

ENGINEERING



SFWRENG 4HC3 6HC3 | COMPSCI 4HC3

Group Project Fall 2021

Assignment 3: Research & Prototyping

Weight: 23%

Description:

Conduct user research to better understand your target audience. Analyse the results of your studies to create task, persona and scenario descriptions, along with a storyboard and a video prototype.

Requirements

Part 1: Research Report

Part 1.1: Project Concept (5 marks)

Describe the concept for your design project. This sets the context for requirements, and includes:

- vision statement (one sentence long accurate description of your project)
- any relevant background material or research supporting the vision statement
- listing of all stakeholders
- any assumptions you are making

Part 1.2: Field Study Report

Students are required to conduct primary research using at least 2 different research instruments. Students are free to choose the instruments of their choice.

As a general guideline, interviews must be conducted with at least 2 individuals, with 5 being ideal.

Surveys/questionnaires should be administered to at least 5 people, with 15 – 20 people being ideal.

Other research tools include observational studies and artefact analysis. Where possible, we strongly suggest that you record your interviews and also have participants sign the consent forms for interviews and observational studies that are available on Avenue.

Part 1.3: Field Study Report – Mini Report (10 marks)

This section should include a summary of relevant research results. Your report should be specific, for example, describe the number of participants **(2)**, include relevant quotes from interviews and questionnaires **(2)**, and tables and/or charts of response statistics **(6)**. Avoid vague language and include the actual values.

Include updated research instruments (if they changed) as an appendix.

Part 1.4: Task Analysis (5 marks)

Based on the outcomes of your research, provide one hierarchical task analysis of a task relevant to your users and your design. Identify problem areas in the HTA where your concept may help.

Part 1.5: Persona (5 marks)

Create one **primary persona** representing a key user with their goals, behaviours, and attitudes. Students are free to use the personas that they created in labs if they are relevant.

Part 1.6: Scenarios (10 marks)

Based on your research, create at least **two scenarios** synthesizing what you have learned about your stakeholders, their tasks, environment, artifacts, relevant to your design. The scenarios should be written to include the primary persona, and may be based on stories you heard in your investigations. These should explore the **current situation** as you understand it from your research, not any proposed solution. One scenario should be a story scenario, and the second scenario can be a conceptual or concrete scenario. Students can also use the scenarios that were created in labs if they feel that they are relevant.

Part 1.7: Requirements (5 marks)

Based on what you have learned, list your requirements **using these headings**:

1. stakeholder requirements (needs but I suggest avoiding the term needs)
2. environmental requirements
3. functional requirements
4. technical requirements, and
5. usability requirements

Each requirement should be described in a sentence and justified with reference to the research results.

Part I Total Marks: 40

Part 2: Storyboard and Prototype

Part 2.1: Storyboard (10 marks)

Provide sketches of key interaction sequences in the form of a storyboard. Students may want to consider a Day in the Life storyboard or the user interacting with the product. Ideally, the storyboard should illustrate the particularly important or novel interaction sequences of your design, which could be based on your scenarios. We suggest a storyboard of between 6 – 12 shots, with every shot numbered, and descriptions included where necessary. Scanned hand drawings are acceptable.

Part 2.2: Prototype (20 marks - 15 marks for prototype 5 marks for description)

Students are required to build a prototype of their design that show some part of the interface that your group has envisioned. Discuss briefly any key design decisions made in creating the prototypes. **For the prototype, list what you were attempting to prototype, e.g., what functionalities, the look & feel, the interaction design, etc in the form of a short document that will be included with your submission.**

A prototype should suggest what an application will do, what its essential characteristics are (5), what it will look like (5), and how it is to be used (5). Prototypes may focus more on one of these aspects, but all must be included. The prototype should exhibit a small but important subset of the functionality. In many cases, it is sufficient to simulate the functionality.

Students are required to create only **one** prototype from the 3 options:

Prototype Option 1 – Paper Prototype

A video recording of a paper prototype similar to the examples that were shown in class

Prototype Option 2 – Code Based Prototype

A video recording of a code based prototype. Students are free to use any development tools as they see fit

Prototype Option 3 – Balsamiq, Figma, PowerPoint, GIMP, Photoshop

A video recording of a prototype using any visual tools

Part: 2.3 Interviews (10 marks)

Students are required to record at least two videos of users commenting on the prototype. I strongly suggest following the Google Sprint 5 Act Model for interviews as it is quite clear and easy to follow.

<https://library.gv.com/how-to-test-prototypes-with-customers-the-five-act-interview-80305d98c407>

We also suggest that participants sign consent forms for interviews and observational studies that are available on Avenue.

Part II Total Marks: 40

Total Marks: 80 weighted at 23%

Report Guidelines

Times New Roman 12-point Font, Double Spaced, Page Numbering

Your project report should contain the following:

1. Cover page with group member names
2. Table of Contents
3. The parts in the order described above

4. Links to your video prototypes
5. Links to your interviews
6. Any relevant appendices
7. Any other information that you feel is relevant

Due Date:

Due dates will be posted on Avenue

Submission:

Via Avenue

Grading

Assignments will be assessed on the following criteria:

- Timely submission
- Answering all the sections in the report
- The overall quality and submission of your work, including your research instruments
- The quality and originality of your proposal
- The marks that are distributed to particular sections
- Grades may be deducted for assignments which are poorly written. Please check your spelling and grammar