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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.

```
1 def playGame(wordList):
2     """
3     Allow the user to play an arbitrary number of hands.
4
5     1) Asks the user to input 'n' or 'r' or 'e'.
6         * If the user inputs 'e', immediately exit the game.
7         * If the user inputs anything that's not 'n', 'r', or 'e', keep asking the
8
9     2) Asks the user to input a 'u' or a 'c'.
10        * If the user inputs anything that's not 'c' or 'u', keep asking them again.
11
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 yet.
16        Please play a new hand first!"
```

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

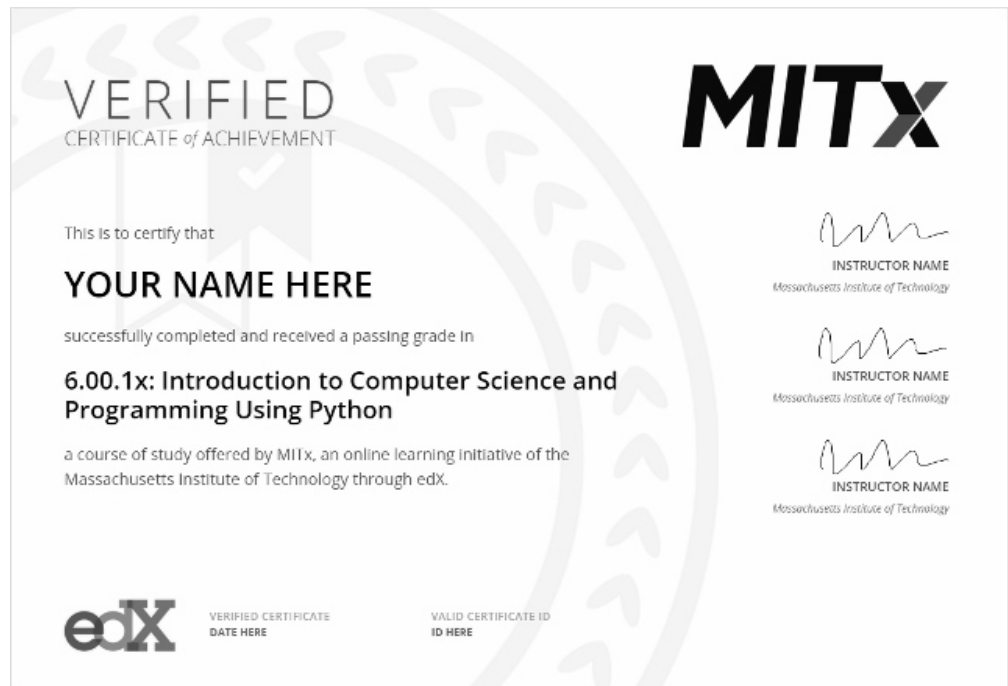


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Problem 7 - You and your Computer

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[Having read the runtime note given in the pset, I'm eager to make the suggested changes and so f...](#)



?	<u>Same issue as problem 6. code works fine in IDE but wont pass the grader.</u> <u>Here is the grader output: Enter n to deal a new hand, r to replay the last hand, or e to end game: ...</u>	13
?	<u>why the submit button isnt working?</u> <u>i cant submit my answer although i didnt ran out of time i still have 3 hours, this problem time fini...</u>	2
?	<u>Have an error at the last test case...</u> <u>I can't figure out what's wrong. The code works but the last test case it fails. Here is my output: En...</u>	4
?	<u>*** Error: Your code called 'dealHand' more times than necessary. Be sure you are following the program specifications.</u> <u>What does the error mean? *** Error: Your code called 'dealHand' more times than necessary. Be...</u>	2
?	<u>IndentationError: unexpected indent</u> <u>How do I fix this? I've tried every indent, but nothing is working.</u>	3
?	<u>What does the error "Your code interfered with our grader. Don't use bare 'except' clauses." mean?</u> <u>I am trying to understand why I cannot run my code at all, I get this error in the title. Would this co...</u>	4
?	<u>Usage of Try and Except</u> <u>Is it bad if I did not use Try and Except at all for this week's assignment?</u>	6
💬	<u>Finally made it</u> <u>I finally got the correct code with a lot of whiles, ifs and boolean validators. Surely it's a lot less tha...</u>	4
?	<u>Staff debug: L397 with not infinite loop</u> <u>I was running my code and it worked perfectly in spyder, but took a very long time for the comput...</u>	4
?	<u>Not sure what's wrong with my code</u> <u>Here is the error message of my code for the last test case: > Enter n to deal a new hand, r to repl...</u>	3
🔍	<u>Error running solution (Staff Debug: L370)</u>	

