C3 – Assignment #1 – WordGame

Probably the best game never invented...

Some Useful Background Information

WordGame is a word game that tests your skill at word creation, checks if you can spell, and assesses your performance under pressure (tick... tick... tick...).

WordGame is a command-line, text-based game.

When started, your WordGame program selects a word of seven or more letters from a dictionary. This word is known as the **source word**. The source word is displayed on screen, and the game records the current timestamp value.

The user of the game now has to think up seven three-or-more letter words made up from the letters contained within the source word, and they have to do this as quickly as possible. Each word is entered into the game which then – once the seven words are entered – records another timestamp value.

Upon receipt of the seven words, the game checks to ensure that:

1. each word is made up from letters contained within the source word,

2. each word exists within the dictionary (i.e., it's a "real" word),

3. the words all have three letters or more,

4. there are no duplicates[1], and

5. none of the seven submitted words is the source word.

If the seven words meet the above criteria, the game computes how long the process took using the two timestamp values, recording the amount of time taken. The game then asks for the user's name to add to the *Top Scorers List*.

Upon receipt of the name, the game adds the user's name and their time into the appropriate place within the *Top Scorers List* then displays the current "Top 10" entries from the *Top Scorers List*.

And, of course, because this game is *so* cool, the user willingly accepts your kind offer to play again (or, if they're a spoilsport, they quit).

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1   Note: Case is not an issue here. So, "PET" is the same as "Pet" - that is, they are NOT two different words.

Points to note:

1. If one or more of the seven words are invalid, the game needs to tell the user which words were wrong, and display an appropriate "error" message[2].

2. If the user does not make the Top 10, they should be told where they were placed within the list (e.g., *"Nice try, Alan: You were ranked 4396th. Better luck next time."*).

Assignment Specification & Notes

1. Use Python 3 as your programming language for the game.

2. Be sure to test your solution (and maybe even ask your friends to play your game).

3. E-mail your solution code to `paul.barry@itcarlow.ie` by the due date/time.

4. This is your first CA and is worth 10% of your final mark. While this CA is active, no new material will be presented in class.

5. Due date: **Friday, October 27th 2017**. Due time: 5:00pm.

6. Your code will be checked for PEP8 compliance. Make sure it passes.

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2   And the game needs to appropriately chastise the user in the most "reasonable" way possible. Use your imagination.