

IT351: Human Computer Interaction

Lab Assignment 6

Forest Tree Census Application

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Objective:

1. Create and Compare two user interfaces (web/ mobile)
2. Critic on the two interfaces
3. Evaluate the time efficiency of the two interfaces with expert users

The interface is a forest tree census application that taken in following input fields:

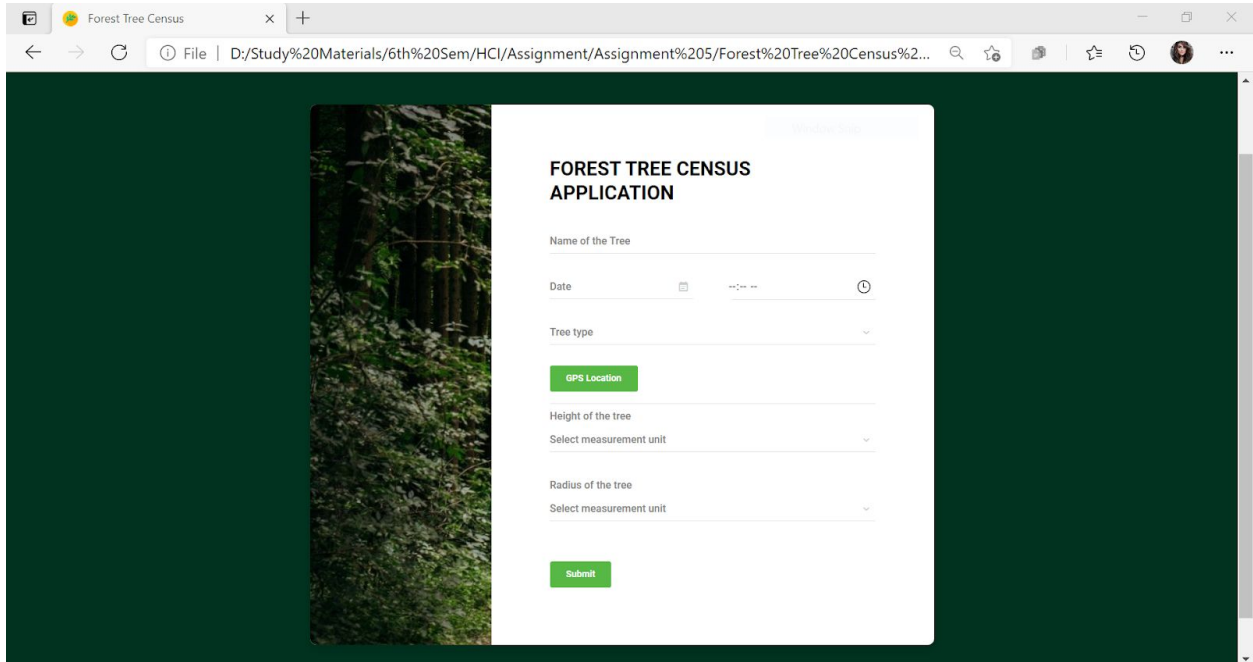
1. Name of the tree
2. Date and time
3. Type of the tree
4. GPS location of the tree
5. Measurements of the tree(height and radius)

The design and general UI principles are followed in the interfaces as follows:

1. A simple and consistent style has been maintained. The style reflects the topic clearly as an image of forest has been used with a green colour coding.
2. The input fields are clear for the user to enter appropriate data.
3. Date and time have a select bar which makes it easy to choose even for a normal user.
4. Under the tree type, 'other' option has been provided for greater accessibility. A text box appears only on selecting 'other' option. This gives the user the freedom to select a tree type of his/her choice.
5. The interface doesn't distract the user from the main purpose of the application.
6. Calendar and clock symbols have been used for date and time respectively to help recognise the fields. This emphasises recognition over recall.
7. Overall, the interface is very simple and easy to use.
8. Error prevention is done by not alerting with an empty field message.
9. About is provided to understand the application.

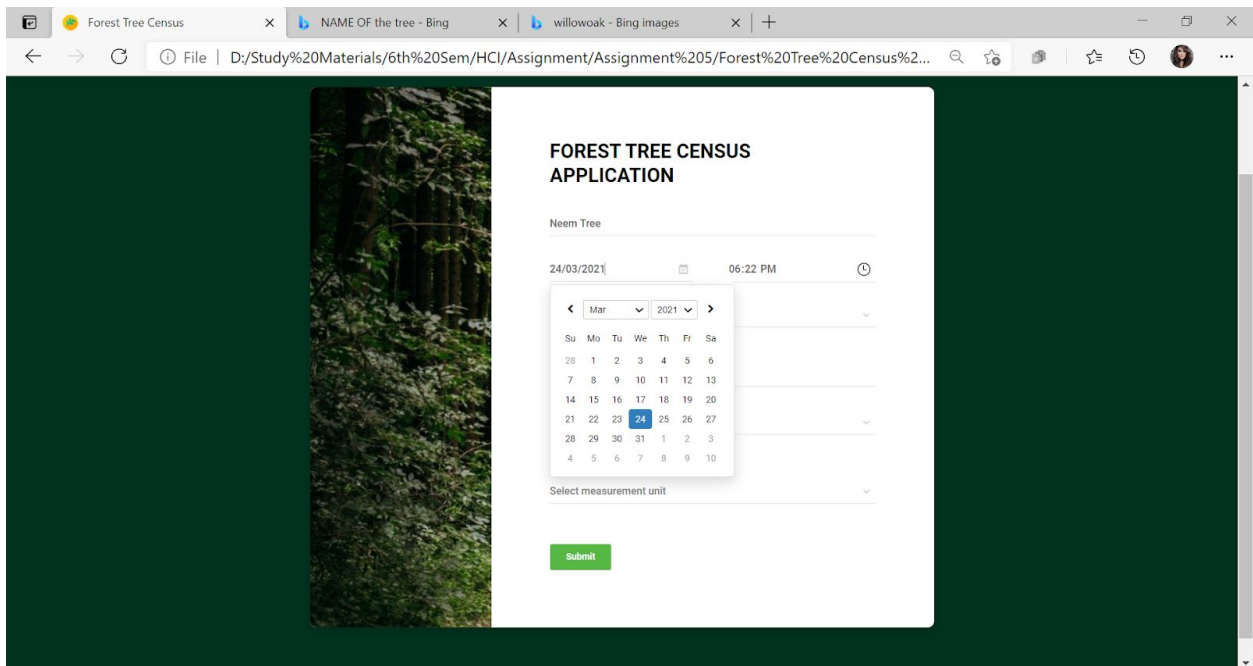
Screenshots:

Web Interface



The screenshot shows the front page of the 'Forest Tree Census' web application. The page has a dark green background with a vertical image of a forest on the left. On the right, there is a white form titled 'FOREST TREE CENSUS APPLICATION'. The form contains the following fields: 'Name of the Tree' (text input), 'Date' (date picker), 'Tree type' (dropdown menu), 'GPS Location' (green button), 'Height of the tree' (text input), 'Select measurement unit' (dropdown menu), 'Radius of the tree' (text input), 'Select measurement unit' (dropdown menu), and a 'Submit' (green button).

Fig 1. Front Page



The screenshot shows the 'Forest Tree Census' web application with the date input field filled. The form title is 'FOREST TREE CENSUS APPLICATION'. The 'Name of the Tree' field is filled with 'Neem Tree'. The 'Date' field is filled with '24/03/2021' and '06:22 PM'. A calendar dropdown is open, showing the month of March 2021. The calendar grid is as follows:

Su	Mo	Tu	We	Th	Fr	Sa
28	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31	1	2	3
4	5	6	7	8	9	10

The 'Submit' button is green.

Fig 2. Date input

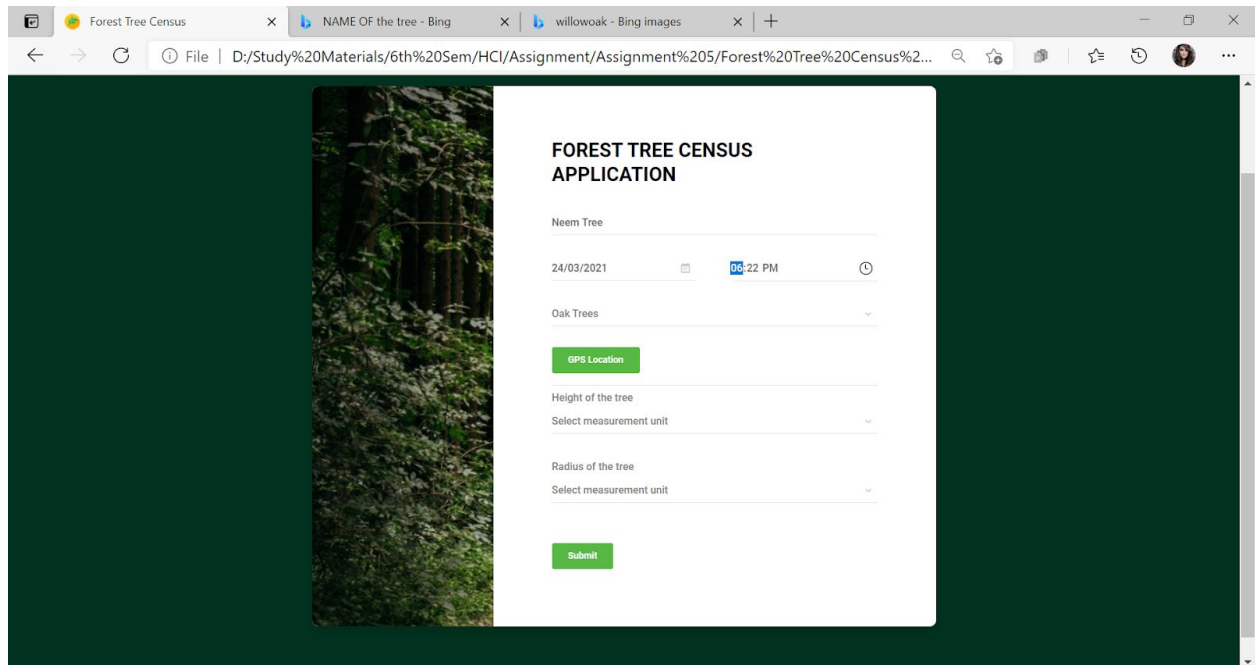


Fig 3. Time input

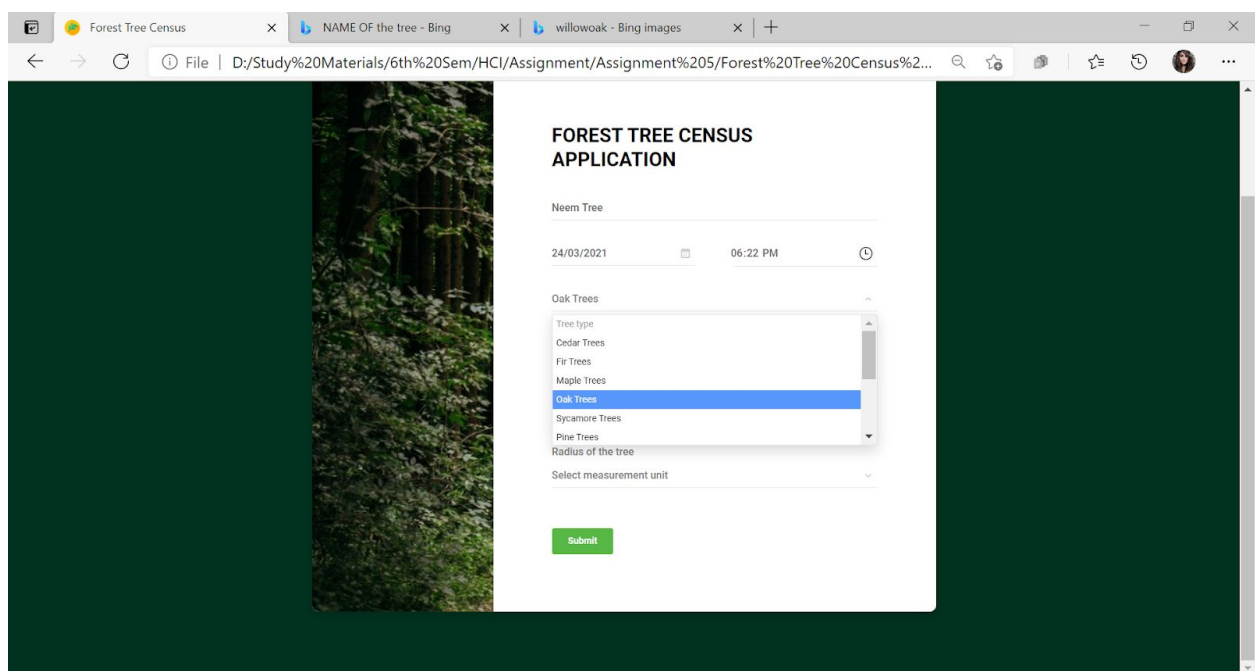


Fig 4. Type of tree select option

FOREST TREE CENSUS APPLICATION

Neem Tree

24/03/2021 06:22 PM

Other

Indian Lilac

GPS Location

Height of the tree

Select measurement unit

Radius of the tree

Select measurement unit

Submit

Fig 5. Other option

FOREST TREE CENSUS APPLICATION

Neem Tree

24/03/2021 06:24 PM

Other

Indian Lilac

GPS Location

Latitude: 26.99583633333333

Longitude: 49.65653833333332

170

m

4

m

Submit

Fig 6. GPS location

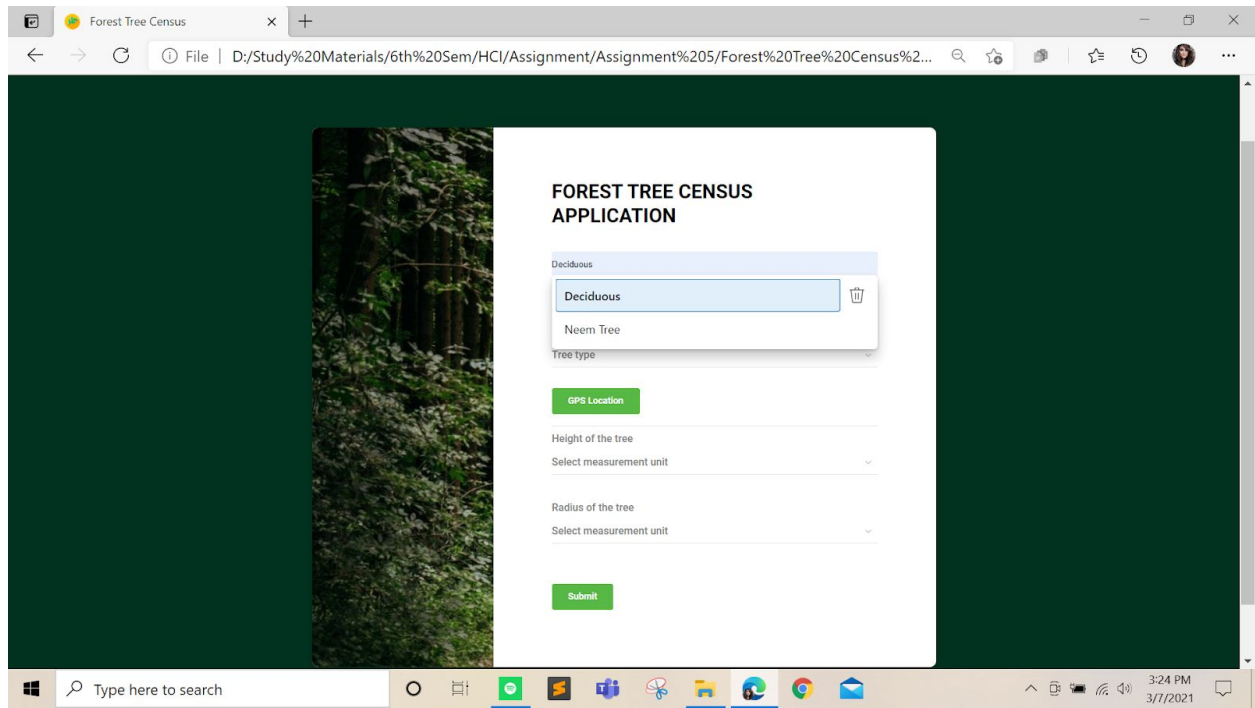



Fig 7. Auto fill and delete option



FOREST TREE CENSUS APPLICATION

Name of the Tree

Date

--:-- --

Tree type

GPS Location

Fig 8. Responsive Page 1

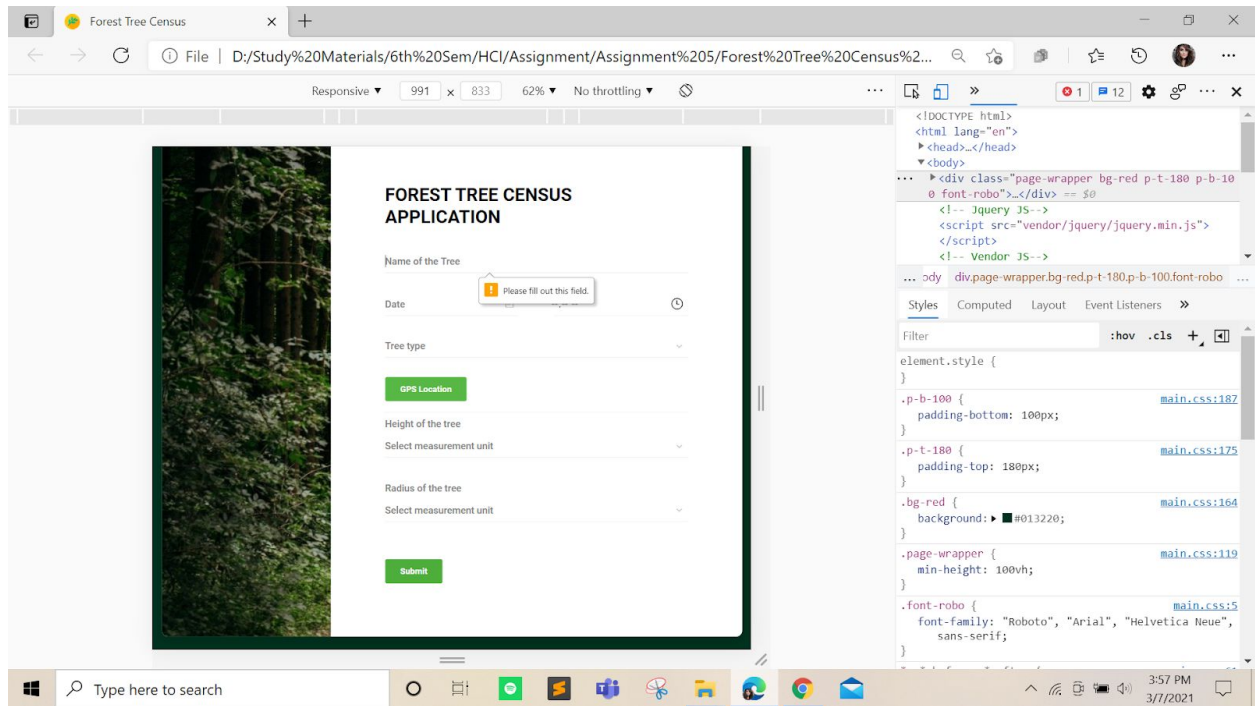


Fig 9. Responsive Page 2 with error handling

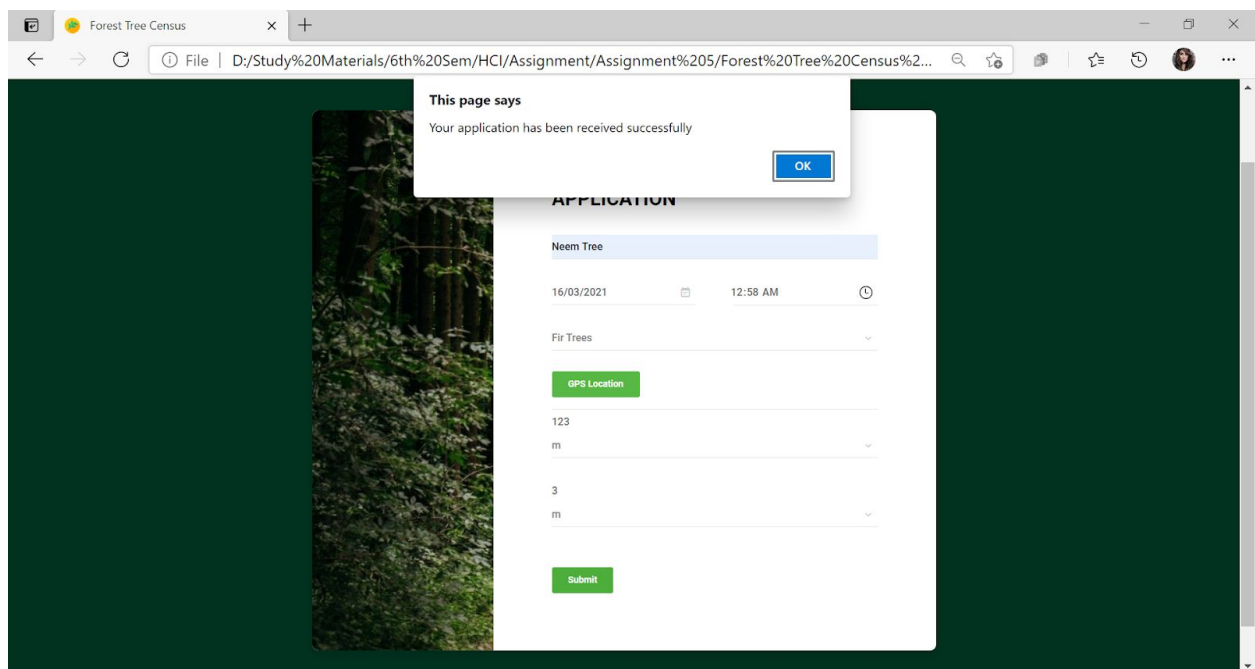


Fig 10. On submit alert box

Mobile Interface



Fig 11. Mobile App Preview

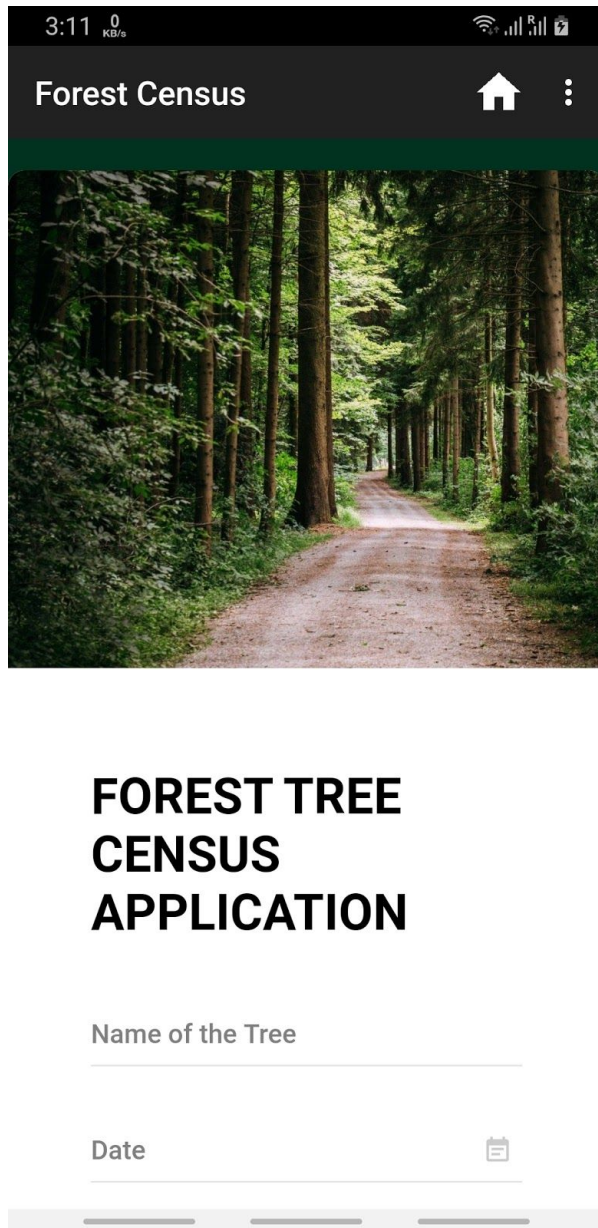




Fig 12. Home page

3:12 0 KB/s

Forest Census



FOREST TREE
CENSUS
APPLICATION

Coconut Tree

Date

<

Mar

>

2021

>

Su	Mo	Tu	We	Th	Fr	Sa
28	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31	1	2	3
4	5	6	7	8	9	10

Radius of the tree

Fig 13. Date input

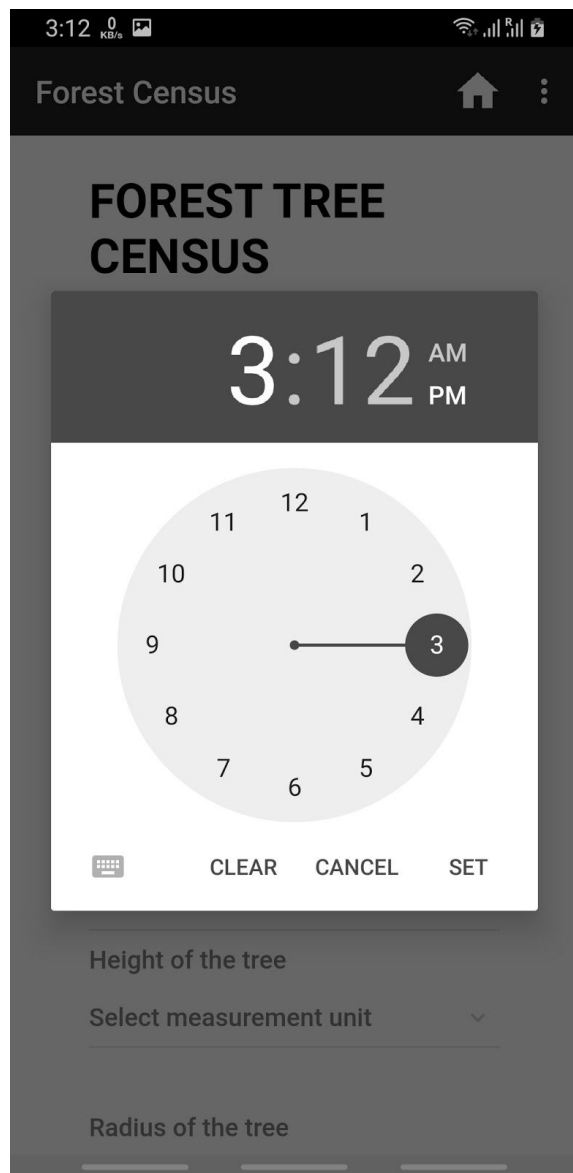


Fig 14. Time input

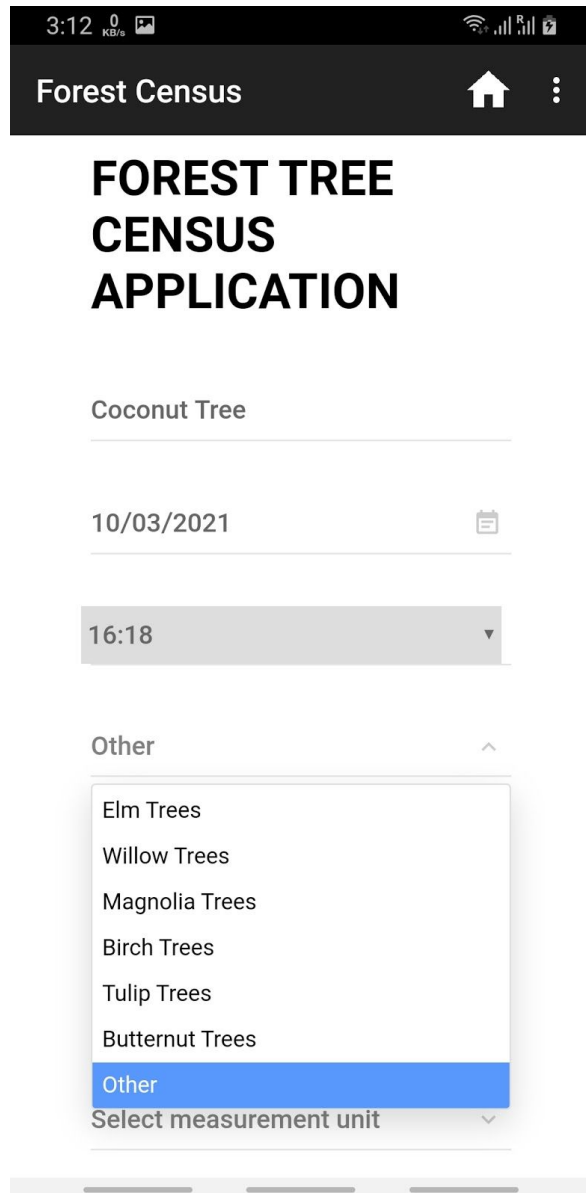


Fig 15. Other option

3:13 0 KB/s

Forest Census

Other

Indian Long Tree

GPS Location

Latitude: 26.9961131

Longitude: 49.6566318

Height of the tree

Select measurement unit

Radius of the tree

Select measurement unit

Submit

Fig 16. GPS Location

3:11 0 KB/s

Forest Census

Name of the Tree

Date

Tree type

GPS Location

Height of the tree

Select measurement unit

Radius of the tree



Select measurement unit

Submit

Fig 17. When other option is not selected

3:14 0 KB/s

Forest Census



Indian Long Tree

GPS Location

Latitude: 26.9961131

Longitude: 49.6566318

123

m

1

m

Select measurement unit

cm

m

Fig 18. Measurements of the tree

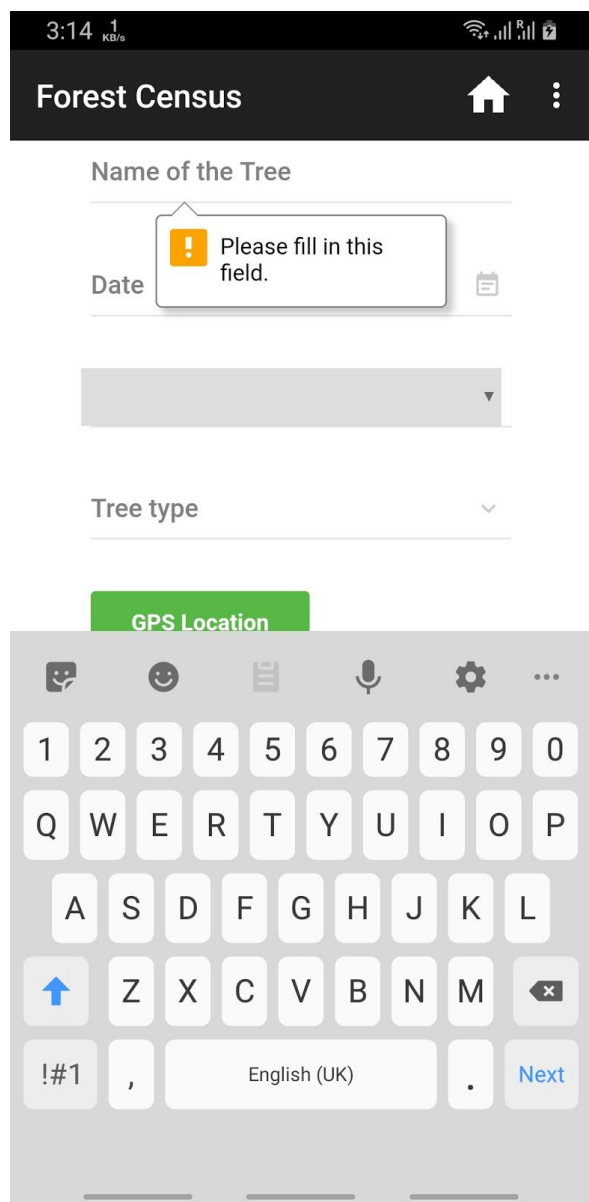
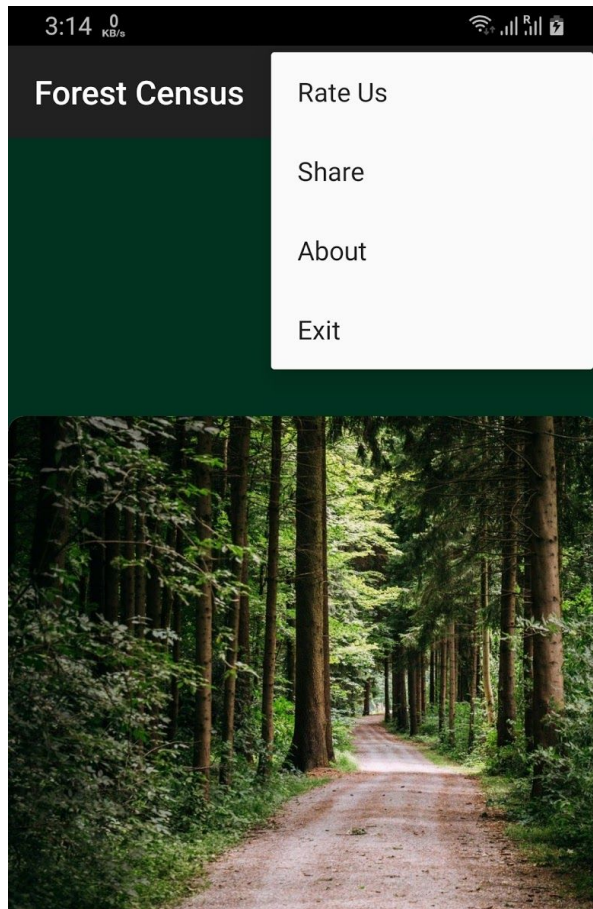


Fig 19. Error Handling



FOREST TREE CENSUS APPLICATION

Fig 20. Back and exit option

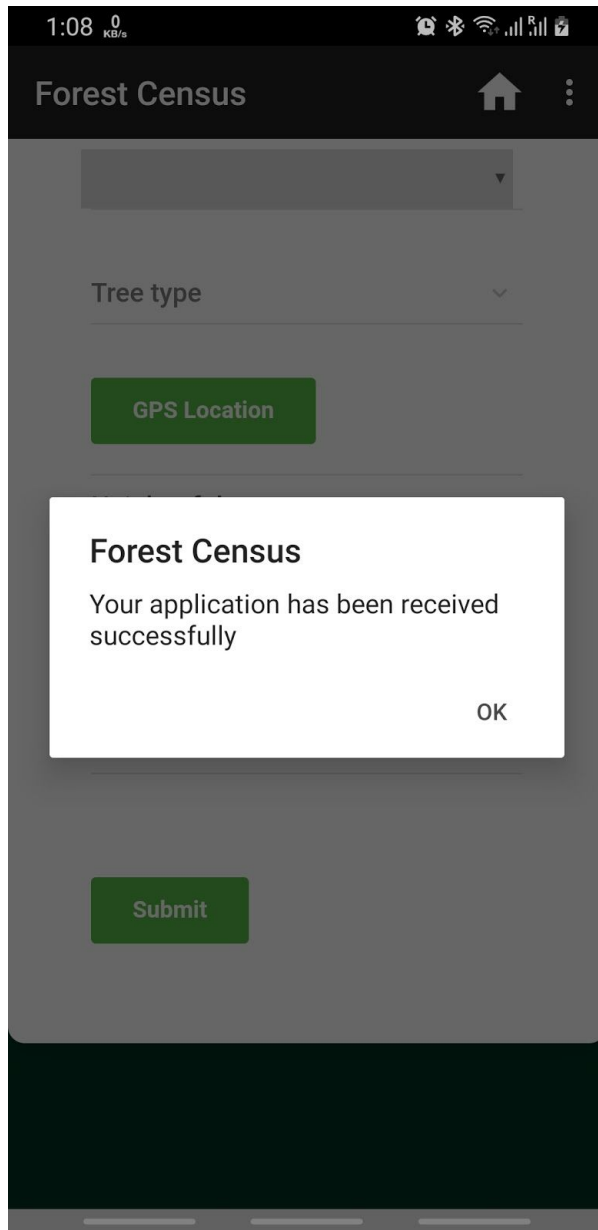


Fig 21. On submit

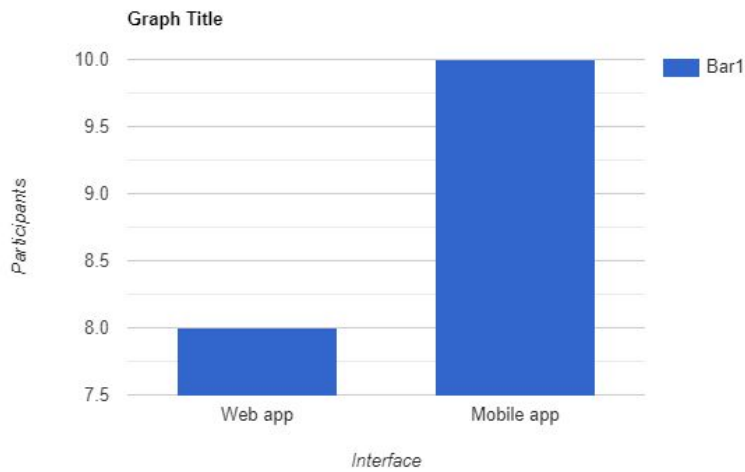
Interface differences between Web app and Mobile app

Web app	Mobile app
The application is clear and big.	The interface might seem small.
The content displayed without scrolling.	Vertical scrolling to view more contents.
Limited functionalities	Provides greater functionality in terms of system resources
Doesn't offer the best quality experience	Smoother experience

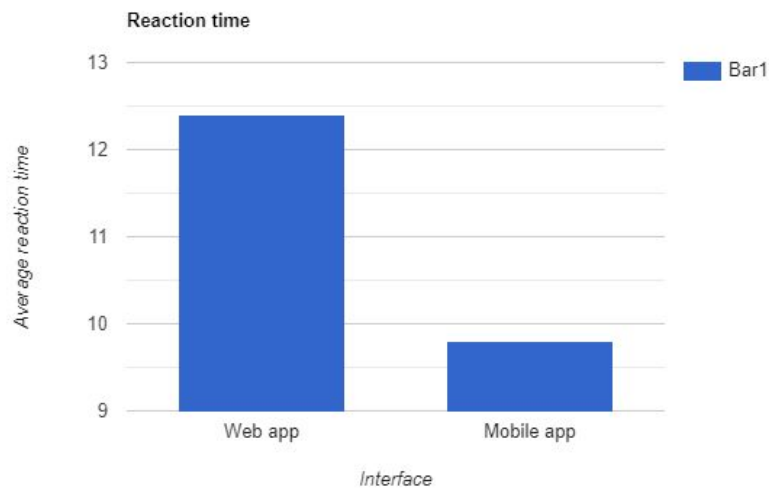
Time Evaluation

The time efficiency evaluation results are based on 20 test participants from my class:

General results of number of participants who felt a particular interface was better in terms of time efficiency:



Graph 1. Interface and Number of participants



Graph 2. Interface and Average reaction time in seconds