



< Previous	✓	✓	✓	✓	✓	✓	Next >
------------	---	---	---	---	---	---	--------

**Problem 4**

🔖 Bookmark this page

## Problem 4 - The Game

15.0/15.0 points (graded)

Now you will implement the function `hangman`, which takes one parameter - the `secretWord` the user is to guess. This starts up an interactive game of Hangman between the user and the computer. Be sure you take advantage of the three helper functions, `isWordGuessed`, `getGuessedWord`, and `getAvailableLetters`, that you've defined in the previous part.

### Hints:

- You should start by noticing where we're using the provided functions (at the top of `ps3_hangman.py`) to load the words and pick a random one. Note that the functions `loadWords` and `chooseWord` should only be used on your local machine, not in the tutor. When you enter in your solution in the tutor, you only need to give your `hangman` function.
- Consider using `lower()` to convert user input to lower case. For example:

```
guess = 'A'
guessInLowerCase = guess.lower()
```

- Consider writing additional helper functions if you need them!
- There are four important pieces of information you may wish to store:
  - `secretWord`: The word to guess.
  - `lettersGuessed`: The letters that have been guessed so far.
  - `mistakesMade`: The number of incorrect guesses made so far.
  - `availableLetters`: The letters that may still be guessed. Every time a player guesses a letter, the guessed letter must be removed from `availableLetters` (and if they guess a letter that is not in `availableLetters`, you should print a message telling them they've already guessed that - so try again!).

### Sample Output

The output of a winning game should look like this...

```
Loading word list from file...
55900 words loaded.
Welcome to the game Hangman!
I am thinking of a word that is 4 letters long.
-----
You have 8 guesses left.
Available letters: abcdefghijklmnopqrstuvwxyz
Please guess a letter: a
Good guess: _ a _ 
-----
You have 8 guesses left.
Available letters: bcdefghijklmnopqrstuvwxyz
Please guess a letter: a
Oops! You've already guessed that letter: _ a _ 
-----
You have 8 guesses left.
Available letters: bcdefghijklmnopqrstuvwxyz
Please guess a letter: s
Oops! That letter is not in my word: _ a _ 
-----
You have 7 guesses left.
Available letters: bcdefghijklmnopqrstuvwxyz
Please guess a letter: t
Good guess: ta_ t
-----
You have 7 guesses left.
Available letters: bcdefghijklmnopqruvwxyz
Please guess a letter: r
Oops! That letter is not in my word: ta_ t
```

```
-----
You have 6 guesses left.
Available letters: bcdefghijklmnopquvwxyz
Please guess a letter: m
Oops! That letter is not in my word: ta_ t
-----
You have 5 guesses left.
Available letters: bcdefghijklmnopquvwxyz
Please guess a letter: c
Good guess: tact
-----
Congratulations, you won!
```

**And the output of a losing game should look like this...**

```
Loading word list from file...
55900 words loaded.
Welcome to the game Hangman!
I am thinking of a word that is 4 letters long.
-----
You have 8 guesses left.
Available Letters: abcdefghijklmnopqrstuvwxyz
Please guess a letter: a
Oops! That letter is not in my word: _ _ _ _
-----
You have 7 guesses left.
Available Letters: bcdefghijklmnopqrstuvwxyz
Please guess a letter: b
Oops! That letter is not in my word: _ _ _ _
-----
You have 6 guesses left.
Available Letters: cdefghijklmnopqrstuvwxyz
Please guess a letter: c
Oops! That letter is not in my word: _ _ _ _
-----
You have 5 guesses left.
Available Letters: defghijklmnopqrstuvwxyz
Please guess a letter: d
Oops! That letter is not in my word: _ _ _ _
-----
You have 4 guesses left.
Available Letters: efghijklmnopqrstuvwxyz
Please guess a letter: e
Good guess: e_ _ e
-----
You have 4 guesses left.
Available Letters: fghijklmnopqrstuvwxyz
Please guess a letter: f
Oops! That letter is not in my word: e_ _ e
-----
You have 3 guesses left.
Available Letters: ghijklmnopqrstuvwxyz
Please guess a letter: g
Oops! That letter is not in my word: e_ _ e
-----
You have 2 guesses left.
Available Letters: hijklmnopqrstuvwxyz
Please guess a letter: h
Oops! That letter is not in my word: e_ _ e
-----
You have 1 guesses left.
Available Letters: ijklmnopqrstuvwxyz
Please guess a letter: i
Oops! That letter is not in my word: e_ _ e
-----
Sorry, you ran out of guesses. The word was else.
```

Note that if you choose to use the helper functions `isWordGuessed`, `getGuessedWord`, or `getAvailableLetters`, you do not need to paste your definitions in the box. We have supplied our implementations of these functions for your use in this part of the problem. If you use additional helper functions, you will need to paste those definitions here.

 Hide Notes

Your function should include calls to `input` to get the user's guess.

Why does my Output Have `None` at Various Places?

`None` is a keyword and it comes from the fact that you are printing the result of a function that does not return anything. For example:

```
def foo(x):
    print(x)
```

If you just call the function with `foo(3)`, you will see output:

```
3  #-- because the function printed the variable
```

However, if you do `print(foo(3))`, you will see output:

```
3      #-- because the function printed the variable
None   #-- because you printed the function (and hence the return)
```

All functions return something. If a function you write does not return anything (and just prints something to the console), then the default action in Python is to `return None`

```
1 def hangman(secretWord):
2     '''
3     secretWord: string, the secret word to guess.
4
5     Starts up an interactive game of Hangman.
6
7     * At the start of the game, let the user know how many
8       letters the secretWord contains.
9
10    * Ask the user to supply one guess (i.e. letter) per round.
11
12    * The user should receive feedback immediately after each guess
13      about whether their guess appears in the computers word.
14
15    * After each round, you should also display to the user the
```

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

Correct

Test results

CORRECT

See full output

See full output

**Note:** In "See Full Output", the parameter to the hangman function is a string.

Submit

You have used 1 of 30 attempts

Problem 4: Hangman Game

Hide Discussion

Topic: Problem Set 3 / Problem 4

Show all posts













by recent activity

Problem Set 3: Post your solutions and discuss!

Please use this thread to post your solutions (full or otherwise) for Problem Set 3. People need a variety of solutions to study so...

Pinned Community TA

Hide Notes

 <a href="#">test markdown to html</a>	3
 <a href="#">Community TA</a>	
 <a href="#">Test post below problem</a>	1
 <a href="#">Community TA</a>	
 <a href="#">my_output is correct but</a> <a href="#">my_output is correct but i keep getting this error: *** ERROR: Expected to find a number in the line Available letters:. Check to be...</a>	3
 <a href="#">Oh Joy. Doesn't work</a> <a href="#">straight copy -- Enjoy the course - some useful links --Single Step thru your code watching the variables change with python tut...</a>	8
 <a href="#">Community TA</a>	
 <a href="#">Cant press submit excercise 4</a> <a href="#">just that, seems stuck on my last try</a>	6
 <a href="#">Error 'lettersGuessed' is not defined</a> <a href="#">My_game gives identical outputs locally when I play the examples given. But in the grader, my hangman function gives this error: ...</a>	7
 <a href="#">Unlikely problems</a> <a href="#">Multiple issues with the downloaded code, issues that never occurred in the previous problem sets for this unit, even finding cod...</a>	5
 <a href="#">If loops outcome different</a> <a href="#">My code has worked perfectly when running it locally on my computer, but I am disappointed to find that my if loops are returnin...</a>	4
 <a href="#">What time is gmt + 10?</a> <a href="#">For some reason im having problems finding my time zone equivalent, to find when the excercise 3 date is due.</a>	3



## edX

- [About](#)
- [Affiliates](#)
- [edX for Business](#)
- [Open edX](#)
- [Careers](#)
- [News](#)

## Legal

- [Terms of Service & Honor Code](#)
- [Privacy Policy](#)
- [Accessibility Policy](#)
- [Trademark Policy](#)
- [Sitemap](#)

## Connect

[Blog](#)  
[Contact Us](#)  
[Help Center](#)  
[Media Kit](#)



© 2022 edX LLC. All rights reserved.  
深圳市恒宇博科技有限公司 [粤ICP备17044299号-2](#)