

Usability Test Plan for Mentor Finder

Prepared By Lina El Sadek

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Table of Contents

1 Document Scope	3
2 Purpose.....	3
2.1 Aims and objectives of the test	3
2.2 What the usability test is not designed to achieve.....	3
3 Evaluation Procedure	4
3.1 Schedule/Location.....	4
3.2 Format	4
3.3 Participants.....	4
3.4 Equipment	4
3.4.1 Equipment on Participants' Side	4
3.4.2 Equipment on Moderator's Side.....	4
4 Roles	4
5 Sessions.....	5
6 Task Scenarios	5
7 Observations	5
7.1 Screen Recording	5
7.2 Video Recording	6
7.3 Data Logging	6
8 Metrics	6
8.1 Task Completion Rates	6
8.2 Task Completion Time	6
8.3 Subjective Satisfaction.....	6
9 Participant Instructions	6
Appendix A – Post-Test Survey	7
Appendix B – Participants' Instruction Guide	12

1 Document Scope

This document describes the usability test plan for Mentor Finder. Mentor Finder is a web application that can be accessed through any browser on desktop and smartphones. Its purpose is to match undergraduate students with available mentors to help the students with their courses.

Since this is the first prototype version of the web application, this document will aim to test all major tasks implemented. The tasks to be tested are the initial search page, the mentors' list page, the mentor's profile page, and the payment page. The test will help to establish a baseline for future releases on how to enhance user performance, identify potential design flaws, and obtain user input on necessary features to be implemented.

The remainder of the usability test plan document is structured as follows. Section 2 defines the purpose of the usability test and outline objectives aimed to be achieved. Section 3 details the evaluation procedure such as the location and format of the test, participants chosen for the test, and equipment used during the test. Section 4 defines roles of moderators and their responsibilities. Section 5 outlines the typical path test sessions will follow. Section 6 defines testing scenarios that will be performed by participants during the test. Section 7 specifies the different techniques and methods used to capture qualitative data from the test. Section 8 defines usability metrics that will be used to quantify the data obtained from the test. Section 9 outlines the participant instructions that will be given during the usability test.

2 Purpose

2.1 Aims and objectives of the test

There are several usability test objectives that we hope to achieve with this test plan that are listed below:

- Determine any design inconsistencies or flaws within the user interface.
- Determine any sources of errors in:
 - Behavior expectation – if a user performs a task expecting a certain feedback from the interface but receives another.
 - Control usage – if a user improperly used an input or selection field.
 - Presentation issues – if a user fails to locate crucial components in the interface to complete a task.
- Draw a baseline for future releases on how to enhance user performance, learnability, and user satisfaction as well as reduce error rates.
- Determine the effectiveness of the layout chosen in assisting the user during decision making process.
- Obtain user satisfaction metrics on the implementation of modality and identify potential usability issues with this design specifically.

2.2 What the usability test is not designed to achieve

This usability test plan is not suitable to determine the usefulness and popularity of the application on final release due to the small sample size of five undergraduate students.

3 Evaluation Procedure

3.1 Schedule/Location

Testing will take place remotely on Microsoft Teams. It will be done as a single testing session with five participants.

3.2 Format

The usability testing will be conducted asynchronously. Participants will be given a set of instructions to follow with no moderation. On completion of test, a link to a survey will be provided to the user to complete.

3.3 Participants

The participants of this usability test will be undergraduate students. They were recruited as part of a course offered at McMaster University called Human Computer Interfaces (SFWENG 6HC3). The selected participants match the targeted demographic population – undergraduate students.

3.4 Equipment

3.4.1 Equipment on Participants' Side

Participants are expected to have the following equipment prior to starting the test:

- A working computer with mainstream Graphical User Interface based operating systems such as Windows, macOS, or Linux (non CLI flavors)
- Microsoft Teams to receive test instructions
- Any screen recorder software such as OBS Studio
- A working microphone and camera to record their audio and video during the test
- An Internet connection
- Any of the following supported browsers: Chrome (minimum v75), Firefox (minimum v78.3.1), or Safari (minimum v10)

3.4.2 Equipment on Moderator's Side

Moderators are expected to have the following equipment prior to commencing the test session:

- A working computer with mainstream Graphical User Interface based operating systems such as Windows, macOS, or Linux (non CLI flavors).
- Microsoft Teams to initiate the testing session.
- Any screen recorder software such as OBS Studio to record participants.

4 Roles

The roles involved in the usability test plan are defined below.

- Silent Observer
 - Observe the participant with no moderation provided
 - Record notes of participant's reaction during usability test
 - Analyze collected data from usability test

5 Sessions

All test sessions conducted will be the same for consistency and will be completed within 20-25 minutes. The designed session's activities are described below.

- Participants will be sent a zip file to unzip in their local machine. The unzipped folder will contain an index.html file that participants will be asked to run using one of the supported browsers specified. Once the file is open, the participants will then commence the usability test.
- Participants will follow the usability test instructions and complete the tasks outlined in it. Refer to section 9 of this document for a sample of the usability test instructions provided to participants.
- Once participants complete the test, they will be asked to complete a post-interview survey to capture the user satisfaction metrics defined in this test.

6 Task Scenarios

The task scenarios used for testing are described below.

- Scenario 1 version 1: Use “Find a Mentor” form to search for a mentor for course SFWENG 4HC3 at McMaster University – Do not use any of the search assistant options available.
- Scenario 1 version 2: Use “Find a Mentor” form to search for a mentor for course SFWENG 4HC3 at McMaster University – use the search assistant options available.
- Scenario 2: Use “Browse Available Mentors” page to find mentors with rating 3 and up stars.
- Scenario 3: Use “Browse Available Mentors” page to find mentors with budget between \$20-\$50.
- Scenario 4: Use “Browse Available Mentors” page to find mentors using sorting.
 - Note: the sorting option is not specified here to see what would the typical sorting option used and in what order.
- Scenario 5: Use “Browse Available Mentors” page to find mentors to search for mentor “Sal Yassi”.
- Scenario 6: Use “Browse Available Mentors” view a mentor's profile and return back to the “Browse Available Mentors” page.
- Scenario 7: Use “Browse Available Mentors” to hire a mentor with ratings of 4 stars and above.

7 Observations

7.1 Screen Recording

Participants will be asked to record their screen when performing the usability test. Screen recordings will be used to analyze any patterns the participants make during the test. This can help in identifying possible usability issues in the interface.

7.2 Video Recording

Participants will be asked to record a video with audio when performing the usability test. Video recording will help in detecting facial expressions and thoughts said aloud. Those can help in identifying issues with the interface that the user missed in identifying in the survey.

7.3 Data Logging

After the participants send their recorded videos, the videos will be reviewed, and participants' comments will be recorded. Observed behaviors will then be marked with predefined codes listed below:

- BT – Beginning of task
- ET - End of task
- FT - Failure in Task
- B - Bug found by user
- P – positive comment
- N – negative comment

8 Metrics

Usability metrics refers to evaluating a product based on performance of represented target audience against usability requirements defined. In this usability test plan, task completion rates, task completion time, and subjective satisfaction will be collected.

8.1 Task Completion Rates

Task completion rates will be determined according to the below definitions:

- 0% - user was unable to complete a task or used online help to do so.
- 50% - user was able to complete a task not in the intended way.
- 100% - user was able to complete a task in the intended way.

8.2 Task Completion Time

Task completion time will be recorded by asking participants to indicate that a “Task Started” and “Task Ended”. Those keywords will be used to start and stop a stopwatch which would determine the amount of time taken by a participant to complete a task.

8.3 Subjective Satisfaction

Subjective Satisfaction will be measured using a survey given to the user after completing all tasks in the usability test plan. The survey will use free-form inputs, and Likert chart ratings to determine the satisfaction level of certain elements in the interface, ease of use, and the overall experience of the interface. Refer to Appendix A for a copy of the survey that will be used.

9 Participant Instructions

Please refer to Appendix B for a copy of the participants' instruction guide.

Appendix A – Post-Test Survey

MentorFinder Post-Test Survey

Please answer the following questions

* Required

What is your name? *

Your name will remain confidential

Your answer

Have you used a similar App or website to this application? If Yes, please mention its name

Your answer

How do you rate your experience in using the Find a Mentor search page?

	1	2	3	4	5	
Dissatisfied	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Satisfied

If you have comments regarding how we can improve Find a Mentor page, please enter them here

Your answer

How do you rate your experience in using the Browse a Mentor page?

	1	2	3	4	5	
Dissatisfied	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Satisfied

Rate your agreement to the following statement: "The page layout assisted me in selecting a mentor"

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Agree

If you have comments regarding how we can improve Browse a Mentor page, please enter them here

Your answer

How do you rate your experience in using the Mentor Profile page?

	1	2	3	4	5	
Dissatisfied	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Satisfied

Did you like the use of modality in Mentor Profile page? If no, please provide a reason.

Your answer

If you have comments regarding how we can improve Mentor Profile page, please enter them here

Your answer

How do you rate your experience in using Pay a Mentor page?

1 2 3 4 5

Dissatisfied ○ ○ ○ ○ ○ Satisfied

If you have comments regarding how we can improve Pay a Mentor page, please enter them here

Your answer

What did you like about MentorFinder?

Your answer

What did you not like about MentorFinder?

Your answer

Submit

Appendix B – Participants' Instruction Guide

MentorFinder

Instruction Guide

Introduction

Dear Participant,

Thank you for your participation in this usability test. Your feedback will help us in making MentorFinder the best it can!

This test will be unmoderated, and so, the moderator will not be able to communicate with you during the test. Please complete the test to the best of your ability and remember to always **think aloud**.

Before you begin this test, please read the disclaimer below.

“By performing this test, you consent to have your video and audio recorded. The recording will be used for analysis purposes only and will not be shared with any third parties. Your information will remain confidential and recordings will be disposed of after analysis.”

Pre-test Setup

Before you begin the usability test, please make sure your test environment conforms to the below requirements.

- A working computer with mainstream Graphical User Interface based operating systems such as Windows, macOS, or Linux (non CLI flavors).
- Microsoft Teams to receive test instructions.
- Any screen recorder software such as OBS Studio.
- A working microphone and camera to record their audio and video during the test.
- An Internet connection.
- Any of the following supported browsers: Chrome (minimum v75), Firefox (minimum v78.3.1), or Safari (minimum v10).

Test Instructions

Below are the instructions to start your test.

1. Unzip MentorFinder.zip file to a local folder on your hard drive.
2. Start your screen, video, and audio recordings.
3. Open index.html file using a browser.
4. Follow the test scenarios outlined in the next section. **Important! On every task you start, please say “Task Started”, and say “Task Ended” on task completion.**
5. Once all test scenarios are complete, please visit the following URL to complete a post-interview survey: <https://forms.gle/BSaHsQ4Z3uYG6W1A8>

Test Scenarios

The task scenarios used for testing are described below.

Important! On every task you start, please say “Task Started” and “Task Ended” on task completion.

- Scenario 1 version 1: Use “Find a Mentor” form to search for a mentor for course SFWENG 4HC3 at McMaster University – Do not use any of the search assistant options available.
- Scenario 1 version 2: Use “Find a Mentor” form to search for a mentor for course SFWENG 4HC3 at McMaster University – use the search assistant options available.
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- Scenario 3: Use “Browse Available Mentors” page to find mentors with budget between \$20-\$50.
- Scenario 4: Use “Browse Available Mentors” page to find mentors using sorting.
- Scenario 5: Use “Browse Available Mentors” page to find mentors to search for mentor “Sal Yassi”.
- Scenario 6: Use “Browse Available Mentors” view a mentor’s profile and return back to the “Browse Available Mentors” page.
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