

## **Release 3**

### **Usability Testing:**

Since the last release, the integration of the Smartlook usability testing tool encountered issues with the project build. Due to these complications, the instructor suggested switching to manual testing as an alternative. While manual testing is less precise than automated tools, it was considered the most practical option given the project's tight timeline and the current state of the build.

To ensure a well-rounded sample, we selected 15 users with varying degrees of technology familiarity and campus knowledge. This approach aimed to provide a more accurate representation of how the application would be experienced by a diverse group of users.

The usability testing plan aims to evaluate how efficiently and effectively users can interact with the Campus Guide application. The testing will focus on major features such as campus map exploration, outdoor and indoor directions, and specific features related to real-time directions and building navigation.

#### **Test Criteria:**

##### **1. Performance:**

- Evaluate the time taken for the application to load directions from point X to point Y.
- Measure if the stack (technology or platform) supports the user's interactions with minimal lag or delay.

##### **2. Error Identification:**

- Track the frequency of user mistakes, which could be due to user interface confusion or feature misinterpretation.
- Identify issues related to the features' functionality and ease of use, such as directions that are hard to follow, failure in showing real-time updates, or incorrect building locations.

##### **3. User Feedback:**

- Collect feedback from participants on the usability of the features, focusing on ease of use, design clarity, and overall experience.
- Gather suggestions for improvements to enhance user experience.

#### **Test Participants:**

- **Sample Size:** 15 participants
- **User Profile:** Students, staff, or individuals with varying familiarity with campus maps and general navigation applications.

- **Demographics:** A mix of new users, returning users, and those familiar with campus facilities.

Tasks for Testing (5 Major Features, 5 Related Tasks):

1. **Campus Map Exploration:**

- **Task 1:** Switch between SGW and Loyola using the toggle button.
- **Task 2:** Locate a specific building on the campus map.
- **Task 3:** View pop-up information for a building.

**Note:** Confirm the visibility of campus building shapes and distinction from city buildings.

2. **Outdoor Directions:**

- **Task 1:** Select a start and destination building

i. Start JMSB go to Hall

- **Task 2:** Generate directions using multiple transport options (walk, car, public transport).
- **Task 3:** Get directions from SGW to Loyola and vice versa.
- **Task 4:** Utilize the Concordia Shuttle Service in directions.

i. From SGW to Loyola

ii. From Loyola to SGW

3. **Directions to Next Class:**

- **Task 1:** Get directions from one classroom in hall to another classroom

**Note:**

Does it show accessibility by highlighting pathways for students with disabilities.

Does it Show indoor points of interest (e.g., washrooms, water fountains, elevators).

4. **Points of Interest:**

- **Task 1:** Find the nearest points of interest on campus (restaurants, coffee shops).
- **Task 2:** Get directions to Tim Hortons

Metrics to Track:

- **Time Taken:** Measure how long each participant takes to complete each task.
- **Success Rate:** Determine whether participants successfully complete each task.
- **Error Rate:** Track the number of mistakes or issues encountered by the participants.

- **Satisfaction Rating:** Collect feedback using a Likert scale to rate the ease of use, design, and feature usefulness.

Analysis:

To properly analyze the app's functionality we will analyze each category.

### Campus Map Exploration:

This feature was straightforward for all users to navigate. Even those using it for the first time were able to get comfortable with it quickly, thanks to a clear and accessible interface. Tasks were completed with ease and in very little time, showing that the design supports user understanding and smooth interaction without much guidance.

Campus Map Exploration	
Task 1: Switch between SGW and Loyola using the toggle button.	4.60
Task 2: Locate a specific building on the campus map.	8.93
Task 3: View pop-up information for a building.	1.67

### Outdoor Directions:

Most users had little trouble finding directions to buildings both within the same campus and between the two campuses. While the tasks took longer to complete, the time varied depending on how comfortable each person was with using technology. The feature worked well overall, but a few small changes could help make it quicker and easier for everyone to use.

Outdoor Directions	
Task 1: Select a start and destination building by clicking (Start JMSB, go to Hall).	28.67
Task 2: Select a start and destination building by typing (Start JMSB, go to Hall).	29.00
Task 3: Generate directions using multiple transport options (walk, car, public transport).	4.00
Task 4: Get directions from SGW to Loyola and vice versa.	29.93
Task 5: Utilize the Concordia Shuttle Service in directions (SGW to Loyola, Loyola to SGW).	3.27

### Directions to Next Class:

No users were able to complete this part of the test. The feature seems unfinished, which likely caused the difficulties. Although classroom icons are shown on the map, clicking on them doesn't bring up any details. Some users also tried searching for classroom numbers, but the search bar doesn't support that yet. Because of these gaps, users couldn't carry out the task as expected.

Directions to Next Class	
Task 1: Get directions from Hall 501 to Hall 1011.	98.43

### Points of Interest:

This last test could have been explained more clearly in the usability testing plan. Some users tried to find the nearest point of interest based on where they were on the map, zooming in and scanning the area. Others simply typed in places they expected to be close by. From this, we learned that both the zoom and search functions are working properly. However, the way the task was interpreted meant we didn't get a clear look at how well the actual point of interest feature performs. When asked to look for coffee, most users were able to type "coffee" into the search bar and find results, while others typed in the names of coffee shops they already knew were nearby.

Points of Interest	
Task 1: Find the nearest points of interest on campus (restaurants, coffee shops).	25.00
Task 2: Get directions to Tim Hortons.	32.43

The feedback from users gives a clearer picture of where the app could use some improvement. Many found it confusing to use, especially when switching between different parts of the app or trying to get directions. Comments pointed out that it wasn't very user-friendly, and some had trouble with basic tasks like zooming in or figuring out how to move from one screen to another. A few users mentioned accidentally closing the app while using it, which shows that it might be too easy to exit without meaning to.

One issue that stood out was with the classroom directions. Most users were able to find classrooms on the map, but they couldn't get directions from one classroom to another. This made the feature feel unfinished. The search bar also had its own set of problems—it didn't pick up on certain keywords, and there was no spell check, which made it harder for users to get accurate results. Someone also mentioned that the app might be tough for older users to navigate, which points to a need for more accessible design. While features like zoom and basic search worked, the overall experience had enough small issues to show that the app still needs some fine-tuning to feel smooth and dependable.

The average user rating came out to 2.42 out of 5. Even though that's lower than expected, it's important to keep in mind that this was the final sprint, with the focus mostly on testing and improving what was already built. Some areas, like classroom directions and points of interest, weren't quite there yet, and that likely influenced how users rated the app. Still, the feedback from this round of testing is valuable and can help guide the last updates before the app is ready to launch.

Metrics to Track	
Time Taken (mins):	3 minutes and 56 seconds
Satisfaction Rating (1-5):	3.8