edX

Problem 7 - You and your Computer
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0.0/20.0 points (graded)
Now that your computer can choose a word, you need to give the computer the option to play. Write the code that re-implements the `playGame` function. You will modify the function to behave as described below in the function's comments. As before, you should use the `HAND_SIZE` constant to determine the number of cards in a hand. Be sure to try out different values for `HAND_SIZE` with your program.

Sample Output and Hints

Here is how the game output should look...

```
Enter n to deal a new hand, r to replay the last hand, or e to end
game: n

Enter u to have yourself play, c to have the computer play: u

Current Hand: a s r e t t t
Enter word, or a "." to indicate that you are finished: tatters
"tatters" earned 99 points. Total: 99 points

Run out of letters. Total score: 99 points.

Enter n to deal a new hand, r to replay the last hand, or e to end
game: r

Enter u to have yourself play, c to have the computer play: c

Current Hand:  a s r e t t t
"stretta" earned 99 points. Total: 99 points

Total score: 99 points.

Enter n to deal a new hand, r to replay the last hand, or e to end
game: x
Invalid command.

Enter n to deal a new hand, r to replay the last hand, or e to end
game: n

Enter u to have yourself play, c to have the computer play: me
Invalid command.

Enter u to have yourself play, c to have the computer play: you
Invalid command.

Enter u to have yourself play, c to have the computer play: c

Current Hand:  a c e d x l n
"axled" earned 65 points. Total: 65 points

Current Hand:  c n
Total score: 65 points.

Enter n to deal a new hand, r to replay the last hand, or e to end
game: n
```

```
Enter u to have yourself play, c to have the computer play: u

Current Hand: a p y h h z o
Enter word, or a "." to indicate that you are finished: zap
"zap" earned 42 points. Total: 42 points

Current Hand: y h h o
Enter word, or a "." to indicate that you are finished: oy
"oy" earned 10 points. Total: 52 points

Current Hand: h h
Enter word, or a "." to indicate that you are finished: .
Goodbye! Total score: 52 points.

Enter n to deal a new hand, r to replay the last hand, or e to end
game: r

Enter u to have yourself play, c to have the computer play: c

Current Hand:  a p y h h z o
"hypha" earned 80 points. Total: 80 points

Current Hand:  z o
Total score: 80 points.

Enter n to deal a new hand, r to replay the last hand, or e to end
game: e
```

Hints about the output

Be sure to inspect the above sample output carefully - very little is actually printed out in this function specifically. Most of the printed output actually comes from the code you wrote in `playHand` and `compPlayHand` - be sure that your code is modular and uses function calls to these helper functions!

You should also make calls to the `dealHand` helper function. You shouldn't make calls to any other helper function that we've written so far - in fact, this function can be written in about 15-20 lines of code.

Here is the above output, with the output from `playHand` and `compPlayHand` obscured:

```
Enter n to deal a new hand, r to replay the last hand, or e to end
game: r
You have not played a hand yet. Please play a new hand first!

Enter n to deal a new hand, r to replay the last hand, or e to end
game: n

Enter u to have yourself play, c to have the computer play: u

<call to playHand>

Enter n to deal a new hand, r to replay the last hand, or e to end
game: r

Enter u to have yourself play, c to have the computer play: c

<call to compPlayHand>

Enter n to deal a new hand, r to replay the last hand, or e to end
game: x
Invalid command.

Enter n to deal a new hand, r to replay the last hand, or e to end
game: n

Enter u to have yourself play, c to have the computer play: me
Invalid command.

Enter u to have yourself play, c to have the computer play: you
Invalid command.

Enter u to have yourself play, c to have the computer play: c

<call to compPlayHand>

Enter n to deal a new hand, r to replay the last hand, or e to end
game: n

Enter u to have yourself play, c to have the computer play: u

<call to playHand>

Enter n to deal a new hand, r to replay the last hand, or e to end
game: r
```

```
Enter u to have yourself play, c to have the computer play: c

<call to compPlayHand>

Enter n to deal a new hand, r to replay the last hand, or e to end
game: e
```

Hopefully this hint makes the problem seem a bit more approachable.

A Note On Runtime

You may notice that things run slowly when the computer plays. This is to be expected. If you want (totally optional!), feel free to investigate ways of making the computer's turn go faster - one way is to preprocess the word list into a dictionary (string -> int) so looking up the score of a word becomes much faster in the `compChooseWord` function.

Be careful though - you only want to do this preprocessing *one time* - probably right after we generate the wordList for you (at the bottom of the file). If you choose to do this, you'll have to modify what inputs your functions take (they'll probably take a word dictionary instead of a word list, for example).

IMPORTANT: Don't worry about this issue when running your code in the checker below! We load a very small sample wordList (*much* smaller than 83667 words!) to avoid having your code time out. Your code will work even if you don't implement a form of pre-processing as described.

Entering Your Code

Be sure to only paste your definition for `playGame` from `ps4b.py` in the following box. Do not include any other function definitions.

```
def playGame(wordList):
    """
    Allow the user to play an arbitrary number of hands.

    1) Asks the user to input 'n' or 'r' or 'e'.
        * If the user inputs 'e', immediately exit the game.
        * If the user inputs anything that's not 'n', 'r', or 'e', keep

    2) Asks the user to input a 'u' or a 'c'.
        * If the user inputs anything that's not 'c' or 'u', keep askin
```

```
12      3) Switch functionality based on the above choices:
13           * If the user inputted 'n', play a new (random) hand.
14           * Else, if the user inputted 'r', play the last hand again.
15             But if no hand was played, output "You have not played a hand
```

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

Unanswered

Note: the `input` function on Spyder may print an extra newline. That's ok. Do not try to move text backwards using `end='\b'` in a print statement

Submit   You have used 0 of 30 attempts

Problem 7 - You and your Computer

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?	**DealHand Function call** Hi dealHand() function is part of ps4a.py. As I understand,this programs are not to imported i...	1
💬	**I actually did it** I was able to get all of these problems correct on the first submit. I think the instructions and ...	3
💬	**Did anyone do it in under 20 lines? mine was 23** It says under hints that you are suppose to finish it in 15-20 lines. Although I was able to do t...	7
💬	**You have got to be kidding me...**	7
?	**35 lines...** If i can call a function outside the solution to handle the u and c case, Im sure i could make it j...	2
💬	**Done n dusted :P)). but Need little explanation.** Sorry for the title guys. In the description it says, code can be written in 15-20 lines. I dont see...	12

💬 **One in One for this last section of the problem set**

I was having hard time with previous parts of this problem, but this last section I got it quick: ...

1

💬 **Great exercise! Thank you :)**

Hello, I really enjoyed this exercise. I used many of the things we learned so far. Now I see, w...

1

💬 **Crap solution?!**

After I completed this Pset I realized I haven't used exceptions and assertions... my code for t...

4

? **Your code interfered with our grader. Don't use bare 'except' clauses.**

What is the meaning of this?

4

? **What's wrong with my code for input 'r'?**

Here is my code for the user input 'r': <CTA edit - no PSET code please> Half my output gets t...

3

💬 **Too many lines**

Hello) It is said that this problem can be solved in 20 lines of code but I have 35..... So my que...

9

💬 **Tried for 2 hours, finally reduced from 36 lines to 23 lines.**

I still haven't been able to use *try except* in this problem, but I am very happy that I consoli...

4

? **Test #8 error, expected 'this is a filler line'**

For question 8, I'm told: Test 8: "Nothing should break if I call 'r' first - you should just print a ...

1

💬 **Dopamine rush**

Man, that feels good to (finally) get "Correct".

5

? **Testcase 10 wrong?**

2

? **Failed to ask for input!**

Any suggestions to address the following error? Your output: Enter n to deal a new hand, r to ...

4

💬 **to re g. G to the bv**

vr4

1

? **"Too much input"?**

*** Error: Your code called 'input' more times than necessary. Please review where you are u...

7