COMP500 / ENSE501: Week 11 – Exercise:

EXERCISE NAME: *Text Tool*

Declare and define the following:
- A function that counts and returns the number of vowels (a, e, i, o, u) in a C-String.
- A function that counts and returns the number of consonants in a C-String.
- A function that converts a C-String to all lowercase.
- A function that converts a C-String to all uppercase.

Next, write a program in the **main** function which does the following, in order:
- Prompts the user to input a piece of text, and let them type it in.
  - The C-String cannot be larger than 100 characters.
- Prints a menu of items for the user to choose from:
  1. Count the number of vowels.
  2. Count the number of consonants.
  3. Count the number of spaces.
  4. Convert to upper case.
  5. Convert to lower case.
  6. Echo input string.
  7. Enter another string.
  8. Quit.
- Prompts the user for a choice, then based upon their choice, executes the appropriate menu option, and displays the result for the user to view.
- Finally, loops to repeat the displaying of the menu options until the user selects 8 to quit the program.

Ensure each function has a function comment that accurately describes the function.

Follow good programming standards for whitespace, naming and commenting.

Test your program to ensure the implementation is robust.