

**CONCORDIA UNIVERSITY**  
**DEPARTMENT OF**  
**COMPUTER SCIENCE AND SOFTWARE ENGINEERING**

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**SOLUTIONS TO QUIZ 4**

***Answer All Questions***

The low-fidelity prototype of the Search prototype from Quiz 3 (to find either all document files (of one or more types — PDFs, word processor files, spreadsheets, presentations) containing user-specified keywords in the name and optionally in the content or all media files (of one or more types — pictures, audio, video) containing user-specified keywords in the name is given below.

One of the following is displayed depending on the selected file category.

File Search	
Search for all	<input checked="" type="radio"/> Document Files or <input type="radio"/> Media Files
Containing the keyword(s)	<input type="text"/>
In their name	<input type="checkbox"/> and also in their content/body
And of the following Document types	
<input checked="" type="checkbox"/> All Document Files	
<input checked="" type="checkbox"/> PDF	
<input checked="" type="checkbox"/> Word Processor Files	
<input checked="" type="checkbox"/> Spreadsheets	
Cancel	Search

File Search	
Search for all	<input type="radio"/> Document Files or <input checked="" type="radio"/> Media Files
Containing the keyword(s)	<input type="text"/>
In their name	
And of the Following Media types	
<input checked="" type="checkbox"/> All Media Files	
<input checked="" type="checkbox"/> Pictures	
<input checked="" type="checkbox"/> Audio	
<input checked="" type="checkbox"/> Video	
Cancel	Search

It is required to evaluate *the ease of learning* aspect of this prototype.

- (a) [1 mark] Consider the task of finding all Microsoft Word documents containing the specified keyword(s) in their content/body. Can this task be used in the required evaluation? Why or why not?

*This task can be used in the required evaluation as it involves non-trivial subtasks (particularly, selecting Microsoft Word files) and the user has to learn/figure out how to do them.*

- (b) [1 mark] How would you use usability testing to evaluate the given prototype using the task in (a)? Who does the usability testing?

*We can ask the user to perform the task in (a) and observe how easily the user learns/figures out the required subtasks. Usability testing is done by potential users selected from the different user groups.*

- (c) [1 mark] What thing(s) do you have to observe during the usability testing in (b) in order to evaluate the given prototype using the task in (a)? Why?

We need to observe whether the user performs the correct subtasks in the correct order and how easily the user learns them. This information is required to evaluate the ease of learning aspect of the prototype.

- (d) [1 mark] Which protocol (*think aloud* or *retrospective*) is the most appropriate for this evaluation during the usability testing? Why?

Think aloud protocol is the most appropriate as we need to evaluate how easily the user learns/performs the subtasks while (not after) performing the task in (a).

- (e) [1 mark] Identify an aspect of the given prototype that may cause uncertainty in the user's (especially, first-time user's) mind while performing the task in (a).

It is not clear how to select Microsoft Word files in the given prototype. In fact, it is not possible to select only Microsoft Word files within the Word Processor Files.

- (f) [1 mark] Can you use the protocol you selected in (d) to observe the uncertainty you identified in (e)? Why or why not?

Yes, the think aloud protocol can be used to identify the uncertainty in (e) as the user will be hesitant while trying to select Microsoft Word files and verbally express that he/she does not see that option.

- (g) [1 mark] Suggest modification(s) to the given prototype to avoid the potential uncertainty identified in (e).

Allow the user to select individual file type (like Microsoft Word files) instead of the group of file type (like Word Processor Files) using a pull-down menu. This will explicitly show the user how to select the required file type.

- (h) [1 mark] How would you use analytical evaluation to evaluate the given prototype using the task in (a)? Who does the analytical evaluation?

We can ask an expert evaluator to do a cognitive walkthrough (planning the required subtasks and checking how easy/straight forward they are) for the required task in (a). The analytical evaluation is done by experts with enough exposure to file searching.

- (i) [1 mark] Would the analytical evaluation reveal the uncertainty you identified in (e)? Why or why not?

Most likely not since the expert evaluator would already know (and does not have to learn) how to select Microsoft Word files in the given prototype based on his/her exposure/knowledge.

- (j) [1 mark] Which approach (usability testing or analytical evaluation) is more appropriate for the required evaluation? Why?

Usability testing is more appropriate as it identifies the uncertainties/ambiguities from many users' perspectives instead of from (probably biased) expert's perspective.

\*\*\* END OF QUIZ \*\*\*