CS 3205, Section 001 (Horton) - HCI in Software Development
Project Part 4: Evaluation   *(and also)*
Final Technical Report
(version 1.0, 4/02/2016, 3:00pm.)

Submission: Submit your write-up as one single .pdf file on Collab. Be sure to include all your team members and your group ID on the report's title page.

Deadline: Tuesday, April 18, 11:30pm
You can submit this up to 24 hours after the normal deadline for a 10% penalty.
Note: You WILL lose 10% if your submission is not a PDF file.

Overview:

There are two components that make up your submission.

1. **Part 4** of the project requires you to use your prototypes to carry out a user evaluation and analyze and document the results. There is real, HCI kind of work to do here.
2. You will put your write-up for Part 4 into a **Final Technical Report** that includes Part 2 and Part 3. This will be the document you submit. In theory, the effort required will only a small bit of new writing, but may document editing and formatting. The goal is to construct a single document that presents all your project work in a unified, professional looking format.

A separate grade will be given for Part 4 and for the Final Report.

(1) PART 4's REQUIREMENTS / DELIVERABLES:

The goal here is to use prototypes to carry out a user evaluation (i.e. set of sessions where your team observes participants interact with one or more prototypes) where you can get results to answer one or more questions about usability. (In essence this is really the reason and goal for all the work you've done before!)

Can you use the prototypes you developed for Part 3? We hope so! You don't have to use all of them. You need to decide if what you produced in Part 3 will allow you to ask one or more questions about usability, and then allow users to interact with them in a meaningful way that helps answer those questions.

But, you many realize at this point that your set of prototypes (for some reason) are not going to be good for this activity. Perhaps there is not enough detail, and you'd like to add more detail (perhaps make it more of a high-fidelity prototype, or stick to say paper prototyping but add more). Perhaps some combination of things from multiple prototypes would be more useful to answer a usability question. If any of this is true, you should revise or create new prototypes for your evaluation.

For your write-up for Part 4, you will be required to produce a document that outlines your plan for doing this evaluation; summarizes what kind of data you will collect by observing your participants (possibly supplemented by interviewing or surveying them after the observation); and, presents your evaluation results.

The report should conclude with a recommendation for how to proceed with the design of your system. You may very well find that the conclusions of your evaluation are not black and white. This is fine, but it is important that you draw the best conclusions you can from the study you design, even if these lessons are complex and extremely contextualized.

Teams must work and meet together to plan and execute user observation sessions as described in the class. This will require your team to meet to discuss what you want to try to find out using your prototypes (perhaps modifying them), then planning what you'll ask participants to do and what data you'll try to observe or collect, planning what roles team members will play during the sessions, etc.

Include somewhere in the report the text of your "task cards" or "scripts", a summary and analysis of data from your observations but not the raw data. (And, if you ask questions of each participant, a copy of those questions along with a summary and analysis of those results.)

Your write-up might contain the following sections:

- **Evaluation Planning:** What usability question(s) will you evaluate? What are the research questions you plan to tackle? What are your hypotheses regarding the evaluation? What is it about your prototypes that will allow you to collect data that helps answer these questions? Could there be factors that might introduce bias into your study, and if so how can you control for that?

- **Description of prototypes:** If you are using the same prototypes as you included in your Part 3, just give references to those. If you created new ones or made more than minor modifications to them, document them in the same way as you did for Part 3. Provide enough detail for each that a reader can understand the evaluation activities your group is doing.

- **Evaluation Procedure:** Give detailed information on how you carried out the evaluation and collected data. This section may include information on the following things. How many participants did you evaluate? (Give dates and length of sessions.) How did you find participants? Can you say something about whether your set of participants might or might not be representative of a broader set of potential users for some reason? (Perhaps it might make sense for your study to describe their user characteristics.)

  What tasks did you ask them to do? (Include scripts or task cards somewhere in the report.) Which team members played what role during each session? What data did the observers collect during the evaluation? Was any useful information

revealed by the "think-aloud" approach? If you asked questions of the participants before or after to collect additional data, explain and summarize these results.

- **Summary of Results:** Present the data that you collected in an understandable manner. Did any trends or patterns emerge? If it's appropriate to use tables, charts, graphs, or statistics, be sure to do this to make your results clear to the reader.

- **Conclusions:** What answers to your usability questions were obtained? How do you interpret the data you collected? What does this mean in terms of the design(s) that you recommend for your project moving forward? (Be detailed here, don't just say that 'prototype A was better'. Why was it better? Was it better in ALL situations? Maybe some aspects of another design were strong in a different context?)

(2) FINAL REPORT'S REQUIREMENTS / DELIVERABLES:

What you write up for Part 4 will be included in one document, the Final Technical Report. The goal is to construct a single document that presents all your project work in a unified, professional looking format. I recommend following this structure:

- **New Abstract:** Produce a new title and abstract that encompasses the entire piece of work.
- **Combine:** Place the previous homework assignments back to back within your new document, including the Part 4 write-up. Make sure to strip out any other abstracts and superfluous information. You might choose to present each assignment as a different 'chapter' of the final write-up.
- **Add Final Chapter:** Add the final section/chapter describing your evaluation in detail.
- **Seam:** Add the text necessary to make the paper read seamlessly. This will mostly involve   adding transition paragraphs that connect the concepts from each section to one another.
- **Fix/Clarify:** You may need to fix or clarify issues within each assignment that cause misalignments between sections. For example, if you wrote about particular prototypes and then evaluated different prototypes for some reason, then you have to make this clear in the paper in some way. The paper should be clear as a standalone document.

PART 4 GRADING:

An ideal submission will exhibit these qualities:

Paper is well thought out and robust. The group described one or more good usability questions that can be evaluated, and the evaluation procedures are well-described, well-designed, and used their prototypes in a way that represents a serious attempt at answering the usability questions identified. *Regardless of the results,* the group carried out a process and collected and analyzed data in a manner that was appropriate for students who have learned HCI. The group interpreted the results appropriately and providing the best recommendation possible given the data that was collected.

For grading, a numeric score from 0 to 10 will be assigned to each of the following "components." Each component has the weight indicated, and your overall score will be the weighted average.

- 30% - Evaluation planning description
- 10% - Prototype description
- 30% - Description of evaluation procedure
- 30% - Summary of results and conclusion

FINAL REPORT GRADING:

- 20% - New front matter (title, abstract)
- 40% - Parts are combined together so it <u>is organized and reads like</u> one unified document
- 40% - Parts are combined together so that it <u>appears like</u> one unified document (e.g. consistent formatting)

Collaboration rules:

This is a group assignment, but your group is not allowed to submit work that was created by anyone outside your group. When you submit, you will pledge that you have followed these collaboration rules.