**Software Unit Testing Report**

1. Your task is to write a program: **Scrabble Score** using **TDD** and automated unit testing tool in **Python**.

Your task is to compute the scrabble score for a given word.

**Letter Values**

You'll need these:

**Letter Value**

A, E, I, O, U, L, N, R, S, T 1

D, G 2

B, C, M, P 3

F, H, V, W, Y 4

K 5

J, X 8

Q, Z 10

**Examples**

"cabbage" should be scored as worth 14 points:

* 3 points for C
* 1 point for A, twice
* 3 points for B, twice
* 2 points for G
* 1 point for E

And to total:

* 3 + 2\*1 + 2\*3 + 2 + 1
* = 3 + 2 + 6 + 3
* = 5 + 9
* = 14

You have the following set of requirements for this program:

1. The numbers are added up correctly for a given word
2. Upper- and lower-case letters should have the same value
3. Your program should prompt user with the right feedback if user does not enter an alphabet.
4. A 15-seconds timer is shown. User is asked to input a word of a certain length. The number of alphabets required in the word is randomly generated. The program will check to ensure that the right length of word is entered before generating the score. Score will be higher if less time is used to enter the right length of word.
5. Ensure that user enters a valid word from a dictionary. The program will not tabulate the score if the word is not a proper word from a dictionary. Prompts will be given asking the user to enter a valid word if the user does not enter a valid word.
6. The game will keep going:
   1. Until the player quits the game and display the total score of the player.
   2. After 10 rounds and compute the total score of the player.

You can slightly modify the requirements as long as the basic game requirements remain the same. Check with the lecturer first.

Other requirements for this assignment are:

1. Create a Git directory for your assignment (including word or pdf documents and programming code). Make sure to include the link in your report.
2. Submit the following onto Learnline in a zip folder

* A report of the following format:
  + **Introduction**: Outline what you are trying to do, justify the programming language and automated unit testing tool you will be using.
  + **Process**: You should clearly explain how TDD and automated unit testing tool have been used to create your program. Support it with relevant screenshots for each of the requirements.
  + **Conclusion**: conclude the report with lessons learnt and your GitHub link.
* The python file containing your game

Refer to the marking rubric for more details.