



UTM
UNIVERSITI TEKNOLOGI MALAYSIA

FACULTY OF COMPUTING
UTM Johor Bahru

Project Part #4: Prototyping and Evaluation (20%)

Subject	:	Human-Computer Interaction (SECV2113)
Session	:	2025/2026 Semester 1
Lecturer	:	Ts. Dr. Sarina binti Sulaiman
Title	:	Project Part #4: Prototyping and Evaluation
Blog Post Deadline	:	10 Days (24 December 2025 until 2 January 2026 before 12.00 am)
Submission	:	This is a GROUP WORK and submit it INDIVIDUALLY Upload URL for blog (in Google Document) for a group submission and via UTM E-learning for an individual submission

Instruction:

Throughout class lectures, discussions and activities done, students are expected to have a clear idea of how to design, implement and evaluate a user interface. In this semester-long project, each group will have to design a particular interactive product/application that interests them. The project may aim to replace or update an established system, or it may aim to develop a totally innovative product with no obvious precedent. The project phases will reflect the stages of the interaction design process and will be submitted as project deliverables throughout the semester.

Process 3: Build interactive versions

Each group will build a medium to high fidelity prototype implementation of your proposed application. You can use any prototyping tools available e.g. Figma or Invision. Your prototype should be able to handle your **THREE TASKS**.

Build your prototype:

1. **Incorporate** the wireframes and design ideas from your Project #3 into the prototype. If you are working on an application, a system or a website, your prototype should include the homepage as a starting point for the user. Similarly, if you are working on an object or device, your prototype should also provide the initial condition of the device as a starting point for the user.
2. Your prototype should be:

High fidelity in look. Lay out screens as you want them to appear in your final implementation. Make choices about colors, fonts, alignment, icons, and so on.

Hint: Use design guidelines that we have learned throughout the course.

Medium fidelity in feel. Your prototype, at a minimum should be able to run on a desktop computer with a mouse and a keyboard.

Medium fidelity in breadth. Your prototype should be able to show the actual and complete interaction flow of the three (3) tasks (vertical type of compromise – refer to teaching slides). You don't need to prototype all of the functions, just the ones that are needed for the user to complete the three tasks.

Process 4: Evaluating what is being built

Each group will conduct a usability test and write up the results of the project. The process is described below:

Users

You will test your computer prototypes on at least **THREE USERS (1 user from each three-user group)**. If you can't find an actual representative, find a potential user that is most similar to your user target group.

Testing with users and write your report.

Prepare a briefing for test users. This task should be at most a page of information about the purpose of your application and any background information about the domain that may be needed by your test users to understand it. These are your notes for the briefing, so make them short, simple and clear, not dense wordy paragraphs. This is not a manual or quick-reference card. It should not describe how to use the interface. You will read this to your test users.

Usability testing

Flow:

1. Welcome the user.
2. Brief the user on the purpose and background information of the application.
3. Obtain verbal consent from the user
4. Present a task. Hand the index card to the user, read it, and let the user read it.

5. **IMPORTANT:** Tell the user that if for whatever reason he/she is unable to complete the task or could not figure out how to complete the task, the user should say loudly “terminate”. This would be the cue for you to start the next task.
6. Begin testing the task.
7. **IMPORTANT:** For each time a user is doing the task, screen record it, along with the audio of the user thinking aloud.
8. **IMPORTANT:** Take notes of your observations. Ask the user to think-aloud.
9. **REPEAT STEPS 4 TO 8 WITH THE NEXT TWO (2) TASKS.**
10. **IMPORTANT:** After the user has done all three tasks, ask the questions that you want them to answer. These might include: What was easy? What was difficult? What would the reasons be why/when they would use system? What would the reasons by why/when they wouldn't? How well would the system fit into their lives? What didn't the system do that they might want? etc. Alternatively, you may use System Usability Scale (SUS) or User Experience Questionnaire (UEQ) for questions:

- Read more about SUS and what the score means here:
<https://usabilitygeek.com/how-to-use-the-system-usability-scale-sus-to-evaluate-the-usability-of-your-website/>
- Read John Brooke original paper:
https://digital.ahrq.gov/sites/default/files/docs/survey/systemusabilityscale%2528sus%2529_comp%255B1%255D.pdf
- Read more about UEQ here:
<https://www.ueq-online.org/>

11. Show appreciation to the user (With small gifts or just a heartfelt thank you).
12. REPEAT ALL STEPS FOR THE OTHER TWO USERS

Submission 4: High Fidelity Prototyping

Submission is by blog post. The report should include the following:

1. **Introduction:** When and where did the testing take place? What equipment is used? What tasks are tested? How many participants are involved?
2. **Prototype:** Some screenshots of your prototype, and video recordings of the usability testing. Upload/Embed the pictures and linked videos in your blog post.
3. **Briefing:** The briefing you gave to users.

4. **Observations:** Describe what users did. You must test with at least with 3 users (1 from each user group – you could test with additional 2 users from any group to have richer findings).
5. **Results** from interviews.
6. **Usability problems** you discovered from the testing, and **possible solutions**.

FORMAT REPORT (BLOG POST):

{Title of Submission: e.g. Group Project 4: Prototyping & Evaluation}

Introduction

{of your prototype}

{info on which group member(s) did which user testing:

Testing for User 1 was handled by Member A,

Testing for User 2 was handled by Member B,

Testing for User 3 was handled by Member C.}

Screenshots of your prototype

{Several screenshots are enough}

Briefing notes – prepared by {member's name(s)}

{The briefing you gave to users}

Testing with users

{Name of tested Task number 1}

{Embedded/link video on User 1 testing task number 1}

{Embedded/link video on User 2 testing task number 1}

{Embedded/link video on User 3 testing task number 1}

*Repeat for Task 2 and 3.

Observations – prepared by {member's name(s)}

{Description of your observations on the tasks carried out and summary of result interviews}

Findings – prepared by {member's name(s)}

{Usability problems you discovered from the testing, and possible solutions.}

Rubric Part 4: Prototyping and Evaluation

Item	Absent (0)	Minimal (1)	Moderate (2)	Good (3)	Excellent (4)	Weightage	Score
(a) Prototype (CLO3)	No prototype	<p>Do not have a look and feel of a final product and does not really illustrate the proposed idea, and/or,</p> <p>Has quite blurry / lack of screens/interfaces which guide users to perform tasks, and/or,</p> <p>has starting point.</p>	<p>Have a look and feel of a final product but does not really illustrate the proposed idea, and/or,</p> <p>Lack of screens/interfaces which guide users to perform tasks, and/or,</p> <p>has starting point. (1 out 3)</p>	<p>Have a minimal look and feel of a final product and able to illustrate the proposed idea, and/or,</p> <p>has distinguished screens/interfaces which guide users to perform tasks, and/or,</p> <p>has clear starting point. (2 out 3)</p>	<p>Have a look and feel of a final product and able to illustrate the proposed idea, and,</p> <p>has distinguished screens/interfaces which guide users to perform tasks, and,</p> <p>has clear starting point.</p>	5	/20
(b) Usability testing – procedure (from the report / recorded videos) CLO3	No testing performed	<p>The procedure performed but unclear and/or unstructured:</p> <ul style="list-style-type: none"> - Brief introduction - Task instructions included explanation of the interfaces - Recorded video session x 3 users (at least) - Short interview 	<p>Follow the suggested practice, but may be incomplete or inaccurate:</p> <ul style="list-style-type: none"> - Brief introduction - Task instructions included explanation of the interfaces - Recorded video session x 3 users (at least) - Short interview 	<p>Follow the suggested practice, but incomplete:</p> <ul style="list-style-type: none"> - Brief introduction - Clear task instructions (no how, but what to do) - Recorded video session x 3 users (at least) - Short interview 	<p>Follow the suggested practice:</p> <ul style="list-style-type: none"> - Brief introduction - Clear task instructions (no how, but what to do) - Recorded video session x 3 users (at least) - Short interview 	2.5	/10
(c) Usability testing – findings CLO2	No findings delivered	<p>Poor analysis of observations, and/or,</p> <p>Provide results of interview, and/or,</p> <p>Problems found, but not related to usability, and/or and propose suitable solutions.</p>	<p>Clear analysis of observations, and,</p> <p>Provide results of interview, and,</p> <p>Highlight the usability problems found, and propose suitable solutions.</p>	<p>Clear analysis of observations, and,</p> <p>Provide results of interview, and,</p> <p>Highlight the usability problems found, and propose suitable solutions.</p>	<p>Clear analysis of observations, and,</p> <p>Provide results of interview, and,</p> <p>Highlight the usability problems found, and propose suitable solutions.</p>	2.5	/10

40/40 = 20%