Criteria 8 Usability Testing

Who – the client and a high school student

Justification – As the solution was made with the client’s requests and requirements in mind, the client would serve to be an appropriate tester for the application as they would have the best knowledge on how the program should work. Furthermore, the client fits the target demographic of the solution, being high school students as they would be likely to find the program useful for it has the ability to aid in their studies. A selected high school student also took part in the test to provide more data as they fall into the targeted audience for the solution hence being an appropriate tester.

Where and when – 12/07/23 and 13/07/23 (TBC) 1 hour

Justification – The date of the usability test follows the developer led testing but before the program has formally been completed. Performing the test here will allow more problems to be found if there are present, and suggestions to be made to improve the program before its final release. The testing session will go over one hour as sufficient time will be required due to only one test taking place. The test needs to be long enough so that the tester will be able to test all of the functionalities and aspects of the solution as well as provide detailed comments to help further improve the solution.

On what – school laptop

Justification – The device selected for testing would best reflect the targeted userbase as many high school students would have access to a laptop for use during school hours as well as for studying after hours. The solution is designed to work on even low-end devices, which a student is more likely to own and most school provided laptops are of lower quality.

Test metrics – Through the usability testing aspects of the solution that could not be tested by the developer will be examined by the selected tester to ensure that the final product meets all of the requirements. This will focus on testing the non-functional requirements, which the tester will be able to provide comments on and allow the developer to alter the program so that it is able to meet all of the requirements – both functional and non-functional. With only one usability test being conducted, the test will go through all of the non-functional requirements to obtain data to ensure that the solution meets the client’s requests.

Tester 1 – Client

Tester 2 – high school student

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| Test item | Procedure | Achieved? | Comments |
| Test the ease of creating a PIN and logging in with it | Load the program and instruct the user to follow the prompts to create a PIN and then ask them to log in with it after it has been created | Yes  Yes | Client stated the feature was sufficient and had no issues with completing it.  It was easy to understand what to do. |
| Test the readability of the UI | Load the program and ask the user to access each form in the program and question them as to whether they were able to understand all of the elements of the UI | Partial  Yes | Add notice that the auto boot feature requires administrator permission  Make the tag’s purpose more clear  Add a feature to distinguish multiple-choice questions and short answer questions  Make the main screen display the name for both the list box and the label  It was easy to understand all parts of the UI |
| Test the attractiveness of the UI | Load the program and ask the user to access each form in the program and question them as to whether they considered the UI to be visually appealing | No  Partial | Potentially match UI colours with icon colours  Not much colour to it |
| Test the intuitiveness of creating a short answer question | Load the main screen and ask the user to create a short answer question, taking note of how much time it takes and any difficulties they face | Yes  Yes | N/A  Simple to understand what to do |
| Test the intuitiveness of creating a multiple-choice question | Load the main screen and ask the user to create a multiple-choice question, taking note of how much time it takes and any difficulties they face | Yes  Yes | Client stated their displeasure for how the number of multiple-choice answers were pre-defined  Easy to understand the process |
| Test the intuitiveness of editing a short answer question | Load the main screen and ask the user to edit a short answer question, taking note of how much time it takes and any difficulties they face | Partial  Yes | Client was able to edit the question but had some issues with the UI  Easy to understand how to edit it |
| Test the intuitiveness of editing a multiple-choice question | Load the main screen and ask the user to edit a multiple-choice question, taking note of how much time it takes and any difficulties they face | No  No | In their attempts to edit a question their changes were not saved  The user was unable to edit the question due to a bug |
| Test the intuitiveness of deleting all of the questions | Load the main screen and ask the user to delete all of the questions | Yes  Yes | N/A  N/A |
| Test the efficiency of searching through the added questions | Load the search page and ask the user to search through the questions they have added | Yes  Yes | Although the search functionality was successful, the client suggested being able to view more information for each of the results  The search was easy to understand how to do it |
| Test the efficiency of sorting the added questions | Load the main screen and ask the user to sort the added questions | Yes  Yes | N/A  N/A |
| Test the simplicity of the study feature | Load the main screen and ask the user to begin studying their added questions | Partial  No | Client requested that it was made clear that closing the study window would return one to the main window  Tester encountered a bug that prevented them from progressing the study session |
| Test the simplicity of enabling and disabling the auto boot feature | Load the main screen and ask the user to enable and disable the auto boot feature | Partial  Partial | The process for adding the auto boot should be made easier by auto filling the file path  Same comment as above |
| Test the interconnectedness of the solution’s design by prompting the user to delete a question | Load the main screen and ask the user to delete one of their questions without giving guidance | No  No | The client kept encountering an error with the file being used by another process  Same as above |
| Test the interconnectedness of the solution’s design by prompting the user to add a tag | Load the main screen and ask the user to create a tag of their choice without giving guidance | Yes  Yes | Client stated that putting the feature within the add question window would be better  Simple to do |

List of modifications to be made:

* Add some colour to the UI, matching the application icons
* Alter some of the labels to improve readability including clarifying what the search results are
* Add an indicator that differentiates the multiple-choice and short answer questions in the main screen
* Add an option to alter the number of multiple-choice answers that can be added to a question
* Fix the bugs surrounding the multiple-choice questions including reading and editing it
* Have the search function reveal more data than just the name of the question
* Fix bugs with the study feature preventing the user from progressing their session
* Add an auto-fill for the auto boot feature when it asks for the exe file path
* Add a button in the add question window to add a tag
* Add code to auto refresh the list box items in both the main window and the add question window

Within the economical constraints of time, not all of the modifications listed could be implemented. The ones that were implemented were changes that did not take much time to implement, such as minor UI changes and altering of the objects to either fix minor bugs or the ease of use of the solution. From the list, adding colour to the UI, improving some of the labels for readability, and adding a button in the add question window were implemented. Another modification that was able to be implemented was addressing tediously inputting the file path of the exe for the auto boot feature. An open file dialogue was added to simplify the process of adding the program’s exe so that it can open up on boot. The rest of the modifications require major modifications of the code that is not feasible to complete within the limited time frame. Some of these changes, such as those surrounding the multiple-choice questions require re-working how the files are read and saved, meaning that the code for the entire solution would have to be redone. Others include adding features that would necessitate more time in developing new features for the solution, as well as testing the changes.