

Criterion E - 315 words

Evaluation

All the success criteria set in criterion A has been implemented except success criteria 19 which has been partially done. However, my client is still “overall pleased with the product” (see appendix) and their feedback was that it will be “a really nice tool to have for my test preparations!” (see appendix).

Success Criteria Number	Success Criteria	Client's feedback	My evaluation
1	The program can access the excel file that store all the questions and their respective solutions	Since the client wouldn't be able to assess this criteria, this is referred to in success criteria 13.	Can be done without error and is functioning. All the questions are stored logically and correctly.
2	Randomized questions for both practice questions and quiz questions	The client mentions that the “questions felt very natural and seemed to have a nice flow”. This helped him to stay “focused for a longer period”. Thus, the feature is well implemented.	Is functioning. But if the terminate button has been pressed, this feature does not apply anymore.
3	3 pages in total: 1 home page, 1 question page, and 1 result page	The client mentions that “The program's layout and structure is rather simple”. Therefore, the 3 pages are intuitive, functioning, and displaying correctly what is needed.	Is implemented and contains exactly the 3 pages stated.

4	Pages can be easily navigated using buttons	The client mentions that the program is “very easy to navigate”, and that “There are no potential distractions present on any of the pages, all of the information present in the program is relevant.” It can be inferred that all the buttons function intuitively and the interface is user-friendly.	Buttons are intuitive and functioning as intended. However, the “terminate” button’s placement might be confused with a “back” button.
5	Feature to select out of 8 physics topics for the quiz in the home page	The client mentions that “there are 8 different topics that I can choose from for the test”. Thus, this feature is functioning as intended.	Is functioning, every topic is clearly stated in the home page. The purpose of the buttons is intuitive.
6	Feature to choose 1 of 3 possible quiz lengths in terms of time in the home page	The client mentions that “Regarding the possible durations, I was able to choose between 20, 40 and 60 minutes”. It is safe to say that the feature is functioning as discussed.	Is functioning and every duration can be selected without error. However, the first duration (20mins) is automatically shown in the JComboBox when the program starts in the home page where it actually hasn’t been selected, which could lead to confusion.
7	Questions are given to the user according to the chosen topics in both	The client mentions that “The questions that I encountered were very much about the three or more topics that I chose before starting the quiz. I	Is functioning. The program tries its best to cover all study topics selected by the user. The program, however, does not provide questions

	quiz and practice questions	did not encounter any questions which did not fall under one of my selected topics. For example, I did not get any questions about thermodynamics when I selected rotational mechanics.” This implies that all questions were correctly provided to the user according to the study topics he has selected previously.	from each study topic equally.
8	User only able to start the quiz if at least 3 topics is selected and a duration is selected in the home page	The client makes the point that “I also am only able to start the quiz once I have selected at least three out of the 8 topics and a duration.” Thus, this feature has been implemented successfully.	Is functioning. Referring to success criteria 6, the user might be confused as to why they are not able to start the quiz when a duration is shown in the JComboBox.
9	The retrieved data from the excel file is correctly displayed in the question page	This may not be possible for the client to assess, but is referred to in success criteria 3.	All the data is accurately displayed and retrieved without any missing information.
10	Timer only displays and functions during quiz in the question page	The client mentions that “I am only able to see the timer appear when I am actually taking the test, the timer does not appear when I am doing	Is functioning. The program makes sure the timer does not function during the practice questions.

		the practice questions or when I am in the home or result pages.” Hence, the timer is only functioning when the user is taking the quiz as it should.	
11	The user can only choose from 4 answer choices with 1 correct answer in the question page	The client mentions that “There were 4 possible answers in each question. “ Thus, this feature has been successfully implemented.	Is functioning and intuitive for the user.
12	Feature to terminate the quiz or the practice questions whenever the user wants in the question page	The client mentions that “there was a button in the bottom left of the screen where I could end the quiz at any time.” The client has successfully identified the function and placement of the button, highlighting the intuitiveness of the program and the functionality of this feature.	Is functioning. Referring to success criteria 2, the terminate button resets everything as if the program is executed again.
13	User’s solutions are checked with the correct solutions for both practice questions and quiz questions once an answer is selected	The user confirms that “I do believe that the correct answers were indeed correct”. Thus, underlining the usability of the product.	Is functioning without error. Referring to success criteria 1, the program can retrieve the correct answer and check it correctly with the respective questions.

14	Correct or wrong answers are displayed (green = correct; red = wrong)	The client mentions that "Furthermore, the answers would turn green if I clicked on the correct one and red if I chose a wrong option, this made it clear when I was right or wrong." This shows the program's intuitiveness and the functionality of the feature.	Is functioning and makes the program much more intuitive.
15	User only able to go to the next question if the correct answer is selected in the question page	The user points out that "I can also only progress to the next question when I click on the right answer." This confirms the functionality of the feature.	Is functioning. Might not be intuitive as the user might be confused of why they aren't able to go to the next question after selecting an incorrect answer like most quiz programs.
16	Feature that ensures the user does not to get the same question more than once	The client mentions that "The questions were unique each time I used the program." During his one week of use, he has not encountered repeated questions, showcasing the functionality of the product	Is functioning. However, at one point this feature will make the program crash due to the limited number of questions in the questions pool, leading to confusion. Therefore the user needs to be notified about this case.
17	Feature to show what study topics the user needs improvement on in the result page	The client mentions that "the program does a good job at assessing my weak areas. I think that the number of incorrect answers here are appropriate to my test	Is functioning. The program correctly evaluates the study topics the user should focus on. However, the evaluation is subjective since I decided the

		conditions.” Thus, my subjective decision was appropriate for my client’s case and the feature is functioning as intended.	minimum number of incorrect answers allowed.
18	Feature to show the user’s score from the quiz in the result page	The client mentions that “My score was displayed in a fraction and corresponded every time to the score I got”. Thus, this feature is functioning without error.	Is functioning. The program has a maximum number of questions for the user in the quiz but if that number is not completed in time, the program then evaluates the user’s score based on the questions they were able to answer. The precision might not reflect the user’s real accuracy since the user did not complete the intended amount of questions.
19	Feature to show the graph of the user’s progress in terms of their score in quiz with time on the x-axis and score on the y-axis of the overall progress in the result page	The client mentions that “The progression graph was functioning perfectly well, it plotted my score on the graph with a dot and connected the dots with a straight line to provide a more visual representation of my progress.” Showing the functionality of the feature. However, he also mentions that he thought implementing persistent data “would have been a	Is functioning. The program correctly plots the user’s score. However, no persistent data has been implemented. Therefore, If the user closes and re-execute the program, their past scores will be deleted.

		<p>useful tool to have.” But the client reassures that “the program still meets my expectations.”</p> <p>Therefore, this missing feature did not impact the overall usability of the product but would have been a useful feature to have.</p>	
20	<p>Feature to let the user redo the questions where they’ve answered incorrectly from the quiz in the practice questions</p>	<p>The client confirms that “Yes, the program allowed me to retake the questions that I got wrong in my first try” according to his experience of using the program in a week, highlighting the functionality of the feature without error.</p>	<p>Is functioning. This allows the user to give the question another shot knowing the answer if they remembered from the quiz, serving as a clue to solving the question.</p>

All quotations can be found in the appendix

Extension

One extension my client mentioned is to implement “some questions [including] long answer response questions instead of multiple choice questions (MCQs)” since the format of the questions “feels a bit repetitive” (see appendix). Indeed, downfalls of only presenting questions in the format of MCQs limits include allowing the user to guess the correct answer without truly understanding the content and potentially making the user engage in memorization to recognize correct answers rather than understanding of the study topics - making the program not as appropriate for revision sessions. Hence, whereas I add different formats of questions which would lead to lots of work since I would need to add visual elements along with updating or creating a brand new Excel question pool file, I will add multiple choice questions that refer to the steps of the problem solving process and not just the answer. This would strengthen the

user's understanding of the knowledge involved, addressing the memorization problem discussed earlier.

One feature I could implement is highlighting the study topic buttons on the home page based on the user's previous quiz performances. For example, if a particular topic requires more focus according to the user's quiz performance, the button for that topic would turn red after returning to the home page. Conversely, topics where the user performed well could turn green. This visual indication can help the user better organize their study sessions and clearly identify their weak areas. Implementing this feature would be straightforward, as it involves tracking the topics selected for the quiz and adjusting the button colors based on the results.