Feedback — Lecture 4 Quiz

Help Center

Thank you. Your submission for this quiz was received.

You submitted this quiz on **Tue 8 Sep 2015 10:59 PM PDT**. You got a score of **10.00** out of **10.00**.

Question 1

The following expression is true when rnatype is 'ncRNA' and length is at least 200, or rnatype is 'ncRNA' and length is 22:

```
(rnatype is 'ncRNA' and length>=200) or (rnatype is 'ncRNA' and length==22)
```

What Boolean expression below represents a negation of the above expression?

Your Answer		Score	Explanation
○ rnatype is not 'ncRNA' and (length			
○ (rnatype is not 'ncRNA' and length			
○ rnatype is not 'ncRNA and length > 22			
◉ rnatype is not 'ncRNA' or (length	✔	1.00	
Total		1.00 / 1.00	

Question 2

For what values of the variable fold would the following code print ‘condition B’?

```
if fold > 2 : print(’condition A’)

elif fold>100: print(’condition B’)
```

```
if fold> 2 or fold<2 : print('condition  A')

else : print('condition B')
```

Your Answer		Score	Explanation
◉ if fold is 2	✔	1.00	
○ if fold is bigger than 100			
○ if fold is less than 2			
○ never			
Total		1.00 / 1.00	

Question 3

How many times will Python execute the code inside the following while loop?

```
i=1

while i< 2048 :

      i=2*i
```

Your Answer		Score	Explanation
○ 10			
○ 1025			
○ 1024			
◉ 11	✔	1.00	
Total		1.00 / 1.00	

Question 4

What sequence of numbers does the range(1,-23,-3) expression evaluate to?

Your Answer		Score	Explanation
-23, -20, -17, -14, -11, -8, -5, -2, 1			
1, -2, -5, -8, -11, -14, -17, -20	✔	1.00	
-23, -20, -17, -14, -11, -8, -5, -2			
-23, -21, -19, -17, -15, -13, -11, -9, -7, -5, -3, -1, 1			
Total		1.00 / 1.00	

Question 5

A substring in programming represents all characters from a string, between two specified indices. Given a variable string called seq, a student writes the following program that will generate all nonempty substrings of seq:

```
for i in range(len(seq)) :    # line 1
    for j in range(i) :       # line 2
        print(seq[j:i])       # line 3
```

Which of the following changes make the above program correct?

A. Program is correct as it is.

B. Change line 1 to: for i in range(len(seq)+1) :

C. Change line 3 to: print(seq[j:i+1])

D. Change line 2 to: for j in range(i+1) :

Your Answer		Score	Explanation
Only B	✔	1.00	

- Only A
- B, and C together
- B, C, and D

Total	1.00 / 1.00

Question 6

While and for loops are equivalent: whatever you can do with one you can do with the other. Given the for loop written by the student in the previous problem, which of the following while loops are equivalent to it:

```
A.
i=0
while i<len(seq) :
         j=0
         while(j<i) :
                print(seq[j:i])


B.
i=1
while i<len(seq) :
      j=1
      while(j<i) :
                 print(seq[j:i])
                 j=j+1
      i=i+1


C.
i=0
while i<len(seq) :
      j=0
      while(j<i) :
                 print(seq[j:i])
                 j+=1
      i+=1
```

```
D.
i=0
while i<len(seq)+1 :
      j=0
      while(j<i+1) :
                  print(seq[j:i])
                  j=j+1
      i=i+1


E.
i=1
while i<len(seq)+1 :
      j=1
      while(j<i+1) :
                  print(seq[j:i])


F.
i=0
while i<len(seq) :
      j=i
      while(j>0) :
                  print(seq[j:i])
                  j=j+1
      i=i+1
```

Your Answer		Score	Explanation
C only	✔	1.00	
A, B, and D only			
B, C, and E only			
C, D, and F only			
Total		1.00 / 1.00	

Question 7

A student writes a program that for any two lists L1 and L2, computes a list L3 that contains only the elements that are common between the two lists *without duplicates*. Which following statement makes the following portion of code that computes L3 correct:

```
L3 = []                 # line 1
for elem in L1:         # line 2
 if elem in L2:         # line 3
  L3.append(elem)       # line 4
```

Your Answer		Score	Explanation
(•) Change line3 to be: if elem in L2 and elem not in L3:	✔	1.00	
( ) Code is correct as is			
( ) Add the following line (with the correct indentation) between lines 2 and 3: if elem not in L3:			
( ) Change line 4 to: L3=L3+elem			
Total		1.00 / 1.00	

Question 8

Study the following two Python code fragments:

Version 1.

```
d = {}
result = False
for x in mylist:
        if x in d:
           result=True
           break
        d[x] = True
```

Version 2.

```
d = {}
result = False
for x in mylist:
       if not x in d:
           d[x]=True
           continue
        result = True
```

Both versions should determine if there is any element that appears more than once in the list mylist. If there is such an element than the variable result should be True, otherwise it should be False. For instance, if mylist=[1,2,2,3,4,5] the result variable should be True. Which of the following statements is True for any value of the list mylist after the execution of both versions of code?

Your Answer		Score	Explanation
(•) The value of the result variable is the same, but the variable d is different.	✔	1.00	
( ) Neither Version 1 or Version 2 are computing the value of the result variable correctly.			
( ) Version 2 is not computing the result variable correctly.			
( ) Both the result and d variables have the same value.			
Total		1.00 / 1.00	

Question 9

Study the following if statement:

```
if x>10 or x<-10: print('big')
elif x>1000000: print('very big')
elif x<-1000000: print('very big')
else : print('small')
```

For what values of x will the above code print 'very big'?

Your Answer		Score	Explanation
For no value	✔	1.00	
For x			
For x > 1000000 or x			
For x > 1000000			
For x = -10			
Total		1.00 / 1.00	

Question 10

What will be the value of the variable i after the following code is executed:

```
i = 1
while i < 100:
          if i%2 == 0 : break
          i += 1
else:
     i=1000
```

Your Answer		Score	Explanation
1			
99			
98			
2	✔	1.00	
1000			
100			
Total		1.00 / 1.00	