

Engenharia Informática (DI/FCT/UNL)

2010/2011

Interação Pessoa-Máquina

Exame Época Normal

January 17, 2011

Duration: 2h

The exam is in English. You may answer the questions in English or Portuguese. Either way, you should be concise and clear.

- 1) For each one of the following statements specify if they are correct or incorrect and justify your answer (explanations are required).
 - a) Interfaces should always contribute to reduce the users cognitive effort.
 - b) Text legibility is improved by using capital letters.
 - c) “Affordances” refers to the perceived and actual properties of an object that determine how the object could be used. “Affordances” should be used to tell the user what to do.
 - d) Desaturated colors help users to focus on all colors of an object.

- 2) A new system was introduced at Lisbon airport to help tourists to quickly find a hotel. A user may specify some parameters, such as location and price range, and the system provides a list of hotel names along with the corresponding details.
 - a) What interaction style would you use to implement the system (ex: command line, natural language, ...)? Why?
 - b) What kind of interaction devices would you find more appropriate for this context of use (ex: mouse, track ball, touch screen, ...)?
 - c) Make a sketch to show how the interaction takes place.

- 3) When designing interfaces for interactive systems, what are the advantages of using an iterative design process?

- 4) Consider the following prototyping techniques: paper prototyping, wizard of OZ, computer-based horizontal simulation and computer-based vertical simulation. Explain which prototyping technique would be more appropriate for the followings situations:
 - a) Find out if users would be receptive to a future technology.
 - b) Find out, in early stages of development, if the system allows users to accomplish all the required tasks,
 - c) Discover if a specific functionality is well-implemented and pleasant to use.

- 5) Explain the difference between “throw-away” and evolutionary prototyping approaches.

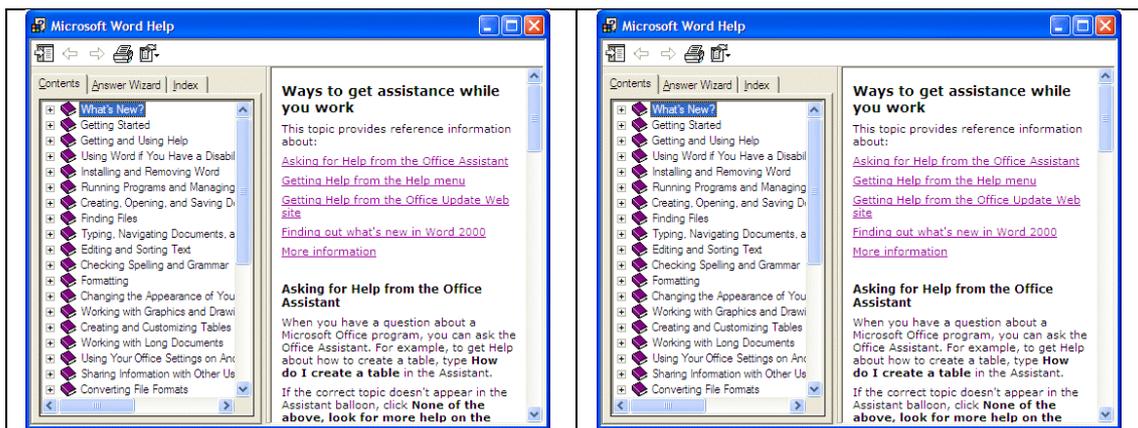
- 6) Describe 2 important differences between heuristic evaluation and user testing.

- 7) While performing a heuristic evaluation of a file transfer program you came across the following dialog box:



Describe one problem with the dialog, identify the heuristic it violates and depict a potential solution.

- 8) Consider the Nielsen's Heuristic "Recognition, not Recall." Explain the reasons for this heuristic and give 2 examples of situations that violate this heuristic, pointing out the corresponding solution.
- 9) Consider the following screen-shots from Microsoft Word help system.



Briefly describe any features of this (and other) help system(s) that best support novice users in their interaction with the application.

- 10) Consider the following two methods for inserting a table with 4 columns and 6 rows in the current opened file in a Word Processor. Present the keystroke level model for these two methods. For each step, indicate the user action. You don't need to indicate the exact time value for each action.
- Method 1: Use only the keyboard to open the dialog box "Insert Table" (Alt-B-I) and enter the number of columns and rows.
 - Method 2: Use the mouse to select the menu options (Table → Insert → Table...) to open the "Insert Table" dialog box, and use the keyboard to enter the number of columns and rows.

GOOD WORK!