

## 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 a prototype 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 – Jun 18, Part 2 – Jul 16, Part 3 – Aug 6. 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 May 31. 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 calendar that facilitates different kinds of activities for university students.

This document describes Part 1 of the project.

### Part 1: Heuristic Evaluation and Design Requirements Specification (10%)

First, use one or both of the following two online discussion forums: (1) Canvas Calendar and (2) Google Calendar to conduct your heuristic evaluation, similar to what you did for Assignment 1:

1. Familiarize yourself with the forum(s) as appropriate, completing tasks related to exploring and using the chosen system(s). Consider the heuristics discussed in class as you use the system and make note of problems and good aspects you encounter. Take into account that the target users are university students and what their typical tasks may be.
2. Use the provided usability inspection report template (in the same folder as this description document on Canvas) for your findings.
  - **Identify three usability problems** (where heuristics are being violated), including severity level 2 (minor), 3 (major) or 4 (critical), grouped by heuristic. Use screenshots as appendix to illustrate your findings (take the screenshots while you are identifying the problems, as later on the application might be updated and you might not be able to find it again).
  - In addition, **include two examples of good usability** (i.e., where a heuristic is met instead of being violated) within your report.
  - **summarize your overall process and the main findings** of your Heuristic Evaluation.

Then, using the materials taught in the lecture on requirements gathering, specify a set of design requirements as **improvements to the interface you evaluated**. The requirements should include:

- **Context identification:** The when/where/who/what/how (e.g., at home, on campus, in a different timezone, purpose of using the forum).

- **User identification:** Who the users are, and what tasks do they perform in the context defined above. Come up with **2 personas**. Include characteristics and system use.
- **Three Functional requirements:** Recall from the lecture on requirements gathering that functional requirements are those that describe “what” the interface should do. These can typically be identified from examining the functionalities provided by existing interfaces, or, if you have access to the end users, looking at the tasks they carry out (using techniques like Contextual Inquiry). Come up with something that is non-trivial (i.e., not “system should allow user to add an event” as this is what a calendar is created for).
- **Three Non-functional requirements:** Recall from the lecture on requirements gathering that non-functional requirements are those that describe “how” the interface should function. These can typically be identified from evaluation of usability of existing interfaces and reference to regulations/policies, or, if you have access to the end users, their comments and feedback. Come up with something that is non-trivial (i.e., not “an event must be added within 1 second after the user clicks the add button”).

Because of their sources of identification, you can base your requirements on the usability problems or good usability examples you discovered in the Heuristic Evaluation. For example, if you find that the interface does not provide enough information about an error in a particular situation, you can specify one of your requirements as providing the appropriate error information in that situation, and provide details on how it can be done (e.g., what kind of information should be shown, what actions can the user do in that situation).

Next, **for each functional requirement, illustrate your idea by including one sketch** in the appendix. These sketches can be drawn by hand or with a simple graphics software. They do not need to be functional but must be annotated to illustrate how the corresponding requirement is met.

Finally, **describe what the next step is** (hint: refer to the User-Centered Design process diagram). 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 your report in a single PDF file to the corresponding folder on Canvas **by Jun 18**. Begin your document with a cover page stating that it is Group Project Part 1, followed by your team number, information of all your team members (names, SFU emails, and student IDs). Only one person per team needs to submit the report. Name the file in this format (X being your team project number on Canvas): **TeamX\_GroupProject\_Part1.pdf**

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

Your report should be using 12-pt Arial font, single spacing, with 1-inch margins. **It should have at most 8 pages** (including the cover page). Screenshots and sketches (e.g., used in your Heuristic Evaluation) can be added in the appendix which will not be counted towards the 8-page limit.

## Team Contract

At the end of your report, also include a team contract by filling out the provided template. While this part does not carry any marks, **absence of it will result in zero mark for all project parts**. This is to encourage and ensure you all to be responsible team players and commit to make the collaboration work.

Start keeping track of who did what and how much time & effort you have spent on the project. At the end of the course you will be filling out a member contribution form individually to indicate your share of the load as well as how you perceive others have contributed.

### Useful Resources

- Nielsen's heuristics: <https://www.nngroup.com/articles/ten-usability-heuristics/>
- 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 most courses for the Spring 2021 term (including this course) 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>.