

Computer Plays a Hand

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Week 4 > Problem Set 4 > Computer plays a hand

(10/10 points)

Now that we have the ability to let the computer choose a word, we need to set up a function to allow the computer to play a hand - in a manner very similar to Part A's `playHand` function (get the hint?).

Implement the `compPlayHand` function. This function should allow the computer to play a given hand, using the procedure you just wrote in the previous part. This should be very similar to the earlier version in which a user selected the word, although deciding when it is done playing a particular hand will be different.

Be sure to test your function on some randomly generated hands using `dealHand`.

Test Cases

Test Cases

Some test cases to look at. Note it is okay if your code finds a different word, as long as the point values are the same.

```
compPlayHand({'a': 1, 'p': 2, 's': 1, 'e': 1, 'l': 1}, wordList, 6)
```

```
Current Hand: a p p s e l
"appels" earned 110 points. Total: 110 points
Total score: 110 points.
```

```
compPlayHand({'a': 2, 'c': 1, 'b': 1, 't': 1}, wordList, 5)
```

```
Current Hand: a a c b t
"acta" earned 24 points. Total: 24 points
```

```
Current Hand: b
Total score: 24 points.
```

```
compPlayHand({'a': 2, 'e': 2, 'i': 2, 'm': 2, 'n': 2, 't': 2}, wordList, 12)
```

```
Current Hand: a a e e i i m m n n t t
"immanent" earned 96 points. Total: 96 points
```

```
Current Hand: a e t i
"ait" earned 9 points. Total: 105 points
```

```
Current Hand: e
Total score: 105 points.
```

Important: For your code to be graded correctly, you must surround the computer's word with single or double quotes. So when displaying what word the computer chooses your line should look like:

```
"immanent" earned 96 points. Total: 96 points
```

or

'immanent' earned 96 points. Total: 96 points

Paste your definition of `compChooseWord`, in addition to your definition of `compPlayHand`, in the box below.

Function call: `compPlayHand({'a': 1, 'p': 2, 's': 1, 'e': 1, 'l': 1}, 6)`

Test Case 1

Output:

```
Current Hand:  a p p s e l
"appels" earned 110 points. Total: 110 points

Total score: 110 points.
None
```

Function call: `compPlayHand({'a': 2, 'c': 1, 'b': 1, 't': 1}, 5)`

Test Case 2

Output:

```
Current Hand:  a a c b t
"acta" earned 24 points. Total: 24 points

Current Hand:  b
Total score: 24 points.
None
```

Function call: `compPlayHand({'a': 2, 'e': 2, 'i': 2, 'm': 2, 'n': 2, 't': 2}, 12)`

Test Case 3

Output:

```
Current Hand:  a a e e i i m m n n t t
"imamate" earned 77 points. Total: 77 points

Current Hand:  e t i n n
"in" earned 4 points. Total: 81 points

Current Hand:  e t n
Total score: 81 points.
None
```

Function call: `compPlayHand({'a': 1, 'p': 2, 's': 1, 'e': 1, 'l': 1}, 8)`

Test Case 4

Output:

```
Current Hand:  a p p s e l
"appels" earned 60 points. Total: 60 points

Total score: 60 points.
None
```

Function call: compPlayHand({'b': 1, 'i': 2, 'k': 1, 'j': 1, 'o': 1, 'w': 2}, 8)

Test Case 5

Output:

```
Current Hand:  b i i k j o w w
"koji" earned 60 points. Total: 60 points

Current Hand:  b w w i
"bi" earned 8 points. Total: 68 points

Current Hand:  w w
Total score: 68 points.
None
```

Function call: compPlayHand({'a': 1, 'e': 2, 'k': 1, 'l': 1, 'o': 1, 'q': 1, 'x': 1}, 8)

Test 6: Randomized Test

Output:

```
Current Hand:  a e e k l o q x
"koa" earned 21 points. Total: 21 points

Current Hand:  q e e x l
Total score: 21 points.
None
```

Function call: compPlayHand({'h': 1, 'k': 1, 'w': 1, 'v': 1, 'x': 1, 'z': 1}, 8)

Test 7: Randomized Test

Output:

```
Current Hand:  h k w v x z
Total score: 0 points.
None
```

Function call: compPlayHand({'a': 2, 'e': 1, 'd': 2, 'i': 1, 'k': 2, 'u': 1, 'w': 2, 'y': 1}, 12)

Test 8: Randomized Test

Output:

Current Hand: a a e d d i k k u w w y
"kadi" earned 36 points. Total: 36 points

Current Hand: a e d k u w w y
"kay" earned 30 points. Total: 66 points

Current Hand: e d u w w
Total score: 66 points.
None