|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| * Expected * Unexpected * Boundary | Expected Input | Input | Outcome | Is it what’s supposed to happen? |
| Expected | To sit in solemn silence in a dull, dark dock,  In a pestilential prison, with a life-long lock | To sit in solemn silence in a dull, dark dock,  In a pestilential prison, with a life-long lock | Score 18 | ✓ |
| Unexpected | Once upon a time in the middle of winter, when the flakes of snow were falling like feathers from the sky, | 2134343rfgdsdfg | Score 0 | ✓ |
| Unexpected | Once upon a time in the middle of winter, when the flakes of snow were falling like feathers from the sky, | Once a time in the middle of winter, the flakes of snow were falling like feathers from the sky, | Score 1 | ✓ |
| Unexpected | There was a little man, and he had a little gun,  And his bullets were made of lead, lead, lead; | Ctrl C  Ctrl V into user text box  Result: BLANK | Score 0 | ✓ |
| Boundary  *Checking if the length of the user’s story is within the range of the story* | none | No user input because it’s not required | Proceed to compare the files | ✓ |
| Expected | Raw  Saw  Answer  Etc. | Raw  Saw  Answer | Score 3 | ✓ |
| Unexpected | Raw  Saw  Answer  Etc. | Saw  Saw  Ran | Score 2 | ✓ |
| Unexpected | Raw  Saw  Answer  Etc. | Shortcuts  Result: BLANK | Score 0 | ✓ |
| Unexpected | Raw  Saw  Answer  Etc. | 12432djkhflskeghkd | Score 0 | ✓ |
| Expected | She sells sea shells by the sea shore | She sells sea shells by the sea shore | You win! | ✓ |
| Expected | SHE SELLS SEA SHELLS BY THE SEA SHORE | SHE SELLS SEA SHELls BY THE SeA SHORE | You win! | ✓ |
| Unexpected | Silly Sally swiftly shooed seven silly sheep | Ctrl C  Ctrl V into user text box  Result: BLANK | You Lose! | ✓ |
| Unexpected | Peter Piper picked a peck of pickled peppers. | Peter Piper picked a peck of pickled peppers. + space | You Lose! | ✓ |
| Unexpected | How much wood would a woodchuck chuck if a woodchuck could chuck wood? | How much wood would woodchuck chuck if a wood chuck could chuck wood? | You Lose! | ✓ |
| Expected | Return button click | Return button click | Returns to menu | ✓ |
| Boundary  ***Timers***  5 seconds  60Seconds  6o seconds | No input starts on click | No user input because it’s not required | On timer event method | ✓ |

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Backdrop of menu/home screen credit to: <https://www.freepik.com/free-vector/realistic-green-leaves-with-neon-frame_6601067.htm>

Correct answers for anagrams credit to:

<http://www.wordfinders.com/words-with-the-letters-answer/>

Short Stories and Togue Twisters credit to:

<https://www.mondly.com/blog/2019/08/23/71-best-tongue-twisters-to-perfect-your-english-pronunciation/>

<https://www.mamalisa.com/?t=hes&p=1982&l=I>

<https://www.bedtimeshortstories.com>

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How is it user friendly? Fonts colours language

I used dark fonts on light backgrounds and light fonts on dark backgrounds for effective readability.

The menu has a pretty backdrop which draws the user’s attention. Each game has their own colour theme. Orange for anagrams, Blue for the typing test and Purple for the memory game. The Program aesthetically entertaining. They layout of using text boxes and the way they’re positioned on the page as well as having bold easy to read instructions makes it easy for the user to follow along and enjoy it. I set the default cursor position to where the user must input to make it more convenient.

How was testing carried out?

Testing was carried out by entering a wide range of expected and unexpected inputs as well as values at, below and above boundaries. A set of these have been recorded in the table above.

Trialing

I trialed my own code several times as well as family members and several of my friends. My code was also displayed at open day where members of the public were able to trial it. I received some valuable feedback which I was successfully able to incorporate into my program.

Issues and How I incorporated feedback:

I started off with console framework, but I found that there was no effective way to stop input when time is up with the knowledge I have right now. I spent weeks trying to make it work. I switched to forms and found a solution by creating an event on the timer which set the properties of the user’s input text box to read only.

I found that because timer runs in background labels and buttons kept disappearing and reappearing after each time interval. So, I created an integer variable called TimesRan that gets a value from a counter. The counter gets incremented each time the timer completes its assigned interval. So, after the timer has ran once, I will have an if statement to display the labels. Once the timer has ran twice or more it won’t interfere with anything because it won’t meet the criteria in the if statement.

At open Evening some kids decided to try to cheat and outsmart the computer my copy pasting the paragraph in the typing test. I resolved this by disabling shortcuts in all the text boxes in all my games because this cheat could also be used in the memory games and user could also copy answers from google for the anagrams. I’ve tested it and made sure that shortcuts are disabled.

Relevant Implications?

My program uses suitable language and reading level and appeals to the right audience. Its appropriate for anyone with a minimum requirement of a basic understanding of reading, spelling, typing, copying, and memorising. Its aesthetics appeal to the right audience and gives the programs some character and meaning. Legal Implications: This program is created by me and myself only I have used a backdrop for the menu from and external source which I have cited above(just under the table) and I have also used the answers for anagrams from an external source instead of working out every possible answer which is also cited in the same place. The tongue twisters I have used for the memory game and the short stories for the typing test are also from an external source that’s also cited above.

Evaluation: I think my code was very successful. It’s user friendly and visually appealing. The games are word based and mostly have different texts which prevents them from getting boring. Users can conveniently exit the program and switch between games from the menu. I can easily make changes to the program without causing any trouble. I struggled with stopping user input in the console framework so using forms was much better because I could just adjust the properties. Overall, I was able to deliver a robust program by using things like reading and writing to and from text files, getting file paths, comparing files, timers, events, and creating menus. In the future I’d like to have some sort of point system or leader board that can display the names and scores of the most successful contestants.