

## Group Project (50%)

Welcome to the group project! This project will let you experience a full cycle of the user-centered design (UCD) process, including requirements gathering, prototyping, and evaluation.

There are three parts in this group project. In the first part (10%) you are going to conduct a Heuristic Evaluation on an interface and specify design requirements. In the second part (15%) you are going to create prototypes implementing the design requirements you came up with. In the third part (25%) you are going to evaluate your design, provide recommendations for improvement, and reflect on the process.

There are three submission deadlines: Part 1 – June 12, Part 2 – July 10, Part 3 – July 31. All will have until 11:59p on that day to submit (see the Submission section for more details).

Each group will have at most five members. When you have formed a group, go to Canvas and assign yourselves to a team. This should be done by 2 June. Groups with less than 5 might be assigned with someone without a group.

### Overview

Your team is tasked to design the interface for an online video-conferencing application made specifically for university students to collaborate with each other on projects for multiple courses.

This document describes Part 2 of the project.

### Part 2: Prototyping (15%)

There are two stages of prototyping in this part which you need to include in your submission.

#### Component 1: Low-Fidelity Prototypes (LFPs)

Starting with pen and paper, **develop several low-fidelity prototypes (LFPs)** that will satisfy the requirements that you have established in Part 1. Then **select three designs** and create them in Balsamiq (name them as TeamX\_LFP1, TeamX\_LFP2, and TeamX\_LFP3, where X is the number of your team).

For each LFP, in the submission document **describe using no more than one page on how the interface design satisfies the requirements**. Do your best to include **1-2 screenshots showing the overall look of the design**. The rest of the illustrative screenshots can be added as appendix at the end of the document that doesn't count towards the page limit. In the corresponding Balsamiq file, if you cannot demonstrate a non-functional requirement in the interface design, write them as comments in the file.

When brainstorming/designing the interface, use the identified users, their tasks, and the requirements to help you come up with prototypes that illustrate how your interface would appear to them. You should not be concentrating on prettiness or completeness; rather, you are trying to show the overall appearance and interaction style of your interface. Each prototype should contain the core screens that illustrate how the system will work as a whole, including simple interactions supported by the “Links” feature in Balsamiq.

Hint: To get diversity, each group member may want to try to create a few rough sketches before gathering as a group. You should also realize that some people may be better at this than others; this is not supposed to be a competition!

## Component 2: Horizontal and Vertical Medium-Fidelity Prototypes (H-MFP & V-MFP)

Based on the three LFPs in Component 1, choose or combine them to create one MFP using Figma. For this MFP, you are going to present a horizontal prototype (named TeamX\_H-MFP, where X is your team number) and a vertical prototype (named TeamX\_V-MFP, where X is your team number).

Start with a few sentences in the submission document explaining the decisions you made in choosing or combining the three LFPs (e.g., the placements of buttons make more sense in LFP1, the functionality is better supported by using LFP1's layout and LFP2's terminology).

- **Horizontal MFP** should be “interactive” in that we should be able to click around in the interface. It should not contain any wireframe components (e.g., content container with no content) and must show your whole system satisfying the requirements you gathered in Part 1. In about 1-2 pages explain how this design satisfies those requirements. Do your best to include a few screenshots showing the overall look of your design in those pages, the rest can be added as appendix at the end of the document that doesn't count towards the page limit.
- **Vertical MFP** should implement a substantial part of your interface, meaning that examples of the more interesting/important features (screens, error messages, handling of unexpected input, defaults. Robustness, etc.) should be demonstrable. You may leave some of the interactive elements as stubs (e.g., just show an “under development” message or screen). One way to choose the feature is to look for a meaningful task that makes your design unique (e.g., do not do a vertical implement of log-in/out). In about 1-2 pages explain how this design satisfies the associated requires your gathered in Part 1, also provide the interaction steps we need to follow. Do your best to include a few screenshots showing those steps, the rest can be added as appendix at the end of the document that doesn't count towards the page limit.

Finally, in a few sentences discussing what you have learned from designing the MPFs, for example, the considerations/trade-offs you had/made in selecting the design components, what couldn't you do/show using the prototyping tool, and any strength/weaknesses of your design (be honest, we won't judge your design if you pointed out the weaknesses). Again, assume the readers are developers who do not know about the details of this assignment (but are familiar with concepts such as UCD and design requirements) – your writing should thus be self-contained.

## Submission

Submit a zip file including your report (submission document in a single PDF file, name it as Part2Documentation.pdf) and the prototype files (3 .bmpr files and 2 .fig files) to the corresponding folder on Canvas **by July 10**. Begin your document with a cover page. Only one person per team needs to submit the report. Name the file as (X being you team number on Canvas): **TeamX\_GroupProject\_Part2.zip**

Assignment late penalty: 10% per calendar day (each 0 to 24 hour period past due), max 2 days late.

## Overall Layout and Format of the Submission Document

**(1 page of cover page)** Stating that it is Group Project Part 2, followed by your team number, information of all your team members (names, SFU emails, and student IDs. **(1 page max)** Begin your report by repeating the second component of your Part 1 (i.e., context identification, user identification, functional

requirements, and non-functional requirements). **(3 pages max)** Then present your description for the LFPs. **(4 pages max)** Finally present your horizontal and vertical MFPs and lessons learned.

Your report should be using 12-pt Arial font, single spacing, with 1-inch margins. **It should have at most 9 pages** (including the cover page). Screenshots or sketches of your prototypes can be added in the appendix which will not be counted towards the 9-page limit.

### Useful Resources

- Balsamiq MockupsL Beginner Tutorial: <https://www.youtube.com/watch?v=6ec8Ylrfbhk>
- Wireframing for Newbies: <https://balsamiq.com/learn/resources/wireframing-for-newbies/>
- Figma 101 Intro: <https://www.youtube.com/watch?v=cCNLD5IZY34>
- Using Figma: <https://help.figma.com/hc/en-us/categories/360002042553-Using-Figma>
- ID-Book Chapter 11 Section 3: What are Requirements?

### Notes on Heuristic Evaluation

Under normal circumstances this part would have been conducted using a traditional Usability Testing methodology, where you will design a set of questionnaires and invite 3-5 representative users to use the interface in front of you and answer the questionnaires.

As the University has made the decision that all courses for the Summer 2020 term have to be conducted remotely, this in-person interview process is not available. Hence the use of heuristic evaluation. Please however familiarize yourself with the usability testing approach with the materials provided in the lectures as well as the reading materials.

### Academic Honesty

It is expected that within this course, the highest standards of academic integrity will be maintained, in keeping with SFU's Policy S10.01, "Code of Academic Integrity and Good Conduct." In this class, collaboration is encouraged for in-class exercises and the team components of the assignments, as well as task preparation for group discussions. However, individual work should be completed by the person who submits it. Any work that is independent work of the submitter should be clearly cited to make its source clear. All referenced work in reports and presentations must be appropriately cited, to include websites, as well as figures and graphs in presentations. If there are any questions whatsoever, feel free to contact the course instructor about any possible grey areas.

Some examples of unacceptable behavior:

- Handing in assignments/exercises that are not 100% your own work (in design, implementation, wording, etc.), without a clear/visible citation of the source.
- Using another student's work as a template or reference for completing your own work.
- Using any unpermitted resources during an exam.
- Looking at, or attempting to look at, another student's answer during an exam.
- Submitting work that has been submitted before, for any course at any institution.

All instances of academic dishonesty will be dealt with severely and according to SFU policy. This means that Student Services will be notified, and they will record the dishonesty in the student's file. Students are strongly encouraged to review SFU's Code of Academic Integrity and Good Conduct (S10.01) available online at: <http://www.sfu.ca/policies/gazette/student/s10-01.html>.