

CS1Q Exam

Solutions

1.

a) Please provide BRIEF answers to the following questions:

i) What is haptic human computer interaction?

[Seen problem] Haptic human computer interaction involves the use of a computer through a tactile method involving a device that, for instance, senses body movement such as the data glove or the Phantom.

ii) What is mood congruence in a computer game?

[Seen problem] Mood congruence describes the affinity between a user and the character/role that they are to play in the game. Hence, some people will not be comfortable with 'shoot 'em up games' because there is no congruence with the characters they are expected to either play or interact with.

iii) When would you use a sans-serif font?

[Seen problem] Sans-serif fonts lack the glyphs or additional lines that are intended to guide the reader's eye along a line of text. One consequence of this is that the text stands out well in discrete blocks hence sans serif fonts such as Helvetica are used in Newspaper headlines or in the titles of papers. Sans serif fonts are also used for command names and menu options in interfaces because they must stand-out rather than be read in-line with a mass of other prose.

iv) What impact does perception have on human-computer interaction?

[Seen problem] Perception involves the sensing of information in our environment. In human-computer interaction, it is important that users can read/observe critical information on the display. Similarly, users must be able to hear audible sounds if they are to react to warnings etc.

v) What are usability heuristics?

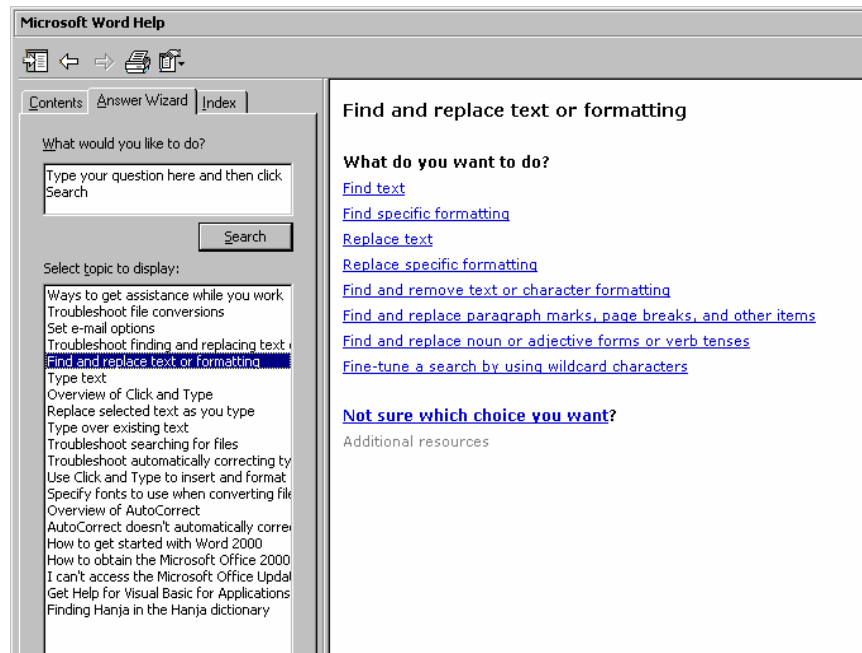
[Seen problem] Usability heuristics are rules of thumb that can be applied to guide the development of a broad range of human computer interfaces. They can be used at low cost throughout the development cycle but often fail to provide the same quality of insight that might be expected from direct user testing. For example, designers may find it difficult to obtain a users' perspective simply by trying to apply 'consistency'.

[2 marks per answer, 10 marks in total]

b) Briefly explain why 'think aloud' techniques can be a cost-effective tool for formative evaluation. [3 marks]

[Seen/Unseen problem] We have covered cooperative-evaluation based on the Wright and Monk papers in the lectures and in the open assessment. The key issues include the insights obtained not simply about what a user might do when interacting with a system but also *why* they respond in a certain way. The approach is cost effective because it can often be done relatively informally in the users' workplace. The approach often lacks the overheads associated with more controlled empirical studies.

c) The following screen-shot is taken from the Microsoft Word help system.



Briefly describe any features of this or similar help systems that you think offer the greatest support to novice users. [5 marks]

[Unseen problem] There are many different potential solutions to this relatively open-ended question. The intention is not to catch people out but to give the more able students a chance to show what they have learned while not completely losing the weaker students. I'm looking for some consideration of the problems of knowing when and how to access on-line help. Once you've successfully started the help system then there are the problems associated with forming a query or question. The MS example shows how some systems provide an index list of support and also a free-text query facility. If you can form a question then you use the free text, if you're not sure even how to begin then you can browse the index entries. This browsing can provide declarative information about the key concepts in the tool but problems arise with more procedural information, for example, on complex combinations of commands to reformat entire documents or particular styles. In such cases, students might talk about the use of help facilities that guide you step by step through a process. Hence the Wizzard tab shown above.

d) You have been asked to design an web-site for a company. Users will be able to browse and then purchase a 'ring-tone' for their mobile phone. Briefly explain how you would test for the success or failure of a design as you get close to the final delivery of your 'ring-tone' web site.

[7 marks]

[Unseen problem] Once again this is a relatively open-ended design/evaluation question. In the lectures we have briefly mentioned some of the issues associated with web development but most of this material is presented in IS3. I'm not expecting too much but the better students might mention accessibility issues. They might also talk about remote usability testing when web systems are available to many diverse and asynchronous user groups. Similarly, they might mention the use of web logs on beta-test versions of a site. Finally, I would expect some mention of the usual pantheon of questionnaires, focus groups, think alouds and so on. To get really good marks the students should pay attention to both the commercial aspects of the site and to the potential population of end users.