Feedback — Lecture 6 Quiz

Thank you. Your submission for this quiz was received.

You submitted this quiz on **Sun 13 Sep 2015 8:30 PM PDT**. You got a score of **6.00** out of **6.00**.

Question 1

Which of the following is a correct Python program to obtain the Python version you are using?

A.

print(__version__)

B.

import sys

print(sys.version)

C.

print(version)

D.

import sys

print(sys.__version__)

Your Answer		Score	Explanation
○ B, C			
○ B, C, D			
○ A, B, C			
⦿ B	✔	1.00	
Total		1.00 / 1.00	

Question 2

What does the following code do?

```
import random
def create_dna(n, alphabet='acgt'):
    return ''.join([random.choice(alphabet) for i in range(n)])
dna = create_dna(1000000)
```

Your Answer	Score	Explanation
⚪ Creates a dna variable containing a string of length 999999, containing the 'acgt' substring repeated.		
⚪ Creates a dna variable containing a string of length 1000000, containing the 'acgt' substring repeated.		
⦿ Creates a dna variable containing a string of length 1000000, and with the a,c,g,t characters.	✔ 1.00	
⚪ Creates a dna variable containing a string of length less than 999999, and with the a,c,g,t characters.		
Total	1.00 / 1.00	

Question 3

The following functions are all supposed to count how many times a certain base (represented as a character variable in Python) appears in a dna sequence (represented as a string variable in Python):

```
def count1(dna, base):
    i = 0
    for c in dna:
        if c == base:
            i += 1
```

```
        return i

def count2(dna, base):
    i = 0
    for j in range(len(dna)):
        if dna[j] == base:
            i += 1
    return i

def count3(dna, base):
    match = [c == base for c in dna]
    return sum(match)

def count4(dna, base):
    return dna.count(base)

def count5(dna, base):
    return len([i for i in range(len(dna)) if dna[i] == base])

def count6(dna,base):
    return sum(c == base for c in dna)
```

Which of them is correct?

Your Answer	Score	Explanation
● All of them are correct.	✔ 1.00	
○ count3, count4 only		
○ count4, count5 only		
○ count1, count4, and count5 only		
Total	1.00 / 1.00	

Question 4

Which of the correct functions defined in the previous exercise is the fastest? Hint. You will need to generate a very large string to test them on, and the function clock() from the time module to

time each function.

Your Answer		Score	Explanation
⦿ count4	✔	1.00	
◯ count5			
◯ count3			
◯ count6			
Total		1.00 / 1.00	

Question 5

If the PYTHONPATH environment variable is set, which of the following directories are searched

for modules?

A) PYTHONPATH directory

B) current directory

C) home directory

D) installation dependent default path

Your Answer		Score	Explanation
⦿ A, B, and D	✔	1.00	
◯ A, B, and C			
◯ A, B, C, and D			
◯ B and C			
Total		1.00 / 1.00	

Question 6

A student imports a module called dnautil in Python using the following command:

import dnautil

What does the following call to the dir function do?

dir(dnautil)

Your Answer		Score	Explanation
○ Lists all the functions in the dnautil module			
○ Lists the variables defined in the dnautil module			
⦿ Lists all the attributes of the dnautil module	✔	1.00	
○ Prints the directory where the dnautil module is located			
Total		1.00 / 1.00	