CS160, Fall, 2004, Midterm Exam 1, Canny
This is a closed book, individual test. You are not allowed to use your notes, texts, or laptop computers. You have eighty minutes for this exam; there are eighty points total. Use your time accordingly.
Before you begin, write your name on every page!
Please wait until the signal to begin. Good luck!

NAME____________________________ SID #_________________________

Part I: General HCI Questions (35 points)

1) What was the Dynabook and who proposed it? [2 points]
2) Name an HCI contribution due to Don Norman, and one due to Jacob Nielsen? [2 points]
3) What are the 3 stages in the Human-Centered Design cycle? (please draw in a cycle) [3 points]
4) What characteristics should a good persona have for design? [4 points]
5) How are representative tasks used in Human-Centered Design? [3 points]
6) List some things an interviewer should do when conducting a contextual inquiry interview in the Master-Apprentice model. [4 points]
7) Give three influences that improve the effectiveness of transfer in human learning [3 points]
8) List Piaget’s 4 stages of child development [4 points]
9) What is the role of an inquiry cycle in learning science? [2 points]
10) Give some advantages and disadvantages of paper prototyping vs. electronic systems like SILK and DENIM. [4 points]
11) Give some advantages and disadvantages of regular user studies vs. heuristic evaluation. [4 points]
Part II: Heuristic Evaluation (20 points)
Describe ten usability problems in the interface on the next page. Label each violation with a number on the figure and make a list of violations. For each problem, you must discuss which guideline is violated and why. You should also suggest a solution for each of these problems. Use Nielsen’s second set of heuristics below to label each violation. Remember to list each violation separately. Remember: If the same violation occurs in multiple places, it is still one violation, but the same interface element may cause several violations.

HEURISTIC POINT BREAKDOWN:
1 points for “labeling each violation with a number on the figure”
20 points for the ten violations

Reference: Nielsen’s Revised Set of Ten Usability Heuristics
H2-1: Visibility of system status
H2-2: Match between system and the real world
H2-3: User control and freedom
H2-4: Consistency and standards
H2-5: Error prevention
H2-6: Recognition rather than recall
H2-7: Flexibility and efficiency of use
H2-8: Aesthetic and minimalist design
H2-9: Help users recognize, diagnose, and recover from errors
H2-10: Help and documentation

Write your heuristic evaluation problems here:
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WARNING: Unknown error [Exit]

Type "I'd like to learn more" and then your email address below to receive more information!

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Choose one:

- I would like to receive daily updates on your products and services, OR
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If you would like to be removed from our mailing lists, please re-enter your email address here: New customers receive a 50% one-time discount. There are only 2754361 seconds remaining on this offer!!

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Power Users: Many shortcuts will be available in a future version of this form!!

Our intelliscan software is checking your financial profile, please do not quit this form.
A customer representative will be with you as soon as they have nothing better to do.
Part III: UI Scenario and sketch (25 points)
You have conducted a contextual inquiry and task analysis of user behavior in a UCB physics class and identified the following set of sample tasks that you want to implement on a portable computer:
(a) Find today's lecture notes and view them.
(b) View the experimental procedure for the next lab assignment (Millikan's experiment), and then search for information about “Millikan's experiment” from the notes.

1. Sketch a main page which supports the above tasks (and other very common tasks). Include labels as needed on icons [10 points]
2. Sketch Scenario (a) using storyboarding. [5 points]
3. Sketch scenario (b) using storyboarding [10 points]