

```
cs131-47853-homework > Chapter 4 > Nguyen_Albert_and_Nguyen_Thomas_Lab4.py
Nguyen_Albert_and_Nguyen_Thomas_Lab4.py x
1  # Due to PEP8, 2 blank lines at start and end of functions in labs below, also variable in functions in camelCase
2  # Lab 4a
3
4
5  def print_multiples_of_5_10(n): # parameter1 is passing argument from variable n in outer scope
6      numberToTest = 1 # numberToTest starts at 1 to exclude negative numbers and 0
7      print("Printing all multiples of 5 or 10 less than %d:" % n)
8      while numberToTest < n:
9          if numberToTest % 5 == 0 or numberToTest % 10 == 0: # check if numberToTest is multiple of 5 or 10
10             print(numberToTest)
11             numberToTest = numberToTest + 1 # or numberToTest += 1, go to next array: numberToTest[0]⇒[1]⇒[2]⇒[n-1]<n
12         return numberToTest # return value won't be printed
13
14
15  n = 20 # variable n or given number is the upper limit which loop stops at once while loop increment finishes
16  print_multiples_of_5_10(n) # With n = 20
17  print_multiples_of_5_10(30) # With n = 30
18
19  # Lab 4b
20
21
22  def vowel_count(string): # to keep vowelCounter and stringArrayNum local, default para is string
23      vowelCounter = 0 # start at count 0
24      stringArrayNum = 0 # start at string[0][Array=0]
25      vowels = "aeiouAEIOU"
26      while stringArrayNum < len(string): # the length of the string, i.e. len("foo") = 3, loop foo[0],foo[1],foo[2]
27          if string[stringArrayNum] in vowels: # i.e. vowelCounter = 0, foo[0] = f, foo[1] = o, vowelCounter += 1
```

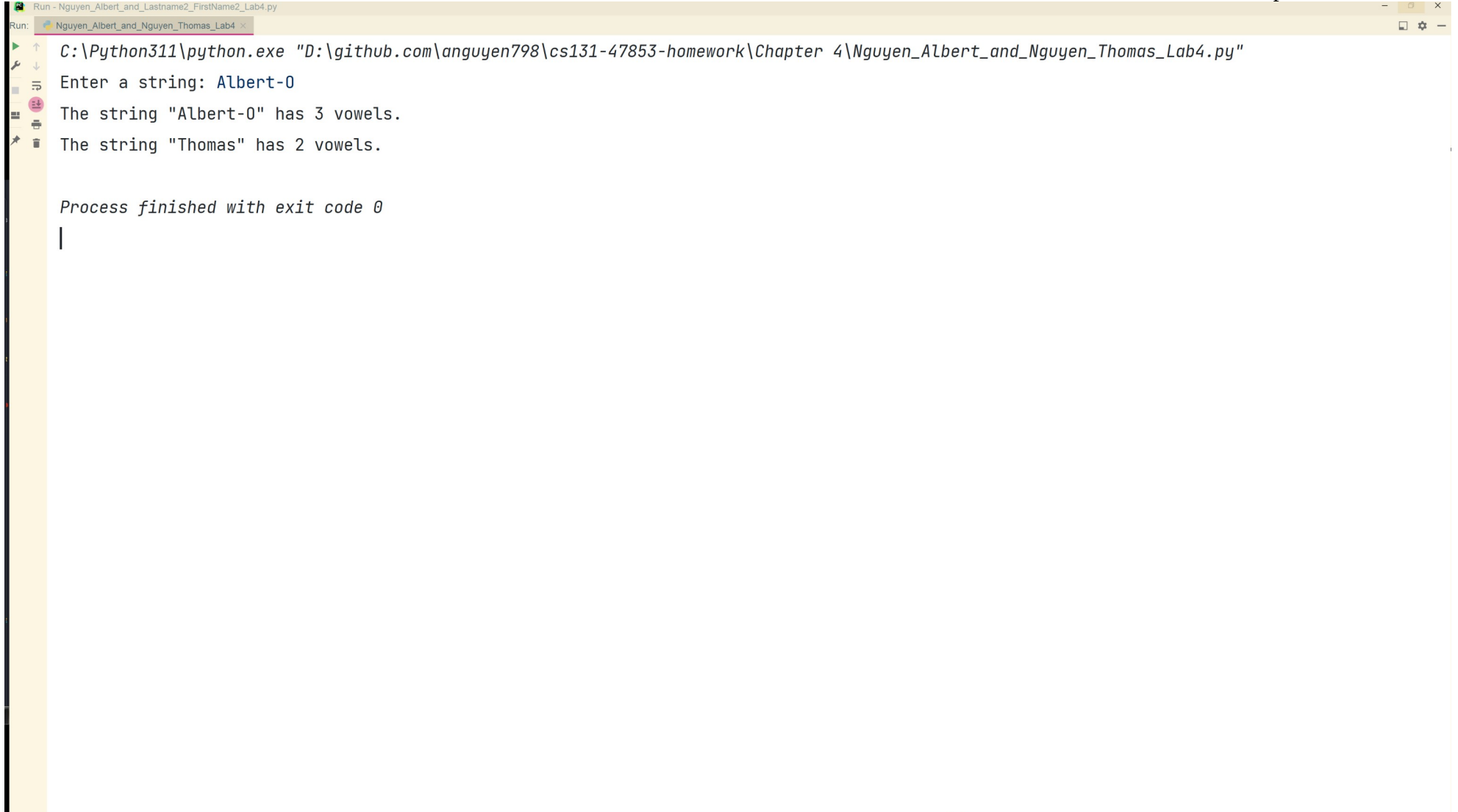


The screenshot shows a Windows command prompt window titled "Run - Nguyen\_Albert\_and\_Lastname2\_FirstName2\_Lab4.py". The command executed is `C:\Python311\python.exe "D:\github.com\anguyen798\cs131-47853-homework\Chapter 4\Nguyen_Albert_and_Nguyen_Thomas_Lab4.py"`. The output of the program is as follows:

```
Printing all multiples of 5 or 10 less than 20:  
5  
10  
15  
Printing all multiples of 5 or 10 less than 30:  
5  
10  
15  
20  
25  
  
Process finished with exit code 0  
|
```

```
cs131-47853-homework > Chapter 4 > Nguyen_Albert_and_Nguyen_Thomas_Lab4.py
Nguyen_Albert_and_Nguyen_Thomas_Lab4.py x
19 # Lab 4b
20
21
22 def vowel_count(string): # to keep vowelCounter and stringArrayNum local, default para is string
23     vowelCounter = 0 # start at count 0
24     stringArrayNum = 0 # start at string[0][Array=0]
25     vowels = "aeiouAEIOU"
26     while stringArrayNum < len(string): # the length of the string, i.e. len("foo") = 3, loop foo[0],foo[1],foo[2]
27         if string[stringArrayNum] in vowels: # i.e. vowelCounter = 0, foo[0] = f, foo[1] = o, vowelCounter += 1
28             vowelCounter = vowelCounter + 1 # or vowelCounter += 1, add to
29             # or stringArrayNum += 1: after executing if statement(vowelCounter), look at next stringArray[0] => [1] => [2]
30             stringArrayNum = stringArrayNum + 1
31         # print statement commented out in function to practice assigning function to return values:
32         # print("The string \"%s\" has %d vowels." % (parameter1, vowelCounter)) # commented out
33     return vowelCounter # return the vowel count to be assigned outside function
34
35
36 # Default, i.e. string = input("Albert-o")
37 string = input("Enter a string: ")
38 vowelCounter = vowel_count(string) # call function on string and assign vowel counter to function output, default para
39 print("The string \"%s\" has %d vowels." % (string, vowelCounter)) # format vowelCounter with integer %d specifier
40
41 # Bypassing the input() function with string = "Thomas"
42 string = "Thomas"
43 vowelCounter = vowel_count(string) # call function, must explicitly pass variable "string" as parameter
44 print(f"The string \"{string}\" has {vowelCounter} vowels.") # using f string, \ to escape the double quotes
45
```

4b\_Code



The screenshot shows a terminal window titled "Run - Nguyen\_Albert\_and\_Lastname2\_FirstName2\_Lab4.py". The command executed is `C:\Python311\python.exe "D:\github.com\anguyen798\cs131-47853-homework\Chapter 4\Nguyen_Albert_and_Nguyen_Thomas_Lab4.py"`. The program prompts the user to "Enter a string:" and the input "Albert-0" is provided. The program then outputs two lines: "The string 'Albert-0' has 3 vowels." and "The string 'Thomas' has 2 vowels." Finally, it displays "Process finished with exit code 0".

```
Run - Nguyen_Albert_and_Lastname2_FirstName2_Lab4.py
Nguyen_Albert_and_Nguyen_Thomas_Lab4
C:\Python311\python.exe "D:\github.com\anguyen798\cs131-47853-homework\Chapter 4\Nguyen_Albert_and_Nguyen_Thomas_Lab4.py"
Enter a string: Albert-0
The string "Albert-0" has 3 vowels.
The string "Thomas" has 2 vowels.

Process finished with exit code 0
|
```

4b\_Output



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CONSTRUCTION**



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```
cs131-47853-homework > Chapter 4 > Nguyen_Albert_and_Nguyen_Thomas_Lab4.py
Project
Pull Requests
Commits
139
140
141
142
143
144 # Lab 4h
145 from random import randint # import statement usually at top, import only randint module from random
146
147
148 def roll_dice(numRolls=10): # default 10 rolls
149     print("The dice is rolled %d times" % numRolls)
150     for roll in range(numRolls): # start at roll[0] increment by 1, ... range function stops at position numRolls[]
151         dieOne = randint(1, 6) # random integer between 1 and 6
152         dieTwo = randint(1, 6)
153         print(dieOne, dieTwo)
154     return dieOne, dieTwo # return value won't be printed, example of returning 2 values
155
156
157 roll_dice()
158 roll_dice(5) # 5 rolls
159
```

for char in string

Git Python Packages TODO Python Console Problems Terminal Evernote Services Notes

Enable Auto Reset Color Scheme?: Do you know that you can automatically reset the bundled t... (3 minutes ago) 133:2 CRLF UTF-8 4 spaces 1 Δ/up-to-date Blame: Anguyen798 2/23/2023 2:05 AM NA Nguyen\_Albert\_and\_Lastname2\_FirstName2\_Lab4.py Solarized Light (Material) Python 3.11 main

4h\_Code



```
Run - Nguyen_Albert_and_Lastname2_FirstName2_Lab4.py
Run: Nguyen_Albert_and_Nguyen_Thomas_Lab4
C:\Python311\python.exe "D:\github.com\anguyen798\cs131-47853-homework\Chapter 4\Nguyen_Albert_and_Nguyen_Thomas_Lab4.py"
The dice is rolled 10 times
5 1
6 3
3 6
2 2
4 4
2 2
6 3
3 3
5 5
4 1
The dice is rolled 5 times
6 1
6 2
5 1
6 3
2 6
Process finished with exit code 0
|
```

4h\_Output