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shengtatng ~

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Problem 1 - Word Scores

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Problem 1 - Word Scores

10.0/10.0 points (graded)

The first step is to implement some code that allows us to calculate the score for a single word. The function <code>getWordScore</code> should accept as input a string of lowercase letters (a *word*) and return the integer score for that word, using the game's scoring rules.

A Reminder of the Scoring Rules

Scoring

- The score for the hand is the sum of the scores for each word formed.
- The score for a word is the sum of the points for letters in the word, multiplied by the length of the word, plus 50 points if all *n* letters are used on the first word created.
- Letters are scored as in Scrabble; A is worth 1, B is worth 3, C is worth 3, D is worth 2, E is worth 1, and so on. We have defined the dictionary SCRABBLE_LETTER_VALUES that maps each lowercase letter to its Scrabble letter value.
- For example, 'weed' would be worth 32 points ((4+1+1+2) for the four letters, then multiply by len('weed') to get (4+1+1+2)*4 = 32). Be sure to check that the hand actually has 1 'w', 2 'e's, and 1 'd' before scoring the word!
- As another example, if n=7 and you make the word 'waybill' on the first try, it would be worth 155 points (the base score for 'waybill' is (4+1+4+3+1+1+1)*7=105, plus an additional 50 point bonus for using all n letters).

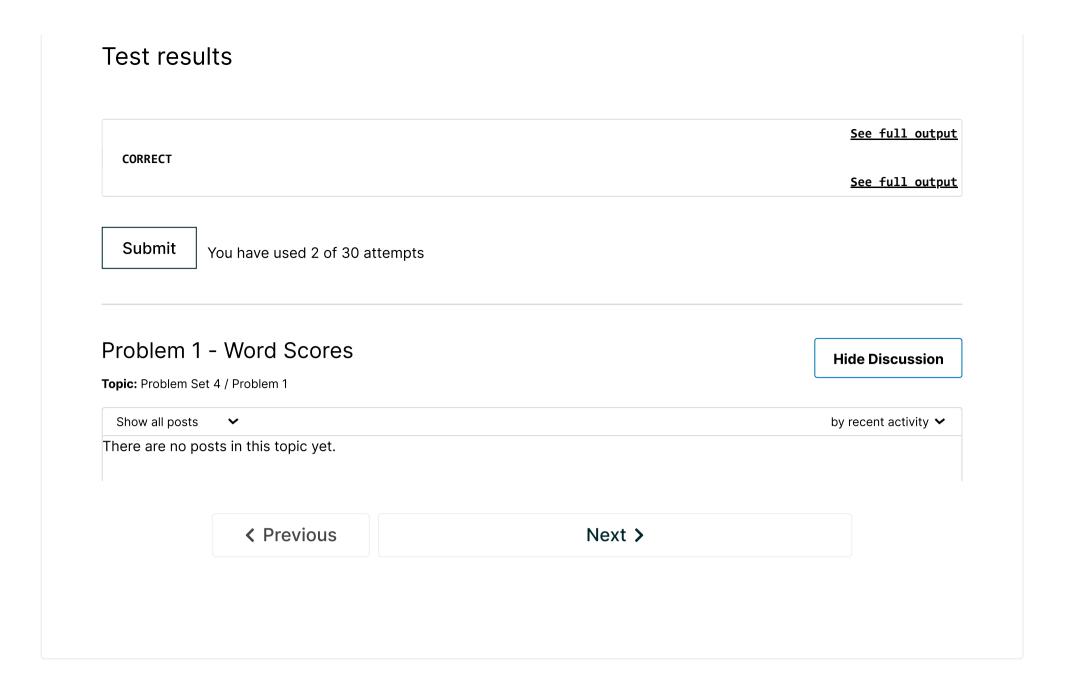
Hints

- You may assume that the input word is always either a string of lowercase letters, or the empty string "".
- You will want to use the SCRABBLE_LETTER_VALUES dictionary defined at the top of ps4a.py. You should not change its value.
- Do **not** assume that there are always 7 letters in a hand! The parameter n is the number of letters required for a bonus score (the maximum number of letters in the hand). Our goal is to keep the code modular if you want to try playing your word game with n=10 or n=4, you will be able to do it by simply changing the value of HAND_SIZE!
- **Testing:** If this function is implemented properly, and you run <code>test_ps4a.py</code>, you should see that the <code>test_getWordScore()</code> tests pass. Also test your implementation of <code>getWordScore</code>, using some reasonable English words.

Fill in the code for <code>getWordScore</code> in <code>ps4a.py</code> and be sure you've passed the appropriate tests in <code>test_ps4a.py</code> before pasting your function definition here.

```
1 def getWordScore(word, n):
2
 3
      Returns the score for a word. Assumes the word is a valid word.
4
 5
      The score for a word is the sum of the points for letters in the
6
      word, multiplied by the length of the word, PLUS 50 points if all n
7
      letters are used on the first turn.
8
9
      Letters are scored as in Scrabble; A is worth 1, B is worth 3, C is
10
      worth 3, D is worth 2, E is worth 1, and so on (see SCRABBLE_LETTER_VALUES)
11
12
      word: string (lowercase letters)
13
      n: integer (HAND_SIZE; i.e., hand size required for additional points)
14
      returns: int >= 0
15
```

Press ESC then TAB or click outside of the code editor to exit



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