

PLAYING A HAND (15/15 points)

In `ps4a.py`, note that in the function `playHand`, there is a bunch of *pseudocode*. This pseudocode is provided to help guide you in writing your function. Check out the Why Pseudocode? resource to learn more about the What and Why of Pseudocode before you start coding your solution.

Note: Do **not** assume that there will always be 7 letters in a hand! The parameter `n` represents the size of the hand.

Testing: Before testing your code in the answer box, try out your implementation as if you were playing the game. Here is some example output of `playHand`:

Test Cases

Case #1

Function Call:

```
wordList = loadWords()
playHand({'h':1, 'i':1, 'c':1, 'z':1, 'm':2, 'a':1}, wordList, 7)
```

Output:

```
Current Hand:  a c i h m m z
Enter word, or a "." to indicate that you are finished: him
"him" earned 24 points. Total: 24 points
```

```
Current Hand:  a c m z
Enter word, or a "." to indicate that you are finished: cam
"cam" earned 21 points. Total: 45 points
```

```
Current Hand:  z
Enter word, or a "." to indicate that you are finished: .
Goodbye! Total score: 45 points.
```

Case #2

Function Call:

```
wordList = loadWords()
playHand({'w':1, 's':1, 't':2, 'a':1, 'o':1, 'f':1}, wordList, 7)
```

Output:

```
Current Hand:  a s t t w f o
Enter word, or a "." to indicate that you are finished: tow
"tow" earned 18 points. Total: 18 points
```

```
Current Hand:  a s t f
Enter word, or a "." to indicate that you are finished: tasf
Invalid word, please try again.
```

```
Current Hand:  a s t f
Enter word, or a "." to indicate that you are finished: fast
"fast" earned 28 points. Total: 46 points
```

```
Run out of letters. Total score: 46 points.
```

Case #3

Function Call:

```
wordList = loadWords()
playHand({'n':1, 'e':1, 't':1, 'a':1, 'r':1, 'i':2}, wordList, 7)
```

Output:

```
Current Hand: a r e t i i n
Enter word, or a "." to indicate that you are finished: inertia
"inertia" earned 99 points. Total: 99 points

Run out of letters. Total score: 99 points.
```

Additional Testing

Be sure that, in addition to the listed tests, you test the same basic test conditions with varying values of `n`. `n` will never be smaller than the number of letters in the hand.

```

27     if calculateHandlen(hand)>0:
28         print "Current Hand:",displayHand(hand)
29         word = raw_input('Enter word, or a "." to indicate that you are finished:')
30         if isValidWord(word, hand, wordList) == True or word == '.':
31             if(word == '.'):
32                 print "Goodbye!", "Total score:",sum,"points."
33                 break
34             else:
35                 calc = getWordScore(word, n)
36                 sum = sum + calc
37                 print '"',word,'"','earned',calc,'points.','Total:',sum,'points'
38                 hand = updateHand(hand, word)
39         else:
40             print "Invalid word, please try again."
41             continue
42     else:

```

Correct

Test results

Hide output

CORRECT

Function call: playHand({'a': 1, 'h': 1, 'r': 1, 'i': 1}, '<edX internal wordList>', 4)

Test 1: Using all the letters in the hand on the first guess

Output:

```
Current Hand: a h r i
None
Enter word, or a "." to indicate that you are finished:hair
" hair " earned 78 points. Total: 78 points
Run out of letters. Total score: 78 points.
None
```

Function call: `playHand({'a': 1, 'z': 1}, '<edX internal wordList>', 2)`

Test 2: Guessing incorrectly, then correctly

Output:

```
Current Hand: a z
None
Enter word, or a "." to indicate that you are finished:zo
Invalid word, please try again.
Current Hand: a z
None
Enter word, or a "." to indicate that you are finished:za
" za " earned 72 points. Total: 72 points
Run out of letters. Total score: 72 points.
None
```

Function call: `playHand({'q': 1, 'i': 1, 'o': 1}, '<edX internal wordList>', 3)`

Test 3: Guessing word, then quitting

Output:

```
Current Hand: q i o
None
Enter word, or a "." to indicate that you are finished:qi
" qi " earned 22 points. Total: 22 points
Current Hand: o
None
Enter word, or a "." to indicate that you are finished:.
Goodbye! Total score: 22 points.
None
```

Function call: playHand({'y': 1, 'x': 2, 's': 1, 'z': 2, 'b': 1}, '<edX internal wordList>', 7)

Test 4: Can't make a word :(

Output:

```
Current Hand: y x x s z z b
None
Enter word, or a "." to indicate that you are finished:.
Goodbye! Total score: 0 points.
None
```

Function call: playHand({'a': 2, 'p': 1, 'r': 1, 'e': 2, 't': 1}, '<edX internal wordList>', 7)

Test 5: Full hand transcript - using all letters

Output:

```
Current Hand: a a p r e e t
None
Enter word, or a "." to indicate that you are finished:pear
" pear " earned 24 points. Total: 24 points
Current Hand: a e t
None
Enter word, or a "." to indicate that you are finished:tea
" tea " earned 9 points. Total: 33 points
Run out of letters. Total score: 33 points.
None
```

```
Function call: playHand({'a': 2, 'p': 2, 'r': 1, 'z': 1, 'e': 1}, '<edX internal wordList>', 7)
```

Test 6: Full hand transcript - can't use every letter

Output:

```
Current Hand: a a p p r z e
None
Enter word, or a "." to indicate that you are finished:pear
" pear " earned 24 points. Total: 24 points
Current Hand: a p z
None
Enter word, or a "." to indicate that you are finished:za
" za " earned 22 points. Total: 46 points
Current Hand: p
None
Enter word, or a "." to indicate that you are finished:p
Invalid word, please try again.
Current Hand: p
None
Enter word, or a "." to indicate that you are finished:.
Goodbye! Total score: 46 points.
None
```

```
Function call: playHand({'b': 1, 'g': 1, 'm': 1, 'l': 1, 'q': 1, 'p': 1, 'u': 1, 'w': 1, 'v': 1, 'z': 1}, '<edX internal wordList>', 10)
```

Test 7: Randomized Test

Output:


```
Current Hand: b g m l q p u w v z
None
Enter word, or a "." to indicate that you are finished:b
Invalid word, please try again.
Current Hand: b g m l q p u w v z
None
Enter word, or a "." to indicate that you are finished:chayote
Invalid word, please try again.
Current Hand: b g m l q p u w v z
None
Enter word, or a "." to indicate that you are finished:kwijibo
Invalid word, please try again.
Current Hand: b g m l q p u w v z
None
Enter word, or a "." to indicate that you are finished:plum
" plum " earned 32 points. Total: 32 points
Current Hand: b g q w v z
None
Enter word, or a "." to indicate that you are finished:.
Goodbye! Total score: 32 points.
None
```

Hide output

Check

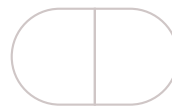
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