Homework due Jul 13, 2021 22:00 +06

Exercise 1

In this five-part exercise, we will count the frequency of each letter in a given string.

Exercise 1a

1/1 point (graded)
Import the `string` library.

Create a variable `alphabet` that consists of the lowercase and uppercase letters in the English alphabet using the `ascii_letters` data attribute of the `string` library.

What line of code did you use to create the `alphabet` variable?

| alphabet = string.ascii_letters | ✔ |

| Submit | You have used 1 of 10 attempts |

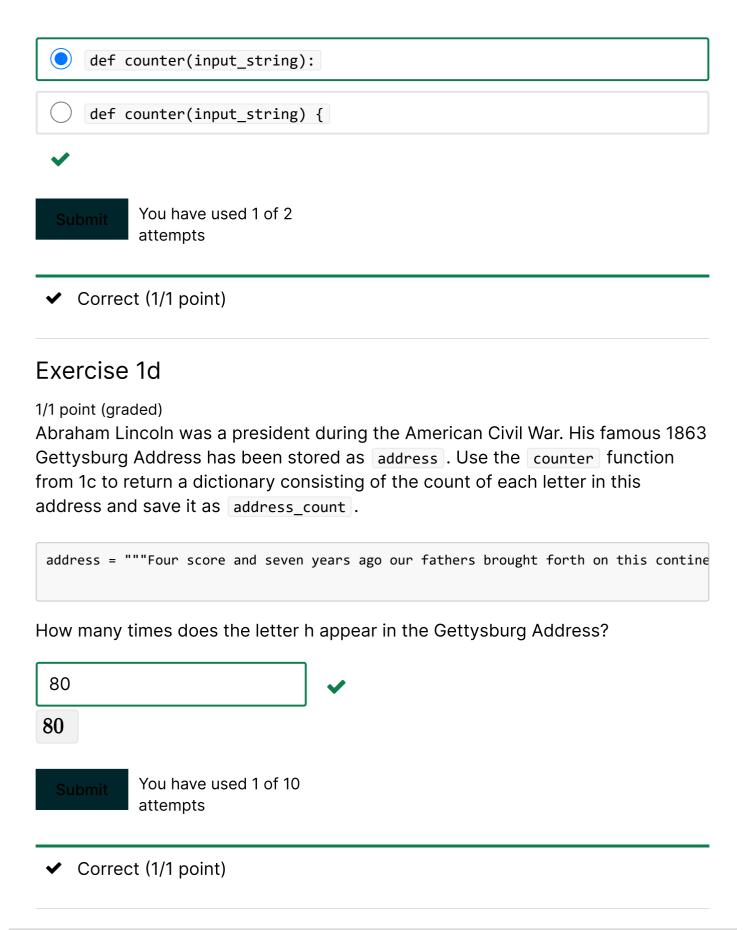✔ Correct (1/1 point)

Exercise 1b

2/2 points (graded)
The lower and upper case letters of the English alphabet should stored as the string variable `alphabet`.

Consider the sentence 'Jim quickly realized that the beautiful gowns are expensive'. Create a dictionary `count_letters` with keys consisting of each unique letter in the sentence and values consisting of the number of times each

letter is used in this sentence. Count upper case and lower case letters separately in the dictionary.

What is the 3rd value of the dictionary?

Hint: remeber that Python is zero indexed!

```
1
```
✔

```
1
```

What is the 8th value of the dictionary?

Hint: remeber that Python is zero indexed!

```
3
```
✔

```
3
```

Submit   You have used 2 of 10 attempts

✔ Correct (2/2 points)

Exercise 1c

1/1 point (graded)

Rewrite your code from Exercise 1b to make a function called `counter` that takes a string `input_string` and returns a dictionary of letter counts `count_letters`.

Use your function to call `counter(sentence)`.

What is the correct function header for the `counter` function?

○ `def counter(count_letters):`

○ `counter <- function(input_string) {`

```
 ● def counter(input_string):
```

```
 ○ def counter(input_string) {
```

✔

Submit You have used 1 of 2 attempts

✔ Correct (1/1 point)

Exercise 1d

1/1 point (graded)

Abraham Lincoln was a president during the American Civil War. His famous 1863 Gettysburg Address has been stored as `address`. Use the `counter` function from 1c to return a dictionary consisting of the count of each letter in this address and save it as `address_count`.

```
address = """Four score and seven years ago our fathers brought forth on this contine
```

How many times does the letter h appear in the Gettysburg Address?

```
80
```
✔

80

Submit You have used 1 of 10 attempts

✔ Correct (1/1 point)

Exercise 1e

1/1 point (graded)

In Exercise 1d, you stored the frequency of each letter in the Gettysburg Address is in `address_count`. Use this dictionary to find the most common letter in the Gettysburg address.

What is the most frequent letter in the Gettysburg Address?

e ✔

Submit You have used 1 of 5 attempts

✔ Correct (1/1 point)