WORKSHOP 08: USABILITY TEST PLAN

FlushFinder

Team Number

G03

Submission Date

9/05/2023

Contents

1.0 Team Details

Team Number / Name: Gee-Oh-Three (G03) **Tute day / time:** Tuesday 11am
Project / Name: Where's the cleanest public loo near me? **Tutor:** Dr Shreya Ghosh

Student	Name	Student Number	Role
1	Hans Wong	20968560	Researcher
2	Harry Walters	19166700	Project Manager
3	Kuldeepsinh Talatia	20872043	User Researcher/Data Analyst
4	Navinda Jayawardhana	20537054	Usability Engineer
5	Ola Malek	19756512	Graphic Designer

1.1 Recap: Task Scenarios Brainstorm

We'll be testing the following scenarios:

Some Task Scenarios which will be tested include:
Research Goal - User Aspect - Creating a Profile
Task Scenario: You would like to sign up to FlushFinder
Task: Please use the FlushFinder app to create a user account and create your profile.

Research Goal - User Aspect - Login
Task Scenario: You would like to login to the FlushFinder app.
Task: Please use the FlushFinder app by continuing as an existing user.

Research Goal - User Aspect - Find your nearest Toilet quickly
Task Scenario: You would like to find your nearest toilet quickly as you are in urgent need of a toilet.
Task: Please use the FlushFinder app to find your nearest toilet in an emergency scenario.

Research Goal - User Aspect - Favourite a toilet
Task Scenario: You would like to save a toilet as a favourite to remember that you liked this toilet.
Task: Please use the FlushFinder app to favourite a toilet.

Research Goal - User Aspect - Reading Toilet Reviews
Task Scenario: You would like to read some toilet reviews to know if the toilet is clean.
Task: Please use the FlushFinder app to find the toilet
Reviews.

Research Goal - System Aspect - Understanding of preferences
Task Scenario: You would like to find your nearest toilet that has a needle disposal bin.
Task: Please use the FlushFinder app to find a toilet with needle disposal.

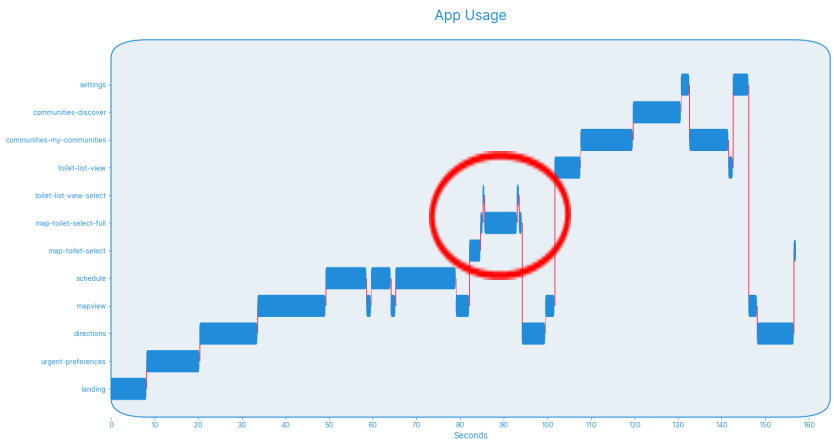
1.2 User Testing Tool

Recognizing the difficulties of producing consistent quantitive data, we decided to automated part of the user test: by screen recording the user's interactions with the prototype, we're able to use computer vision algorithms to detect which page a user is visiting, and can thus time the number of seconds a user spends visiting a page.
Specifically, we populate a directory with screenshots of each unique page (captured from the facilitator's device), and populate another directory with each screen recording, from each user test.

videoToMetrics.py, by default, analyses the video feed twice a second, extracting a frame from the video and comparing it to the unique app page images. The best matching page will be recorded, alongside a timestamp. Once the video has been processed, we filter out any low confidence detections and calculate app transitions (if the next sampled label is different from the current label). These app transition timings are then saved as .csv files.

plottingMetrics.py takes these .csv files and visually represents each user test as a 'waterfall' plot. Each row represents a unique page from the application, the width of each box represents the amount of time visited and the red lines indicate which page the user transitioned to.

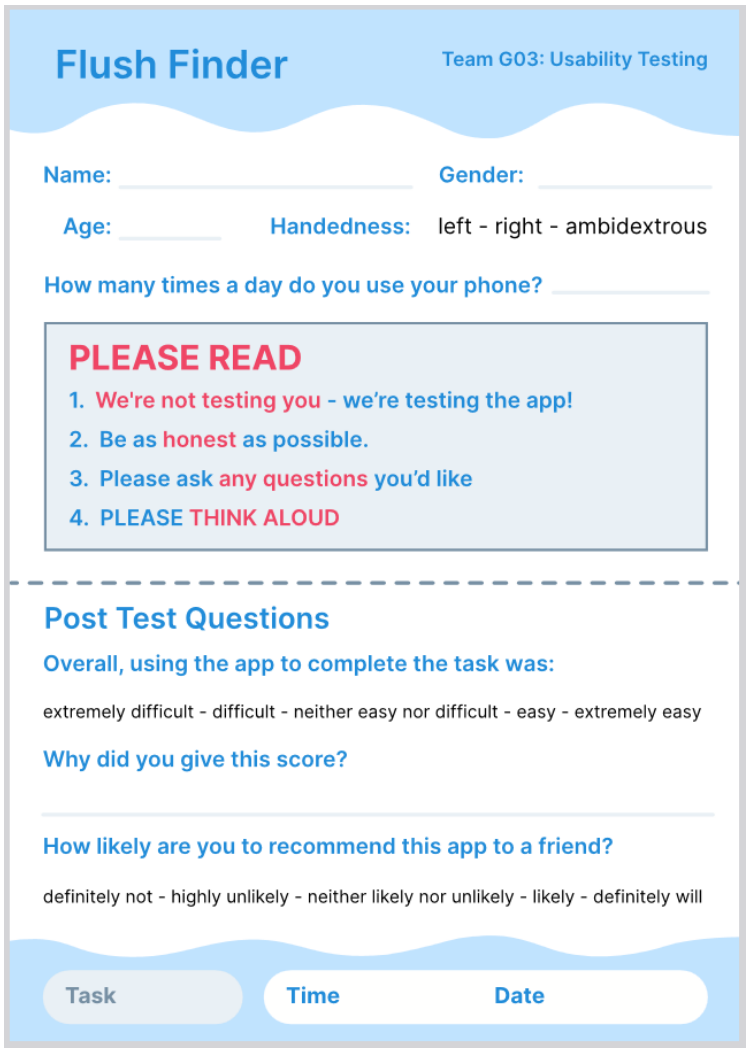
The scripts are designed to modular; a facilitator can modify the datatypes of files, the number of samples per second recorded, the confidence score cutoff, the colours used in the waterfall plots and more.
The User Testing Tool can be downloaded from here:
https://github.com/HarryWalters/UserTestingTool



The example above shows the results of our pilot test. Already, we've used this to discover issues with our experience; in the red circle, we noticed a sharp transition between pages. Further investigation showed that these pages had overlapping buttons, leading to accidental presses (and transitions) to different pages. We found that the visual representation was much faster to parse than watching entire videos for findings.

1.3 Task Sheets

Since developing our initial task sheet draft, we've received useful feedback for which elements of the task sheet we should further develop - such as including more qualitative-based questions, rewording quantitive questions (to get an objective answer) and informing the user of our recording practices. We also converged on a more consistent design language - improving legibility by reducing text thickness (also allowing for more content on the one page) and consistently colouring questions and queries in blue (with expected user response in black and grey)



The most obvious addition is the "PLEASE READ" section - which prompts users to be as honest and as casual as possible. By encouraging users to all have the same "low-stakes" attitude for testing, we are helping to make their responses as grounded to a real-world scenario as possible. We believe that when a user is comfortable, they will be more effective in providing user feedback.

1.4 Facilitator

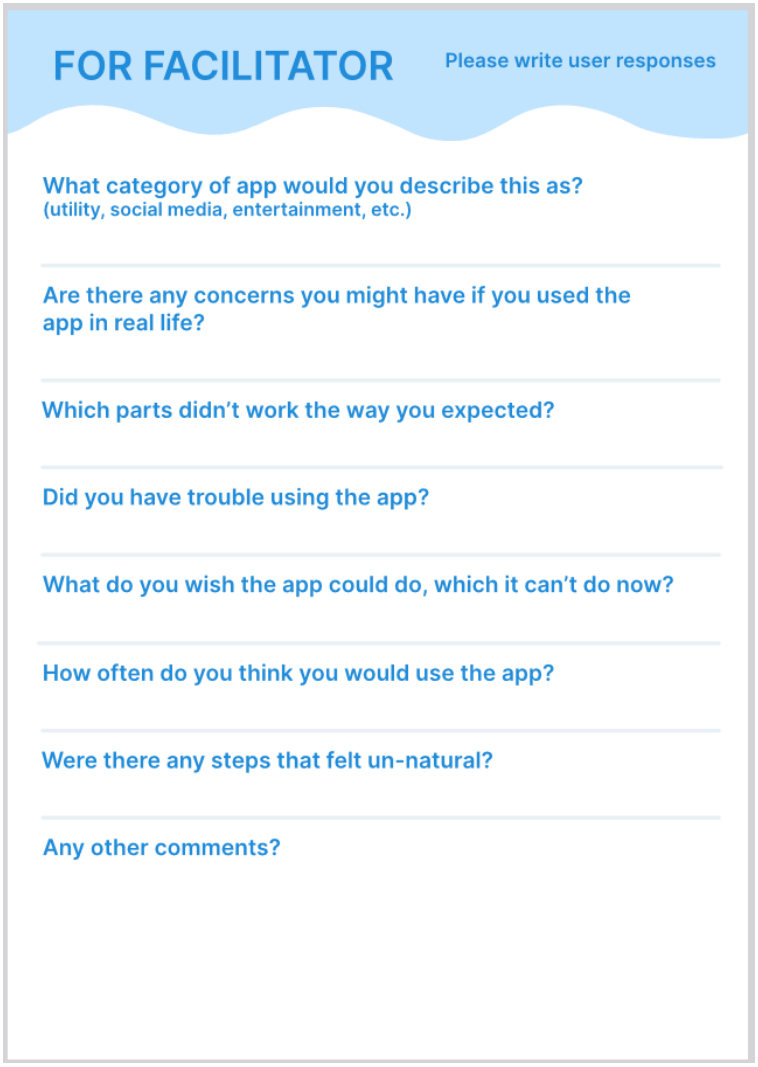
We also received invaluable feedback on the process of testing. We've already discussed that we'll inform the user of our recording practices: which include screen recording the facilitator's device (which they will use), using computer software to analyse the user's behaviour in the recording and noting the user's verbal and emotional feedback (via the facilitator watching the user).

One great piece of advice was to incentivise/reward users with a small chocolate - any opportunity to make the testing environment as positive as possible should be taken!

We've further developed our script, too. The "PLEASE READ" section will be accompanied by the following text (which the facilitator will read out:)

- *"We're not testing you - we're testing the app! If you're having trouble using it, it's never your fault - it's ours!*
- *Be as honest as possible. If you don't like something, or think it's just plain stupid, please say so!*
- *Please ask me any questions you wish, but for the purposes of this test I might not be able to answer them for you.*
- *PLEASE THINK ALOUD as you use the app. Tell us where you're going to click, why you're clicking there, and what you expect to see after you do it.*

- *These four aspects are extremely important to us, so try your best to remember them!"*



Once the user finished the test, the facilitator will interview the user, using the questions on the back page as a script. The user's spoken response will be written down by the facilitator. We believe that users are most comfortable giving spoken responses, than having to write their experiences down.

Any issues which the user faces can be written at the bottom of the page (with any additional comments a user may have).

.

1.5 Participants

To ensure that we gather relevant feedback for the flush-finder app, we will be testing around 5 participants who closely match our target user. The flush-finder app is designed to help people find nearby public restrooms easily and quickly, so we will be looking for participants who are likely to use public restrooms often, such as commuters, travellers, or people who work in busy areas.

Before starting the testing process, we will obtain consent from the participants to conduct testing, using the Research Participation Agreement. We will explain the purpose of the testing and what we expect the participant to do during the session, including tasks such as searching for nearby toilets, accessing directions, or setting preferences/schedules.

To make participants feel comfortable, we will begin with some warm-up questions before moving on to the main testing tasks. The facilitator will provide clear instructions on how to use the flush-finder app and will observe the participant's behaviour and ask follow-up questions if necessary. We will give participants the option to stop at any time if they feel uncomfortable or overwhelmed, ensuring that they are comfortable with the testing process.

Once the testing is completed, we will gather feedback from each participant and analyse the results as a team. This feedback will help us identify any issues or areas for improvement in the app or the high-fidelity prototype, and we will work to make the necessary changes and improvements.

2.0 Posters

While the other members conduct user testing, our graphic designer has commenced work on the research and sales posters. We're looking forward to applying our Flush Finder design language to a large image format!

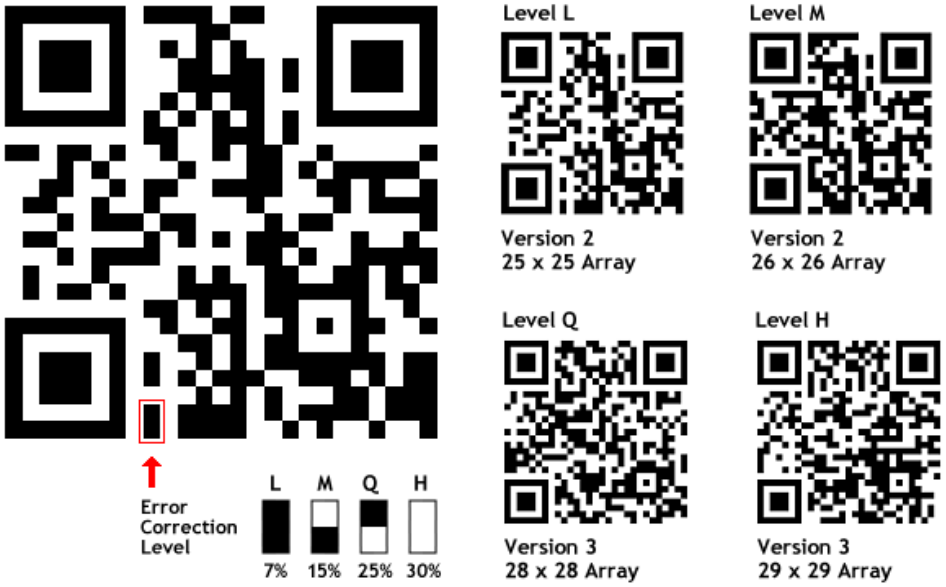
Copywriting

One concept we're piloting for the posters is a "four by four" rule: use a maximum of four bullet points per section and a maximum of four words per bullet point. We believe that for the research poster, this encourages viewers to engage with the team representative (in front of the poster), rather than scare viewers off with a wall of text.

The "four by four" rule is easier to implement with the sales poster - as we're already taking a "show, not tell" approach. We believe that our user interface is sufficiently intuitive to advertise itself. We want to avoid labelling app functionality - if we need to describe it, it's not a good design. We'll include standard elements such as the our logo, the Curtin University logo .svg file and a call to action (to download our prototype).

QR code

Interestingly, one of our team members is *obsessed* with the mathematics behind QR codes. A benefit to their obsession is that we've discovered a fun 'hack' which can be achieved with QR Codes. By producing a QR code with a high error correction level, up to 30% of the QR code can be modified (or even removed), and the code will still be readable by devices



Source: [QR Code Error Correction - QRStuff.com]

	
With 7% error correction	With 30% error correction

A useful byproduct of this, is that we can make a unique visual experience with a highly modified QR code - such as replacing the centre pixels with a ‘download now!’ graphic, or a fun image.

3.0 Conclusion

We believe that the data recorded from the user testing page and our software package will provide detailed insights in the strengths and weaknesses of our app’s usability. This will allow our report to include insights into specific areas of the app which succeeded and failed. Overall, Team Gee-Oh-Three believe that we are on track to completing the User Tests, Posters, Presentation (and slide teck) and Curtin Ignition submission on time to a high calibre.

4.0 UI/UX Glossary and weblinks

Weblinks:
https://xd.adobe.com/ideas/process/user-testing/usability-testing-questions-tips-examples/

https://www.userreport.com/blog/usability-testing/

https://usabilitygeek.com/how-to-develop-goals-usability-test/

https://www.nngroup.com/articles/ux-research-goals-to-scenarios/

https://blog.testlodge.com/usability-testing-examples/

https://maze.co/guides/usability-testing/examples/

https://blog.qrstuff.com/general/qr-code-error-correction/

5.0 Evidence

5.1 Meeting Minutes

GROUP NAME	GEE-OH-THREE
DATE	08/05/23
TIME	1:00-2:00pm
LOCATION	Curtin Library room 422

PRESENT:
Ola Malek, Hans Wong, Kuldeep Talatia (Online), Harry Walters, Navinda (Online)
APOLOGIES:

ABSENT:

DISCUSSION:

- Delegate tasks for workshop 8 submission
- Organise what is being done for assignment 2 and 3

Tasks to do:

TASK	WHO	DUE	COMPLETE
- Few more screens before usability testing	Ola		
- Usability testing	Harry	25/04/23	
- Have at least one scenario ready for piloting tomorrow			
- Make a user testing paper	Harry	2/05/23	
- Workshop 8 - Research Goals	Harry, Hans	9/05/2023	

- Task sheet - Task scenarios			
- Posters	Ola	14/05/2023	
- Functional and non functional requirements assignment 3	Kuldeep		
- Assignment 3 Competitor Analysis	Navinda		
- Assignment 3 prototypes	ola		
-			

References

Figma (User Testing Page)

https://www.figma.com/file/8sdhma3iM8iET2bwTRJiRM/Hi-Fi-Revised?type=design&node-id=4484%3A9773&t=XU8BDGjkuEP0T3B0-1