CS-C3120 Human-Computer Interaction
Exam 9 December 2019

Allowed equipment: Pen and paper

1. Term explanations (8 p)

For each term below, explain what it means (0.5 p) and provide an example of its use in HCI context (0.5 p)

a. "Design for error" heuristic
b. "One sprint ahead" principle
c. Multiple resources theory
d. Triangulation
e. Axial coding
f. Counterfactual Ul analysis
g. Hierarchical task analysis
h. Learning effect

2. Design project critique and improvement (12 p)

Read the design project plan outlined below.

A user research team is developing a task tracking app (such as Trello) aimed for professional programmers, and they are in the beginning of the project. To learn about the most important features to include in the app, they will carry out the following two UCD sprints:

Sprint 1: The team will send out a questionnaire with close-ended questions (such as "Rate the importance of feature X"). They will send out the questionnaire to about 100 computer science students studying in a local university Based on the responses, they plan to conduct a statistical analysis. The features that received most positive responses will be developed for the app.

Sprint 2: For the features that were selected in sprint 1. the team will use a set of visual graphics software to draw possible designs, and will prepare a scenario on how their task tracker would be used. They will show the visual designs to a handful of professional programmers with the help of the scenario and will ask them to provide comments on which feature is well designed or poorly designed.

a. Describe **two** reasons why Sprint 1's UCD method may fail. Explain why. (4 p)
b. Describe **two** reasons why Sprint 2's UCD method may fail. Explain why. (4 p)
c. Let's assume that the team decides to improve the above-presented plan with a third UCD sprint. Which method would you suggest to them, and why? (4 p)

3. **Low-fidelity prototyping (e.g., paper prototyping) as a design method (10 p).**

a. How is this method carried out and what are its purposes in HCI? (4 p)
b. What are its limitations? (3 p)
c. What are its strengths? (3 p)