CSC2-140 Foundations of Computer Science

Exam 2 Part 1 October 9, 2019	Solution

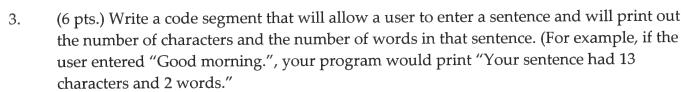
nan	$n\epsilon$
This exam has 2 parts and this is part 1. This part is worth 60 points. Closed book, closed notes. You may not use any devices while taking this part of the exam.	1
1. (2 pts. each) Fill in the blanks.	
a. A data type whose values cannot be changed (modifying functions create a totally new object that does not change the original one) is called a(n) M MU TO data type.	ŧ
b. A function which has no side effects rather it only make changes to the calling program through their return values is called a(n) <u>ρωνε</u> <u>την ετυν</u> .	
c. A(n) 5 100 is a part of a string (substring) specified by a range of indices.	
d. You must a file before you can read its contents. When you are done with file, you should it.	а
e. In computer programming, refers to the situation where the same memor location can be accessed using different names.	ry
f. The first computer programmer, who programmed Charles Babbage's Analytical Engine in the 19 th Century and whose "Day" we celebrated yesterday is	е
g describes the idea of bundling data and methods that work on that data within one unit. This concept is also often used to hide the internal representation or state, of an object from the outside.	ເ ດ,
2. (7 pts.) What is the value of each of the following expressions:	
a. 'Python'[1]	
b. "Strings are sequences of characters."[7]	

c. len("Python")

d. 'Mystery'[:4]

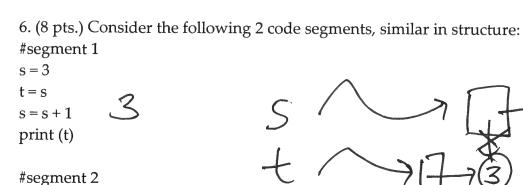
e. 'p' in 'Pineapple'

f. 'pear' not in 'Pineapple' True
g. 'purple' < 'Peach' False

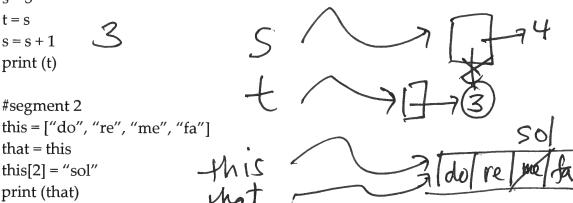


4. (5 pts.) Write a code segment that will create a tuple called odds containing all the odd integers between 1 and 999 inclusive. *Hint: recall that, for example, a tuple holding the integer 7 has to be represented as* (7,) rather than just (7).

- 5. (2 pts. each) What is printed by the following code segments?
 - a. ger = {'one':'eins', 'two':'zwei', 'three':'drei'}
 del ger['one']
 print(len(ger))
 - b. ger = {'one':'eins', 'two':'zwei', 'three':'drei'}
 print('two' in ger)
 - c. ger = {'one':'eins', 'two':'zwei', 'three':'drei'}
 print(ger['five'])



that = thisthis[2] = "sol"print (that)



Produce a reference diagram for each code segment. What will be printed by this code? Explain the difference.

7. (5 pts.) Consider the following function. For each function invocation, what is printed? Briefly explain.

def change (myList): myList.append('The End')

a. demoa = [1,2,3]change(demoa) print (demoa)

[1,2,3, "The End"]

b. demob = ["a", "b", "c"] newList = change(demob) print (newList)

8. (3 pts.) Write a Python statement that would create a dictionary to translate texting acronyms to their full string. Include these three – BTW is "by the way", TTYL is "talk to you later", and OMG is "oh my goodness".

9. (4 pts.) Give what is printed out by the following code segments

aList=["Hello","Goodbye"]

other = aList[:]

print(aList = other)

print (aList is other)

True

b.

str = 'Hello'

print(str.find('h'))

print(str.find('o'))