Task Two

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1 Module Learning Outcomes Met by this Exercise:

- 2. Apply Concurrency to common tasks

2 Preamble

- This task is to give you some practice with Critical Sections, it depends on the code written in the first exercise, so you need to have completed that before you can complete this one.

3 Part One

- Duplicate the program you wrote in exercise one into a new program.

- If you have not yet made your poem display work by using an index variable to select the line to display, do so now.

- The last program altered the shared variable in a non thread safe manner. This time we will alter the program to use a critical section so the shared variable is used in a thread safe way.

- The critical section should appear in both threads, where the shared variable is written to, and where it is read.

- Further alter the program to ensure each line of text is only printed once. (check that the index variable has changed before you allow the next line to be displayed). This is a logic, not a concurrency problem, so you should be able to solve it by now.

4 Part Two

- Introduce a third thread to the program and use this to pause, resume or exit display of the poem.

- To do this most effectively you should alter your program so the poem is repeatedly printed until program exit (the poem printing should infinitely loop).