UNIVERSITY OF CALIFORNIA AT BERKELEY
COMPUTER SCIENCE DIVISION - EECS

CS160  First Midterm Examination  Prof L.A. Rowe
Spring 2001

Name: ___________Solution Key_____________________________________

Score: __________________________________________________________

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<th>Question</th>
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1. (50 points) Define the following terms

   a) Dialogbox
      - Never minimizes, disappears when parent window is closed or minimized
      - Is a temporary display, not resizable, has a 'CLOSE'/CANCEL' button
      - Can be modal, no menu bar or button toolbar

   b) Affordance
      - Visual cue to the user as to how to use the interface

   c) Direct Manipulation Interface
      - Display what the user is manipulating
      - WYSIWYG

   d) Input Event
      - A data structure that gives information about a user input action involving a mouse or keyboard (e.g., mouse-move, button-press, key-down, etc.).

   e) Serif Font
      - The font with the 'feet'

   f) Top-level Window
      - Has title bar, menu bar, tool bar, window controls, application controls,
        display/data

   g) Waterfall Model
      - Sequence of steps from Software Engineering, no cycles, user is not involved
      - Customer □ User

   h) User-centered Design
      - "know thy user"
      - Keep the user involved throughout the project

   i) Callback Function
      - A function called by a dispatcher to handle an event.

   j) Gadget
      - Output only windows
2. (15 points) List three attributes of interface usability.

1. Ease of learning
2. Recall
3. Productivity
4. Minimal error rates
5. High user satisfaction

3. (10 points) Explain why an iterative design process is best for user-interface development.

- Focus on user perspective
- Feedback helps reduce errors in final product
- Easy to learn and use product
- Help keep development on or ahead of schedule
- Reduce training costs
- Improve management visibility

4. (10 points) Explain the difference between a task and a scenario.

- Task => goal; something to complete or do
- Scenario => sequential interactive flow through UI to complete a task

5. (10 points) List the two causes given in the GUI Bloopers for component bloopers.

   a) Misuse of the GUI toolkit by programmers

   b) Attempting to build an application’s UI using a GUI toolkit that is inadequate for the job

6. (15 points) List five bloopers in the following dialog box:

   - No ‘Cancel’ or ‘Close’ button
   - No default set for radio buttons
   - In appropriate use of radio buttons since not an ‘On/Off’ selection
   - Alignment
   - Text baseline
   - Labels not consistent on what side of the components
   - No component grouping
7. (10 points) Why would a UI designer working on an application for use in a company need to know the “lines of management control” in the organization?
   - Designer needs to understand the user’s world
   - Need to see work process
   - Need to interact with target users
   - Need to understand how users interact
   - Need to understand the work place politics

8. (10 points) What is a conceptual model is for a user interface?
   - Mental representation of how a UI works and how interface controls affects it

9. (10 points) Answer the following questions.
    a) What is a “path of operation” in a user interface?
       - Steps user takes to complete a task
    b) Why is an interface with one “path of operation” considered a poor design?
       - Does not provide alternative to expert users, no shortcuts
       - Lack of flexibility for users
       - Harder to learn

10. (10 points) Why are interfaces developed by a multiple person team or group often better than an interface developed by one individual?
    - Catch more bugs
    - Provide more insight to a concept
    - Multiple paths of operations
    - Mix of skills