# COSC 341/541: Human Computer Interaction

## Course Project: Step 4 (Due Date: November 23, 2018, 11:59 pm)

## Undergraduate Student

**Overview:**

In this step, you will implement your project. You need to build the Android app to the point so that users can test it. The implementation should include all three tasks that you suggested in the previous steps.

**Build a vertical prototype.** Build a vertical prototype that addresses all the major tasks (at least three) identified in the project step 3. This prototype should be functional: not only in that the interface appears correct, but that the core functionality works the way that it is intended. The goal, remember, is to allow someone to understand how it would feel to interact with the system. Also, apply design principles that we discussed in lecture 6.

Note: We are not interested, for example, in having you build a whole back-end system w/ SQL Server. PLEASE consult with me if you need further information on major tasks / how much functionality is appropriate (My office hours: Monday 12:30-1:30, Wednesday 12:30-1:30, If the time doesn't work, send me an email. I will schedule a meeting time outside my class/office hours).

**Conduct a heuristic evaluation.** You will conduct a heuristic evaluation of your system. Recruit three members from other groups, use Nielsen's heuristics, identifying some aspect of the interface violates one of the heuristics. Your goal is to identify major problem areas of your interfaces through this method, what heuristic(s) have been violated to cause these problems, the severity of the problem, and to make recommendations on how to address them.

You will submit the following components in a pdf file (six pages max):

- A brief description of your system explaining the major components/tasks of the system. Include a brief justification of the design changes for the tasks from the final paper prototype.
- A brief description indicating that the following design principles are applied: visibility, feedback, constraints, consistency, affordances, simplicity, matching, help. Also, include screenshots of the interfaces to show how the design principles are applied.

- A summary of problems identified by each user, along with which heuristics were violated, severity and users' recommendation
- A report on how you would address them in another iteration. You can sort these in terms of severity, functional/conceptual area (i.e., in a way that makes sense with respect to your system), or each heuristic. Justify your choice for presentation.
- Video: Create a video showing how you expect your system to be used for the tasks. Upload the video to any video sharing site (e.g., YouTube) and share the link

Include individual heuristic evaluation results in a separate pdf file

Bonus

If you attempt for the bonus part, add a brief paragraph mentioning the features that you included in your submission.

- +2 marks if you implement at least five major tasks
- +3 marks if you implement the design fixes suggested by users in the heuristic evaluation phase

**Resources:**

- Heuristic Evaluations
- How to Conduct a Heuristic Evaluation
- Nielsen's 10 Usability Heuristics

**Deliverable:**

1. A report, six pages max, A4 paper, PDF format
2. Another pdf file containing heuristic evaluations of individual users
3. Source code: Upload a zip file containing the following folders: **Code** and **APK**. Code folder should include all the Android codes, and APK folder should only contain the .apk file

**Marking Guideline**

[25 marks] Prototype:

- [12 marks] Vertical prototype of three major tasks (prototype should be functional, check the APK to see the prototype in detail)
- [8 marks] Design principles are applied (e.g., visibility, feedback, constraints, consistency, affordances, simplicity, matching, provide help)

- [5 marks] Description of system explaining tasks, justification, interface screenshots, and a video

[10 marks] Heuristic evaluation

- [6 marks] A summary of problems identified, with heuristics, severity, and recommendation (two marks per task)
- [2 marks] A discussion of design fixes in another iteration
- [2 marks] Individual heuristic response in a separate file

[5 marks] Bonus:

- +2 marks if they implement at least five tasks
- +3 marks if they implement the design fixes suggested by users in the heuristic evaluation

Other deductions:

[-2] Submission instruction not followed

## Graduate Student

**Step 4: Project Final Report: (35%)**

A written final report

- 8-10 pages + references
- Revised/updated project step 1, 2 and 3
- High-fidelity prototype
- User evaluation (Goal, method)
- Results, discussion
- Design guidelines, limitations, and future work
- Conclusion

Sample report: https://people.ok.ubc.ca/mkhasan/papers/2011-CHI-Khalad-CTG.pdf