CS-C3120

Human-Computer Interaction

December 2017 Exam

The Exam is marked out of 30

Students may use an unmarked Finnish-English Dictionary

Answer ALL Questions

1. **(a)** Interviews are a common method to both identify user requirements, as well as evaluate user interfaces.

    (i)   Interviews can be composed of both open and closed questions. State what is meant by an open question and what is meant by a closed question. Provide one benefit and one drawback of each.

[6]

    (ii)   When carrying out interviews they can be conducted in a quiet room, or in a usability lab of some sort. However, they can also be carried out in a situated context. Why might a situated interview be more beneficial than an interview carried out in a usability lab or other place? Provide an example that illustrates your answer.

[2]

(b) Another requirements elicitation technique is observation.

    (i)   State 2 advantages of using an observation technique over the use of an interview?

[2]

    (ii)   Observation can be carried out in-person (direct observation) or remotely (indirect observation). For each, provide an example of where it might be used. For each example, describe why that form of observation (either direct or indirect) is better.

[4]

2. Whilst Action Research shares a great deal of similarities with a general User Centered Design or Iterative Lifecycle development approach, there are also important differences. State and explain three such differences.

[5]

3. Developers, Spaghetti Code Development Oy, have won a contract to develop a new ticket machine from the Helsinki Transport provider HSL. HSL are keen that the machine should be easy to use, overcoming issues with the existing machines. After bad publicity from the introduction of new smart card readers on buses, trams and metro stations, HSL stress that users will include a wide range of individuals with different capabilities (including disabled users). Although the new machines will use the existing smartcard and paper ticket technologies, HSL also stress that the new ticket machines should "take the ticket buying process to the next level".

(a)   Using your extensive knowledge of requirements capturing techniques, outline a plan of how you would capture user requirements for the machines. Your answer should clearly outline what techniques you would use, where and how they would be applied, as well as how you would make sure HSL's requirements are met.

[7]

(b)   HSL like the designs that have been created from your requirements capture, but are worried about committing to build new machines and software without first testing the designs. Outline how you would use prototyping and evaluation techniques to convince HSL that the designs for both the ticket machine and its user interface will achieve both end user's and HSL's requirements. Your answer should justify the techniques you use, and how they will address HSL's concerns.

[4]

[End of Paper]