FP6 – Summative Evaluation Plan and Prototype

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Summative Evaluation Plan

1. Evaluation Objectives

- How quickly can users finish each task, relative to "experienced" users
- If they can complete each task listed
- If the app needs to present any additional instruction for its use
- If any major changes are needed due to task misunderstanding or incompletion

2. Tasks / Scenarios

Test Scenario:

You are a student of NorthEastern University. Deciding to be safe and smart, you download the Covid Tracking App sponsored and created by NorthEastern University. First, you will need to sign in the application. Second, an automatic Daily Wellness Check will open for you, as you have not completed it for today. Follow the questionnaire and answer the questions before submitting your Daily Wellness Check. After this, you notice that you need to set your notifications settings to ensure you understand when you might have been at risk. Going to setting, you will set your notifications preference, and enter your phone number along with your class schedule. Now returning to the home page, you decide to Report a New Covid Test Results you have received. Continue to Report a Covid Test Result, you will follow the questionnaire and answer them, before submitting the final questionnaire. Returning to the home page again, you will now decide, before logging off, you want to check the Covid Tracking Data for the school, the city of Boston, and the state of Massachusetts. After checking the data, you decide you are done and log off.

Task List:

Logging In:

You will type in your school username for the app

You will type in your password

If you wish to, you may click "remember me" for faster logging in next time

You will press the "login" button

If you entered the credentials correctly, you will be taken to the home screen

If you entered the credentials incorrectly, you will be asked to re-enter their credentials

Daily Wellness Check:

You will open the application for the first time in a given day and are prompted to complete the daily wellness check.

You will read question 1 and press either the "yes" or "no" button based on what is appropriate.

You will read question 2 and press either the "yes" or "no" button based on what is appropriate.

You will then review your answers and select either "submit" or "start over" based on what is appropriate.

You will be shown relevant information based on your responses.

You can access the results of your daily wellness check through a button on the homepage and view an associated QR code

Reporting a Covid Test:

You will press the "Report New Covid Test" button on the home page

You then will fill out the box for the date the test was taken

You then will fill out the box for when your results were received

You will press the radio button for either "positive" or "negative"

You will press the "Test Submission" button

You will review your test submission and press either the "submit" button or the "start over" button

You will receive relevant information based on the result of your test

Contact Tracing:

If you have not already done so, you will be prompted to give a valid cellular phone number that can be sent notifications when positive test notifications need to be sent to you.

If you have not verified your phone number through a text message, a text message asking for phone number verification will be sent to you, and you will be required to press the link in the message to verify your phone number.

You will enter whether or not you take classes in person or online on daily basis for when a class has happened

You will enter other locations you have visited on campus during the day, noting time period when possible

You will be able to enter the dormitory you live in if applicable

Notifications:

You will receive a notification if anyone in your residence hall or any of your classes has tested positive for Covid-19

You will receive a push notification, text message, and email about any positive tests. You will also see an automatic popup upon opening the app

You can set your notification preferences

Viewing the Covid Influence:

You will use a finger to "swipe" left, revealing a new page Northeastern covid influence statistics (and possible map)

You will then press the "Boston" button to change to Boston Covid Influence stats / map

You then press the "Massachusetts" button to change to Massachusetts Covid Influence stats

You will then press the "Northeastern" button to change back to Northeastern Covid Influence

You finally will use a finger to "swipe" right to exit page

3. **Metrics**

Usability Metric	Measure
Task-based efficiency	Task completion time in seconds
Task completion ratio	Tasks successfully completed
SUS	Questionnaire Satisfaction Rating

4. Procedure

1. Briefing
2. Log in
3. Daily wellness check
4. Set Contact Tracing Details
5. Report test
6. Explore covid data
7. Questionnaire

5. Testing Environment

We will send the user a link to the high fidelity prototype and then have them share their screens (likely through Zoom or Teams) to observe how they interact with the prototype. We will also be using our smartphones as stopwatches to measure how long each task takes them.

6. Appendix

Sample Script:

"Thank you for agreeing to participate in our evaluation session today.

You probably already know, but let me explain why we've asked you to come here today: Within the scope of a class project, we're testing our newly designed Covid Tracking App and want to know how users feel about it. In this session, we will have you do some typical tasks on our Covid Tracing App. The session will take approximately 10-15 minutes. These tasks consist of actions typically performed when utilizing goal tracking apps. I want to make it clear right away that we're testing the app, not your ability. In fact, you are the one who is helping us evaluate our prototype. You can't do anything wrong here.

 2.   [Ask the participant to read and sign the consent form.]

"Before proceeding to the study, I will ask you to read an informed consent form and sign it should you agree to participate in the study."

3.   [Give the consent form to the participant and allow for sufficient time.]

 4.   [If they sign the consent form, proceed to explaining the procedures to the participant.]

"Here is how the session will work:

●   You will be working on your own computer, using the Covid Tracing App and Teams or Zoom.

●   The tasks that you will be asked to complete are written in a form given. For each task, please read the task carefully and go to the browser to perform the task.

●   After each task, you will be asked to fill out a short questionnaire consisting of six questions about your experience completing the task.

●   At the end of the session, you will be asked to fill out one more questionnaire.

●   After you are done with the test, we will have a short conversation about your overall experience with Covid Tracking App in today's session.

●   Do you have any questions before we begin?"

Questionnaire for each Task:

On a scale of 1 - 10, **1 being low/poor** and **10 being high/good**, please answer the following questions per task attempted.

Mental Demand (Low-High)

    How mentally demanding was the task?

Physical Demand (Low-High)

    How physically demanding was the task?

Temporal Demand (Low-High)

    How hurried or rushed was the pace of the task?

Performance (Poor-Good)

    How successful were you in accomplishing what you were asked to do?

Effort (Low-High)

       How hard did you have to work to accomplish your level of performance?

Frustration (Low-High)

       How insecure, discouraged, irritated, stressed, and annoyed were you?

SUS Questionnaire:

On a scale of 1 - 5, **1 being Strongly Disagree** and **5 being Strongly Agree**, please answer the following questions about the application.

1.   I think that I would like to use this system frequently.

2.   I found the system unnecessarily complex.

3.   I thought the system was easy to use.

4.   I think that I would need the support of a technical person to be able to use this system.

5.   I found the various functions in this system were well integrated.

6.   I thought there was too much inconsistency in this system.

7.   I would imagine that most people would learn to use this system very quickly.

8.   I found the system very cumbersome to use.

9.   I felt very confident using the system.

10.   I needed to learn a lot of things before I could get going with this system.

Observation Log:

Tasks	Screens Visited	User Reactions	Notes
Log in			
Daily wellness			
Set contact tracing			

details			
Report test			
Explore Covid Data			

High-Fidelity Prototype

Link:

https://cdqel7.axshare.com