

## **Mini Research Project guidelines, Human Computer Interaction (COMP 341)**

### **Week 1**

1. Find a problem (case) to be solved in and around you. This can be your mini-research project.
2. Form a team consisting of a maximum 4 peoples in a group.
3. Study the case that you have selected. Conduct a Literature Review (including related works).
4. Conduct a survey with at least 30 people (targeted users of your project) to justify your problem statement.

### **Week 2**

- 2.1 Prepare a document explaining, *why have you selected these members in your team? What is the case (overview)? Why have you taken this particular case for this mini research project? Problem statement of the case? Common understanding between the team members to work on this case? Members portfolio. What are the probable solutions of the problems you stated (Hypothesis)? How innovative do you think your case is? Will the outcome be viable?*
- 2.2 Discuss with at least two different groups of your class regarding your case. Start suggesting and analyzing the pros and cons of the case, Re-document 2.1 after getting feedback.

### **Week 3**

#### **3.1 Paper prototyping #1**

- Make a paper prototype of your case. Let the customers (targeted users) test your prototype. Get feedback from at least 20 users. (Identify the users like and dislike).
- You can know how qualitative is your prototype by just letting users test by explaining the scenario rather than explaining what is your system and how does this work?

#### **3.2 Paper prototyping #2**

From the feedback of 3.1, Re-design your prototype and present it to the same users that tested your system before and collect their feedback and work on it.

### **Week 4**

- 4.1 Design a *User Interface (UI)* of your case based upon the paper prototypes and make it ready for the user evaluation.

**4.2** *Heuristic evaluation* of the project of different groups. Your group will play the role of user interface consultants who have been contracted to evaluate a project of another group. The idea is to identify as many potential usability problems as possible and feed this input into the next design phase.

- Observe the color combinations
- Observe the text and images combinations
- Talk about clickables, navigation and self-explaining feedbacks on mouse hover (for example in a web-based project).

**4.3** Final paper prototyping for submission after the evaluation. Design *Minimum Viable Product* (MVP).

## **Week 5**

Conduct *Persona* and *Ethnography* to find out the impact of your work.

Develop final UI Design addressing the suitable methods relevant in your case. For example:

- Schneiderman's 8 Golden Rules
- Cognitive walkthrough
- Norman's 7 Principles
- Experts review
- Others if you think its relevant.....

## **Week 6**

Select appropriate *usability evaluation* method for your case. Perform *usability testing* with the targeted users of your case and finalize your work. Your mini research project must be a *Minimum Viable Product (MVP)*, which will be evaluated by the course instructor.

**Note:**

***You have to develop the research paper and presentation slide based on your work in different weeks***