**Computer Science Internal Assessment: French Vocabulary Memorization Software**

CRITERION E – EVALUATION:

**Evaluation of the Software:**

The French Vocabulary Memorization Software is evaluated below using the various success criteria described in the planning document (Criterion A):

1. **Home Screen - A screen displaying the various types of tests the user can take (tests of different difficulty levels, tests that ask for the English equivalent of a French word and vice versa etc.)**

As soon as the software is started, the home screen loads. It shows six buttons classified under two groups: “French to English”, and “English to French”. Each subgroup has three buttons, with the words “Take A New Easy Level Test”, “Take A New Medium Level Test”, and “Take A New Hard Level Test” written on them respectively. On pressing any of these buttons, the user is directed to the appropriate test interface. Hence, the home screen presents the different tests the user can take in an organised manner.

1. **Test Generation - Once the user has made their selection on the home screen, they should be directed to the first question of the appropriate, randomly-generated te**st.

The first question is displayed at the top of the screen. Below it is a text box where the user can enter their answer, and a button to submit it. The question is of the selected difficulty level.

1. **User Input - The user should be able to enter and submit their answer to each question in the test.**

Users can click on the box below each question, and use the keyboard to enter their response. Then, they can hit the ‘Check Answer!’ button to input their answer to the software.

1. **Feedback on Correct Answers - If the user’s answer is correct, they should be told so and directed to the next question in the test after a short time delay.**

If the user inputs an answer that is correct, then the software displays the word “Correct!” on screen. This stays there for a delay of 2.5 seconds, in order to give the user enough time to read it. Then, the software automatically displays the next question.

1. **Feedback on Incorrect Answers - If the user’s answer is wrong, they should be told so, shown the expected answer, and directed to the next question in the test after a short time delay.**

If the user inputs an answer that is incorrect, then the software displays the words “Sorry, that was incorrect. The expected answer was [expected answer].” on screen. This message stays there for a delay of 2.5 seconds, in order to give the user enough time to read it. Then, the software automatically displays the next question.

1. **Score Screen - At the end of each test, the user should be directed to a screen where they can see their score.**

After the user has received feedback on their answer to the tenth and final question in the test, they are automatically directed to the score page. Here, they can see their test score (out of 10) displayed at the top of the page.

1. **View Progress - The user should be able to check their progress for each test (i.e. the change in their score from the previous test they took).**

On the score page, the user can click on a button labelled “View Progress”. Once they do so, they are directed to a screen where the change (in numerical terms) in the user’s score since the previous test is displayed. Below it, some text describing the score change, (e.g., “Oh no! Your score has fallen since the previous test”) can also be seen.

1. **Difficulty Level Recommendations - The software should display which difficulty level it thinks the user is suited to, based on their latest test score.**

On the progress page, the user can see--below the software’s feedback on the user’s score change–the words “Difficulty Level Recommendation:”. Depending on the user’s score, the word following the colon is “Easy”, “Medium”, or “Hard” --which references the three difficulty levels that can be selected from in the software.

1. **Difficulty Levels in Battle Mode - The user should be able to choose the difficulty level of their ‘battle’ against the software.**

On pressing the button labelled “Battle Mode!” on the home screen, the user is directed to a page where they can choose the difficulty level of the battle. The page displays three buttons, labelled with the words “Easy Difficulty Level”, “Medium Difficulty Level”, and “Hard Difficulty Level” respectively. Depending on the button the user presses, the difficulty of the questions asked in the Battle Mode Interface will change.

1. **Battle Mode - The user should be able to compete, or battle, against the software on a shared test.**

On pressing the button labelled “Battle Mode! on the home screen, the user is allowed to choose the difficulty level of the battle. Upon doing so, they are directed to the Battle Mode interface, where the first question in the battle is displayed. The user can subsequently enter their answer in a text box, press the ‘Check Answer’ button, and receive feedback on their answer. Then, after a short delay, a new question is displayed on screen. All the while, various details of the battle--like the software’s score, the user’s score, and the software’s answer to each question--are displayed on screen.

1. **Navigate to the Home Screen - The user should be able to navigate to the home screen from any other screen.**

On every screen in the software, the user can navigate back to the home screen through one of two ways: Firstly, by pressing a button labelled “Return to Home.” Or, if that is not possible, by pressing a back arrow in the top left of the screen.

Refer to Appendix C for client correspondence.

**Recommendations for Future Development:**

At the current moment, the solution satisfies all of the client’s needs. However, there are a few improvements that could be made:

1. Currently, the software helps the user memorise the meaning of French words. However, it could also help the user improve their pronunciation of these words. This could be done by playing an audio sample of someone pronouncing the words whenever the user presses the word onscreen.
2. There is no focus by the software on how to use each French word tested in a sentence. In the future, a separate page in the software could be developed to facilitate this. On it, the user would be able to see all the French words they have been tested on. Next to each word could be an example sentence demonstrating how the word is used while communicating.
3. While the current software helps the client memorise French words, the client may want to learn more languages in the future. Thus, new modules could be developed in the software to help the user memorise words in languages like German, Spanish etc.
4. Right now, the French words the user is quizzed on are coded directly into the software. This places limitations on the software as only a finite number of words can be included. Plus, this method is not ideal for performance. In the future, the software could connect to public French-to-English or English-to-French datasets, which would allow it to quiz the user on a virtually unlimited number of words.

[Words: 250]