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Final Project Report

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**Scrabble Cheater**

Have you ever been so frustrated with someone’s ability to play a game, and play it well, to the point that it isn’t even fun for you anymore and you don’t want to play? If the answer is yes, then the Scrabble Cheater is just for you! That or if you simply enjoy word games and want to dominate unquestionably. Scrabble is a game, like most word games, that you must create as many words as possible, and the best words, from a given set of letter and this application will allow you to create the best possible word every time you have a turn and will also display every possible word that can be created from the given letters if the user desires. With this application domination of your opponent isn’t even a question!

AS describe before the problem is to create words from a given set of letter, from the user, and come up with the best word available from the set of words that can be created from the seven letter tiles and this includes trying to implement a blank tile into the problem solution. Words are created with combinations of the letter into a certain order that creates something that makes sense, a word. The idea to solve this problem involves the use of lists and dictionaries in python. Dictionaries will be used to assign a score to a letter, dictionary of scrabble letters, and to assign a score to a complete set of letters, or a word, dictionary of valid scrabble words. And the list will be used to keep track of the words that are contained in the fil so they can be iterated over and each letter compared to the letters in the rack to see if the word can be created.

To begin this solution we create our dictionary of scrabble letters based off the rules of the letter’s scores in the game of Scrabble. Next the text file that contains the list of all valid scrabble words is opened up and for each word in that text file it is added to a list of words, which is iterable. After we have a list of those words we use nested for loops to compare each letter of each word with the letters in the rack that the user has provided to see if that letter is in the rack, if it is then a flag is raised and otherwise no flag will be raised. When each letter in the word is checked we see if the flag is still raised and if it is then the word that we’re currently on is added to a dictionary of scrabble words with the score that is associated with it, which is found by adding the scores of each letter together. Each word in the list of words is checked as described and after every word has been checked we search the dictionary of scrabble words for the best word according to the score and display it to the user along with all the possible words if the user chooses that option.

Games can be fun, but they can also be frustrating if you don’t have the skill level that your opponent has. There are many ways to improve your skills of a particular game, but that is not the only option to compete with a higher level opponent, another one? Cheat! Not only does this scrabble cheater save your skin when in a word battle to the death, but it also saves you time when you are contemplating the best possible word you could achieve. Domination is turned into one of the simplest of task when you have a little bit of ‘luck’ on your side, in other words a nifty application that can help you achieve your maximum in basically any word game known to mankind.

**References**

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