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# Problem 3

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Problem Set due Feb 24, 2022 20:30 -03
Problem 3 - Printing Out all Available Letters

10/10 points (graded)

Next, implement the function getAvailableLetters that takes in one parameter - a list of letters, lettersGuessed . This function returns a string that is comprised of lowercase English letters - all lowercase English letters that are **not** in lettersGuessed :

Example Usage:

```
>>> lettersGuessed = ['e', 'i', 'k', 'p', 'r', 's']
>>> print(getAvailableLetters(lettersGuessed))
abcdfghjlmnoqtuvwxyz
```

Note that this function should return the letters in alphabetical order, as in the example above.

For this function, you may assume that all the letters in lettersGuessed are lowercase.

**Hint:** You might consider using string.ascii_lowercase , which is a string comprised of all lowercase letters:

```
>>> import string
>>> print(string.ascii_lowercase)
abcdefghijklmnopqrstuvwxyz
```

```
def getAvailableLetters(lettersGuessed):
    '''
    lettersGuessed: list, what letters have been guessed so far
    returns: string, comprised of letters that represents what letters have not
      yet been guessed.
    '''
    # FILL IN YOUR CODE HERE...

    return str.join(sorted(set(string.ascii_lowercase) - set(lettersGuessed)))
```

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

Correta

## Test results

See full output

CORRECT

See full output

Enviar You have used 2 of 30 attempts Salvar

Correct (10/10 points)

## Problem 3 - Printing Out all Available Letters

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### Extra Challenge: Do a one line version of this function

discussion posted 11 days ago by __kiwi__ (Community TA)

You can also do this problem very nicely with either listcomps or sets and more on sets.

Both are very very lightly touched during the course but well worth mastering. And fun. So, did you succeed?
(Yes or no, not the solutions please 😉)

```
def getAvailableLetters(lettersGuessed):
    '''
    lettersGuessed: list, what letters have been guessed so far
    returns: string, comprised of letters that represents what letters have not
      yet been guessed.
    '''
    return ''.join([[redacted]])

    return ''.join([[redacted]])
```

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

Correct

This post is visible to everyone.

**Add a Response** 18 responses

**gregoryvit**
10 days ago - endorsed 12 days ago by __kiwi__ (Community TA)

Yes!

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**febdyi**
12 days ago - endorsed 12 days ago by __kiwi__ (Community TA)

Yes

Add a comment

**JoergiRK**
12 days ago - endorsed 12 days ago by __kiwi__ (Community TA)

done for listcomprehension. need to look into sets.

Check :).

posted 12 days ago by **JetSalomons**

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**blaisjoe**
12 days ago - endorsed 12 days ago by __kiwi__ (Community TA)

Got both! I found the set version much more intuitive, coming from no programming experience but some math.

Add a comment

**tpamaresczl**
11 days ago - endorsed 11 days ago by __kiwi__ (Community TA)

Done both! Using set actually need to call more functions than using listcomps, of course does not make any difference for such a small problem

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**joe_black**
10 days ago - endorsed 10 days ago by __kiwi__ (Community TA)

Done!

Add a comment

**rex_dev**
9 days ago - endorsed 9 days ago by __kiwi__ (Community TA)

Done, w listcomps.

Try sets as well. They're often ignored but can be useful.

posted 9 days ago by __kiwi__ (Community TA)

sure! :) I meant to say that I submitted the listcomps version here because here I think is more concise and readable than set. On the other hand, I submitted the set solution in the previous exercise.

posted 7 days ago by **rex_dev**

Add a comment

**PythonFunFactory**
8 days ago - endorsed 8 days ago by __kiwi__ (Community TA)

Dangit, Kiwi, you're making me cocky--I did this one in a single line before I even saw the prompt.

Add a comment

**timosivka**
7 days ago - endorsed 7 days ago by __kiwi__ (Community TA)

Got it both ways. These challenges made me learn something new and useful. Thanks Kiwi!

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**anjanb88**
7 days ago - endorsed 7 days ago by __kiwi__ (Community TA)

Yes

Add a comment

**Julia_Hoffman**
6 days ago - endorsed 6 days ago by __kiwi__ (Community TA)

yes on both

Add a comment

**Jison**
5 days ago - endorsed 5 days ago by __kiwi__ (Community TA)

Was able to get both in one line with the exception of the import statement. Set operators! Thanks again for the challenges!

See if you can do it without importing anything. There'll be another way.

posted 5 days ago by __kiwi__ (Community TA)

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**Edward_Tay**
3 days ago

Still don't get the meaning of set can't see the use of it in this case

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**chrisvandenbrouck**
2 days ago

my set approach seems to work fine when I just listed 3 out of the function meaning the remaining letters were returned in alphabetical order however when I wrote that set approach into the function the letters returned were the correct letters but in random order. Reading more on this was getting me further confused as sets won't always return say a group of letter in alphabetical order but that may be dependent of the version of Python you are using? Any advice on how to ensure I am writing it correctly for it to return alphabetically or actually whatever way the task requires? Thanks

Dicts have only officially returned keys in insertion order since Python 3.7 (insertion, not alphabetic note). This was a side effect of an idea to speed them up.

Sets never have (hash tables are not ninsley ordered) so is there a function you can apply that orders the output of your set function in the way that you want?

posted 2 days ago by __kiwi__ (Community TA)

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**eracosso**
2 days ago

Does **import string** count as a line of code for this purpose? If so, I've done in two lines...

Yes it does. Find a way of doing it without needing anything that's in the string module. Don't overthink it but it will be fewer total characters as well as fewer lines.

posted 2 days ago by __kiwi__ (Community TA)

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**sisypone**
a day ago - endorsed a day ago by __kiwi__ (Community TA)

Yes! Did it on the first try too, I'm going to cry tears of joy :D

Add a comment

**JonKolbeinsen**
a day ago - endorsed about 21 hours ago by __kiwi__ (Community TA)

Much simpler than getGuessedWord!

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**diopezdalboa**
about 23 hours ago - endorsed about 21 hours ago by __kiwi__ (Community TA)

Yes, more elegant that way

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