A6: High-Fidelity Prototype & Heuristic Evaluation

Group assignment
Due: Monday, 5 March before 6:00 pm
Submit on MarkUs: https://markus.teach.cs.toronto.edu/csc318-2018-01
Worth: 10% of your final grade

The purpose of this assignment is to build on the insights gained through your initial low-fi design and evaluation, and develop and test a more refined solution combining the best ideas that you explored in A5. You will develop the **first iteration** of your **high-fidelity prototype** that supports essential system functionality, critical tasks, and test your solution by conducting an **heuristic evaluation**.

The results of your heuristic evaluation will later serve to refine your solution and develop the second iteration of your high-fidelity prototype in A7, before you conduct a formal usability evaluation with users in class, on March 14th.

Your Tasks

- Develop a first iteration of your high-fidelity prototype(s).
- Conduct heuristic evaluation of your group solution.

Developing High-Fidelity Prototype(s)

Review all of your group members' **alternative solutions** and **implications for design** from individual submissions A5. As a group, take all the best ideas and create a solution to your problem. Create the first iteration of your high-fidelity prototype(s) of this solution.

Prototype(s) should communicate the essential features of the system being designed and its style of user interaction (i.e. its look and feel). A prototype should suggest what the system will **do**, what its **essential characteristics** are, what it will **look** like, and how it is to be **used**. It should illustrate a **small but essential** subset of system functionality, the critical tasks you identified earlier.

The exact number of different prototype(s) you create will be determined by your system's complexity and functionality and the complexity and functionality of each prototype. **At least one of your prototypes must be interactive**. You may use the development medium of your choice (HTML, CSS, Java, C, Axure, Invision, prototyping tools[1]) but **check its suitability with your instructor before you begin development**.

[1] See example of prototyping tools here:
http://www.sketchappsources.com/blog/post/app-prototyping-tools-compared

In general, we will consider unsuitable choice of s tool if launching your interactive prototype requires subscribing to a particular platform and/or installing plug-ins or apps. HTLM links and standalone applications (that run without the need to install any extra packages) will generally be considered suitable.

Heuristic Evaluation

Once you have developed your interactive high-fidelity prototype, you should put it to test, internally. For this evaluation, each member of your group will become the critic of the proposed design, and perform individually, a **heuristic evaluation**.

1. Ensure each member of the team has independent access to a copy of your prototype and a numbered list of Nielsen's 10 heuristics.
2. Each member will, on their own, go through the interface noting any violations of the ten heuristics on individual screens or during screen transitions. Be ruthless and pay close attention to any error states, dialog boxes, instructional text, buttons, etc.
3. When individual evaluations are done, combine everyone's violations into a master list sorted by screen and then assign a severity rating to each violation. Also report how many reviewers identified each of the individual violations.

Note: You do not need to include recommendations for changes in A6, you need only to identify the problems. The improvements will be part of A7 where you will use the results of your heuristic evaluation to refine your prototype.

What to submit

1. High-fidelity prototype. A document called `hi-fi-prototype.pdf`, including:

- A **title page** including your names, group name, TA name, etc...
- A **one-page discussion** of how you arrived at the joint prototype following the evaluations of each individual low-fi prototype. You may discuss overlaps between solutions, disagreements, difficulties combining several ideas into a meaningful solution, and any particular technique you may have used to resolve your differences of opinion.
- A **link to your hi-fi prototype**

2. A heuristic evaluation report. A document called `heuristic-evaluation.pdf`, including:

- A **title page** including your names, group name, TA name, etc…
- A **combined list of heuristic violations** discovered in your prototype. Separate violations by screen and include screenshots of each screen that were problematic.
- An appendix consisting of the individual heuristic evaluation notes of each group member (clearly identify the name of the researcher for each individual heuristic evaluations)

How will it be graded?

First iteration of your High-Fidelity Prototype (80%):

- 10% for design rationale discussion of how you arrived at your prototype
- 70% for the hi-fi prototype itself

Heuristic Evaluation (20%):

- 20% for the combined list of heuristic violations & appendices