

CS 5760

# Usability Test plan

Team 4- Green Space

## Team Members:

### UX Consultants

1. Ram Sudda
2. Haoyang Chen

### Developers:

1. Austin Gennrich
2. Jordan Bramer
3. Kyle McIntyre
4. Michael Romero
5. Coli Dohne
6. Sid Regmi

### Scientists:

1. Jesse Alger
2. Mary Ellen Miller

Sudda Parsharam Reddy  
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Date: Apr/03/2023

## Testing information:

A total of 8 Usability testing session has been scheduled. All these sessions are administrated by a UX consultant, Parsharam Reddy. And each Test is scheduled with a time of 1 hour and the UX consultant is accompanied by two developers.

The Six sessions are scheduled below:

	04/09/2023	04/11/2023	04/13/2023	04/15/2023
11:00 am - 12:00 PM		Colin Dohne & Sid Regmi	Sid Regmi & Michael Romero	
12:00 PM - 1:00 PM	Austin Gennrich & Kyle McIntyre	Michael Romero & Jordan Bramer	Colin Dohne & Jordan Bramer	
1:00 PM - 2 PM		Austin Gennrich & Kyle McIntyre	Austin Gennrich & Kyle McIntyre	
4:00 PM - 5:00 PM				Austin Gennrich & Kyle McIntyre

All these sessions except one are scheduled in Library, and the last one is scheduled in Zoom. A few things are required for the test session, all students must attend the session on time and a laptop with an application running in it is provided, while the last session which is scheduled via Zoom has a few requirements such as.

1. A laptop
2. Strong internet connection
3. Access to Zoom
4. A working microphone and audio output method.

All the participants including the UX Consultant will require to access a few documents

1. All the error reports which were collected during the test
2. Test reports of Testing challenges form.

During the Testing phase, Testers are first given a pre-questionnaire survey. Given below

1. How do you agree to do the testing of this application
  - a. Strongly agree
  - b. Agree
  - c. Natural
  - d. Disagree
  - e. Strongly disagree.
2. Do you have any previous experience in testing applications?
  - a. Yes
  - b. No

3. How much do you know about green resources?
  - a. Very good
  - b. Good
  - c. Neutral
  - d. Don't know
  - e. Haven't heard
4. On a scale of 10, what is your understanding and how comfortable are you with using the technology?
  - a. On a scale of 1-10
5. Do you have any previous experience using this kind of application?
  - a. Yes
  - b. No
6. Do you have any visual or physical impairments that may affect your ability to use the application? (yes/no)

## Test Scenario 1

1. To assess the ease of navigating through the website in the Greenspace app.
  - a. To evaluate the time required to navigate through the website.
2. Equipment required: Computer or mobile device with internet access.
3. Quantitative measurement list: Time taken to navigate through the website. Several clicks are required to access each page on the website.
4. Scenario Description: You are a user who is visiting the Greenspace app for the first time. You want to explore the website and learn more about the features of the app.
5. Task List:
  - a. Open the Greenspace app and log in to your account.
  - b. Navigate to the education page. Read the information provided on the education page.
  - c. Navigate to the map page.
  - d. Zoom in and out of the map to explore different areas.
  - e. Click on a green infrastructure location to view details.
  - f. Navigate back to the homepage.
6. Qualitative measurement list:
  - a. Participants' ease of use of the website navigation.
  - b. Participants' understanding of the information provided on the education and map pages.
7. Potential observations of participants:
  - a. Participants struggled to find the education or map pages.
  - b. Participants were confused about the information provided on the education or map pages.
8. Bug Report Form: Description of the bug: Unable to navigate to a specific page on the website.
  - a. Steps to reproduce: Click on the link to the specific page, and the website does not load the page.
9. Post-Scenario Interview and Questionnaire Questions:
  - a. How easy or difficult was it for you to navigate through the website?
  - b. Were there any pages or information that were confusing or unclear to you?
  - c. Is there anything you would suggest to improve the website navigation?
10. Test Set-up Details:
  - a. The test will be conducted online in a quiet room with no distractions. The participant will use their own computer or mobile device to access the Greenspace app.

## Test Scenario 2

1. Test Goals:
  - a. To evaluate how well users understand the content provided on the website, and how helpful it is for solving the quiz before accessing it on the Greenspace app.
2. Equipment required:
  - a. Computer or smartphone with internet access.
3. Quantitative measurement list:
  - a. Several correct answers in the quiz.
  - b. Time is taken to complete the quiz.
4. Scenario Description:
  - a. You are a user who wants to test their knowledge of green infrastructure before accessing the quiz on the Greenspace app.
  - b. You will access the website and complete the quiz without using any external resources.
5. Task List:
  - a. Access the website at <https://ui-dev.cs.mtu.edu:8108/greenspace/>. Read through the provided content on green infrastructure. Complete the quiz provided on the website.
  - b. Submit your answers and note your score.
6. Qualitative measurement list:
  - a. Participants' understanding of the content provided on the website.
  - b. Participants' confidence in their ability to solve the quiz.
7. Potential observations of participants:
  - a. Participants struggled to understand the content provided on the website.
  - b. The participant felt confident in their ability to solve the quiz.
8. Bug Report Form:
  - a. Description of the bug: Unable to complete the quiz.
  - b. Steps to reproduce: Access the website, read the content on green infrastructure, and attempt to complete the quiz.
9. Post-Scenario Interview and Questionnaire Questions:
  - a. Did you find the content provided on the website helpful for solving the quiz?
  - b. Was the quiz challenging or easy for you?
  - c. Is there anything you would suggest to improve the content or the quiz?
10. Test Set-up Details:
  - a. The test will be conducted online, and the participant will use their computer or smartphone to access the website.
  - b. The participant will be asked to complete the quiz without using any external resources.

## Test Scenario 3

1. Test Goals:
  - a. To evaluate the functionality of the map feature in the Greenspace app.
  - b. To assess the accuracy of the green infrastructure locations displayed on the map.
2. Equipment required:
  - a. Smartphone with the app installed and a stable internet connection.
3. Quantitative measurement list:
  - a. Time is taken to load the map.
  - b. Accuracy of the green infrastructure locations displayed on the map.
4. Scenario Description:
  - a. You are a user who is interested in exploring the green infrastructure in your city.
  - b. You want to use the map feature in the Greenspace app to find the nearest green infrastructure location to your current location.
5. Task List:
  - a. Open the Greenspace app and log in to your account.
  - b. Navigate to the map feature.
  - c. Allow the app to access your location.
  - d. Search for green infrastructure locations near you.
  - e. Click on a green infrastructure location to see more information about it.
6. Qualitative measurement list:
  - a. Participants' ease of use of the map feature.
  - b. Participants' understanding of the green infrastructure locations displayed on the map.
7. Potential observations of participants:
  - a. Participants struggled to find the map feature.
  - b. Participants are unable to allow the app to access their location.
8. Bug Report Form:
  - a. Description of the bug:
    - i. Incorrect green infrastructure location displayed on the map.
    - ii. Steps to reproduce: Search for green infrastructure locations near your current location and click on a green infrastructure location to view more information.
9. Post-Scenario Interview and Questionnaire Questions:
  - a. How easy or difficult was it for you to use the map feature?
  - b. Were the green infrastructure locations displayed on the map accurate?
  - c. Is there anything you would suggest to improve the map feature?
10. Test Set-up Details:
  - a. The test will be conducted in person in a quiet room with no distractions.
  - b. The participant will use their smartphone to access the app and a stable internet connection will be provided.

## Test Scenario 4

1. Test Goals:
  - a. To ensure that the process of uploading new green infrastructure locations to the database is functional and user-friendly.
2. Equipment required:
  - a. A computer with internet access and the ability to access the website.
3. Quantitative measurement list:
  - a. Time is taken to upload a new green infrastructure location.
  - b. Several clicks are required to upload a new green infrastructure location.
4. Scenario Description:
  - a. You are a user of the GreenSpace app who has discovered a new green infrastructure location that is not currently listed on the map.
  - b. You want to upload this location to the database so that it can be added to the map.
5. Task List:
  - a. Log in to your account on the GreenSpace app.
  - b. Navigate to the "Upload Location" page.
  - c. Enter the information for the new green infrastructure location, including the location name, address, and a brief description.
  - d. Upload a photo of the location (optional).
  - e. Click on the "Submit" button to save the new location to the database.
6. Qualitative measurement list:
  - a. Participants' ease of use of the upload location tool.
  - b. Participants' understanding of the information required to upload a new location.
7. Potential observations of participants:
  - a. Participant struggling to find the "Upload Location" page.
  - b. Participants were confused about the information required to upload a new location.
8. Bug Report Form:
  - a. Description of the bug:
    - i. Unable to upload a new green infrastructure location.
    - ii. Steps to reproduce: Navigate to the "Upload Location" page, enter location information, and attempt to submit.
9. Post-Scenario Interview and Questionnaire Questions:
  - a. How easy or difficult was it for you to upload a new green infrastructure location?
  - b. Were there any steps in the process that were confusing or unclear to you?
  - c. Is there anything you would suggest to improve the upload location tool?
10. Test Set-up Details:
  - a. The test will be conducted in-person or remotely with screen sharing, with the participant

## Bug Report Form

Bug Number: \_\_\_\_\_

Bug Name: \_\_\_\_\_

Bug Description: \_\_\_\_\_  
\_\_\_\_\_

Steps to reproduce:

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_



## Testing Challenges

Challenge Number	Challenge Name	Description

## Computer User Interface Usability Testing

You are being invited to participate in a research study to determine the usefulness and usability of computer user interfaces. This study is being conducted by Dr Robert Pastel of Michigan Technological University Computer Science Department and Dr Pastel's Human-Computer Interaction (HCI) courses. The students are performing the usability tests as part of their project and to fulfil the HCI course requirements.

There are no known risks if you decide to participate in this research study. There are no costs to you for participating in the study. The information you and the tasks that you will perform will determine the usefulness and usability of user interfaces. The questionnaires and the tasks should take less than an hour to complete. The information collected may not benefit you directly, but the information learned in this study should provide more general benefits.

The questionnaires and tests are anonymous. No one will be able to identify you and your answers, and no one will know whether or not you participated in the study except for the instructor of the class who is giving you credit for participating. Should the data be published, no individual information will be disclosed. Your participation in this study is voluntary. By completing the questionnaires and performing the tasks, you are voluntarily agreeing to participate. You are free to decline to answer any particular question you do not wish to answer or not to perform a task for any reason.

The testing may make use of video conferencing software which will record your tasks on a computer's screen and from your webcam. The webcam recordings will not be shared, and you may mute the webcam at any time. Before sharing your screen, you should clear your desktop of any open apps except your browser. Also, you should clear your desktop of any icons or widgets that you wish not to be observed. If you have any questions about the study, please contact Dr Robert Pastel, Associate Professor, Computer Science Department, Michigan Technology University, Houghton, MI 49931.