Midterm
CS305-001 200830
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Monday, October 20, 2008 -- 10:30-11:20

This exam is worth 10 marks towards your final grade. There are 10 questions, 25 marks in total. You have 50 minutes in which to write this exam. Answer all questions in the exam booklet. Think quality over quantity. Point form is acceptable. Good luck, not that you need it. If you need to make assumptions when answering the questions, please make note of them. I won't answer questions during the exam.

Part 1 (18 total marks, 2 marks each. Choose 9 to answer. Use only about 2 sentences each, please!)

1. What are Raskin's 2 laws of interface design?

2. What are 2 reasons that SBD is helpful in interface design?

3. Draw and label the "foundational" diagram of our class. Why do we sometimes talk about "gulfs"?

4. Give 2 reasons why it may be unethical to cut off someone's arm, even he or she gives you permission?

5. Why are mental models important?

6. What are 2 approaches to evaluation?

7. How are metaphors useful in interface design? How aren't they useful?

8. If an activity is comprehensible, is it good?

9. What is difference between problem scenarios and activity scenarios?

10. Why should we expect to iterate?

Part 2 (7 marks)

Do a claims analysis for the following problem scenario. What is then needed to create an activity scenario?

Sally Harris is a high school sophomore who has been researching black holes for the past three months. This is a topic that has fascinated her for years, and her biology teacher encouraged her to research it for the science fair this year, even though Sally won't be taking physics until next year. She has been in the science fair for the past three years, so she knows a lot about the kind of projects students select, how they organize

their exhibits, and what the judges look for.

She is a bit worried about the space and materials provided to everyone -- a standard 4x6 poster board, with a two-foot shelf underneath for supporting materials or models. This year she has explored some new methods -- for example, an Authorware simulation that illustrates her theory of black hole formation. But she knows from past years that there are few electrical outlets in the gym, and she doesn't have a laptop to use in the exhibit anyway. She checks with the organizer, Rachel Berris, just in case, but Rachel confirms that the school district has no money for special resources such as laptops, and that she will be able to use only battery-powered equipment.

As she studies her simulation, Sally thinks of a way to turn the lack of computer support into a "feature": She will create a sequence of visualizations that can be flipped like a deck of cards to show the animation. In fact, as she works, she gets into it and decides to create several variations, so that visitors can guess which one matches her project data and conclusions. She will then chart people's guesses as a dynamic element in her exhibit. She knows from experience that this is just the sort of thing judges will notice and award points for. Now she just has to figure out how to fit everything into the space she will have.