School of Information and Physical Sciences
SENG2260/SENG6260 – Human-Computer Interaction

Final Project Report (Assign 2 – 20%) and Presentation (Assign 3 – 10%) (30% Total)

Presentation: Week 12 (see Canvas for schedule)
Final Report: Submit using Canvas by **EOD (11.59pm) Friday Week 13**

Final Project Report and Presentation

- Presentations: Week 12 (worth 10%)
    - Students **MUST** participate in their group's in-person presentation (or video if enrolled in an online workshop/lab class) to be eligible for these marks.
    - Presentation slides must be uploaded to Canvas by EOD Friday **Week 12**.
- Final report (worth 20%) and minutes of at least 6 meetings. Due at EOD **Week 13**, via Canvas.
    - Amalgamate the report and minutes into a **single PDF** document.

Overview

In this group assignment, you will do a hi-fidelity prototype of your semester project. You will evaluate your interface with a small user test (of SENG2260/SENG6260 students only) and write a final report.

Presentation and Prototype Implementation

By the deadline, your new prototype should be complete in the sense that you are ready to test users on the tasks you used for your low fidelity prototype (or others if appropriate). User interactions should be as live as possible. We understand that a complete interface/system backend may be beyond the scope of this course.

Your group will demonstrate your implementation/prototype to the class. Your group will have a 10-minute time slot (+ 5 minutes questions/changeover).

During the presentation, you will have to:

- brief us about your application's purpose and target demographic
- take us on a guided tour of the interface, using concrete examples driven by your scenarios
- answer questions about your design decisions, development process and usability testing.

Demonstrations will take place in the workshop times. You will also submit the slides that you use in your presentation as a PDF.

User Testing

Before conducting further user tests, perform a heuristic evaluation within your group. Use Nielsen's 10 heuristics http://www.nngroup.com/articles/ten-usability-heuristics/

Find at least 3 users from the SENG2260/SENG6260 class. All should be willing to participate voluntarily.

Prepare a briefing and three tasks. These may be the same ones that you used in low fidelity prototyping, but you may need to improve them based on feedback from the low fidelity prototyping.

Hi-fidelity prototypes can be developed using a tool such as "Just in Mind" from http://www.justinmind.com/, as interactive PowerPoint presentations or via game engines such as Unity3D (https://unity3d.com/), Unreal Engine (https://www.unrealengine.com/what-is-unreal-engine-4), or via the HoloLens emulator (https://docs.microsoft.com/en-us/windows/mixed-reality/using-the-hololens-emulator). You are not limited to any technology but the UI should have **increased** interactive features.

When testing your interface, you may, if you wish, also prepare a short demo (or video) of your interface that you can use to show your users the purpose of the system. The demo should be scripted, so that you do and say the same things for each user. It should use a concrete example task, but the example task should be sufficiently different from the test tasks to avoid bias

The demo option is offered because some interfaces are learned primarily by watching someone else use the interface. Think carefully about whether your interface is in this category before you decide to use a demo, because the demo will cost you information. Once you have demonstrated how to use a feature, you forfeit the chance to observe how the user would have learned to use it alone.

Pilot test your briefing, demo, and tasks, before you test your users. You can use another member of the class for your pilot testing, if you wish.

Conduct a formative evaluation with each user:

- Provide your briefing and (optional) demo.
- Then provide the tasks one at a time, observe, and take notes.

We **do not** recommend that you videotape your users. However, if you want a record of the user test to supplement your notes, you can use the screen capture options or via a Zoom session.

Collect the usability problems found by your user tests into a list. Assign each problem a severity rating (negligible, minor, major, catastrophic), and brainstorm possible solutions for the problems.

Final Report

Write a final report describing your complete project. The report should have the following parts:

- **Problem domain** [/5] What user problem are you trying to solve? Who are the users? What are their important tasks? (Much of this section can be based (and extended) on material from the previous submission but not just cut-and-paste – there are marks involved). What emotional state would be ideal for your users to be in?
- **Design** [/10] Describe the final design of your interface. Illustrate with screenshots. Point out important design decisions and discuss the design alternatives that you considered. Particularly, discuss design decisions that were motivated by the early evaluations you conducted. Justify the choice of colours, fonts, images, white space and other aesthetic decisions.
- **Implementation/Prototype** [/10] Describe the internals of your hi-fidelity prototype, but keep the discussion on a high level. Mention any technical feasibility problems that may arise.

- **Evaluation** [/30] Describe how you conducted your user tests. Describe how you found your users and how representative they are of your target user population. Describe how users were briefed and what tasks they performed; if you did a demo for them as part of your briefing, justify that decision. List the usability problems you found, and discuss how you might solve them. Discuss any problems you found with the testing procedure. Include all scenarios, briefings and data collected during evaluation. Summarise and analyse the data as well as material drawn from user satisfaction questionnaires or interviews. This section should comprise the majority of your report.
- **Reflection** [/30] Discuss what you learned over the course of the iterative design process. If you did it again, what would you do differently? Focus in this part is not on the specific design decisions of your project (which you already discussed in the Design section), but instead on the meta-level decisions about your design process: your risk assessments, your decisions about what features to prototype and which prototype techniques to use, how you evaluated the results of your observations and what the next steps would be. This section will probably be the most valuable section of your report.
- **Minutes and summary of meetings** [/5] Attach all minutes along with a summary of meetings. In the summary/table comment on attendance (especially if one group member is constantly absent or late), action lists and whether they were completed on time (if not, why not and what was done in response), major decisions made regarding the project and a commentary on group dynamics (is performance of all group members satisfactory?)
- **Report format/readability** [/10]

SENG6260 extra component:

Students enrolled in SENG6260 **must** also complete an individual 2-3 page essay on the project and reflect on the advantages and disadvantages of low and hi-fidelity prototyping for advanced interfaces as targeted in the project this year. This should be uploaded as a separate PDF to Canvas and will contribute 5% of your Final Report mark (see SENG6260 marking form on Canvas).

Deliverables:

The marking form for this assignment is available with this assignment specification on Canvas. The main deliverables of this assignment are:

- Final Report (1 per group) to be submitted via Canvas
- Presentation slides to be submitted via Canvas
- Essay (1 per student **SENG6260 students only**)

- Reports should be submitted as a single **PDF document**.

Late Submission:

Assignments submitted after the deadline will have marks reduced by 10% per day late. (The weekend counts as 2 days.) For example: An assignment worth 15% marked at 78%

- On time: 0.78 *1.00 * 15 = final mark = 11.7
- 1 day late: 0.78 * 0.90 * 15 = final mark = 10.53
- 3 days late: 0.78 * 0.70 * 15 = final mark = 8.19