of a tree. It includes fields for Name, Tree type (a dropdown menu), Date (a date picker), Time (a time picker), Measurement Unit (radio buttons for cm and m), Height, and Radius. A 'LOCATION' button is highlighted in grey, and a 'SUBMIT' button is in red. The current location coordinates are displayed below the buttons.

Name :

Choose Tree type :

Select ▼

Date :

Time :

Measurement Unit :

☐ cm ☐ m

Height

Radius

LOCATION

Latitude: 19.2092487
Longitude: 73.1794806

SUBMIT

User analysis between web application and Android application

Web application	Android application
1)Application is big some application like time are difficult to use	1)Application is small but easy to use
2)Both application have same functionality but undo redo options are difficult	2)Undo redo options are easy
3)Scrolling is not required	3)Scrolling is required
4)Average experience for user	4)Best experience for user
5)User are taking more time to filled the data	5)User are taking less time to filled the data

Time Evaluation-

Time evaluation of web app and android app from 5 different participants

