

## Week 3 : Assignment 1

Your last recorded submission was on 2023-02-11, 19:39 IST

Due date: 2023-02-15, 23:59 IST.

1) \_\_\_\_\_ is the method to insert an item into a specified position in a list. 1 point

- ☐ Push
- ☐ Write
- ☒ Insert
- ☐ All of the above

2) Which method returns the number of occurrences of an element in a list. 1 point

- ☐ Number of
- ☐ Total
- ☒ Count
- ☐ Length

3) The function `random.randint(1,100)` in python generates. 1 point

- ☒ A random integer between 1 to 100 with 1 and 100 both inclusive
- ☐ A random integer between 1 to 100 with 1 and 100 both exclusive
- ☐ A random integer between 1 to 100 with only 100 inclusive
- ☐ None of the above

4) The method `open("file1.txt", r+)` opens the file file1.txt in \_\_\_\_\_. 1 point

- ☐ Read only mode
- ☐ Write only mode
- ☒ Read Write mode
- ☐ None of the above

5) Consider the list `L = [0, 1, 1, 2, 3, 5, 8, 13, 21, 34]`. What will be the output of the statement `L[3:6]`? 1 point

- ☒ [2, 3, 5]
- ☐ [0, 1, 1]
- ☐ [1, 2, 3]
- ☐ none

6) What is the output of this code? 1 point

```
1 a,b=1,0
2 a=a^b
3 b=a^b
4 a=a^b
5 print(a)
```

- ☒ 0
- ☐ 1
- ☐ 2
- ☐ This code will raise a runtime error

7) What is the output of the following code?

```
1 def foo(l):
2     a = l[0]
3     for i in l:
4         if i < a:
5             a = i
6     return a
7
8 print(foo([2, 3, 5, 1, 7, 6]))
```

1 point

8) What is the output of the following code?

1 point

```
1 def bar(string):
2     left = 0
3     right = len(string) - 1
4     while(left < right):
5         if(string[left] != string[right]):
6             return False
7         left += 1
8         right -= 1
9     return True
10
11 print(bar("telugu"))
12 print(bar("malayalam"))
13
```

- ☒ False True  
☐ True False  
☐ True True  
☐ False False

9) Explain what the output will be when the code given below is executed.

1 point

```
def func(list1):
    while (len(list1) > 2):
        k=list1[0]
        for i in list1:
            if k<i:
                k=i
        list1.remove(k)

        j=list1[0]
        for i in list1:
            if j>i:
                j=i
        list1.remove(j)
    return list1

list2=func([1,4,3,6,5,3,7,8,9,4])
#sum is a function which returns the sum of all of the values of all
the elements of a list
print(sum(list2)/len(list2))
```

- ☐ The program throws an error  
☐ 5  
☒ 5.5  
☐ 4.5

10) Which among the following statements is True with respect to the code given below?

1 point

```
1 count = 0
2 for i in range(10):
3     for j in range(5):
4         count += i * j
5 print(count)
```

- ☐ count=50  
☐ The following code throws up an error.  
☐ count=550  
☒ count=450

You may submit any number of times before the due date. The final submission will be considered for grading.

**Submit Answers**

### Programming Assignment 1:

Take an input N as an integer and write a program to display a right angle triangle with N rows and N columns.

Input

5

Output

```
1 *
2 * *
3 * * *
4 * * * *
5 * * * * *
```

Code:

```
n = int(input())
for i in range(1, n+1):
    for j in range(i):
        print("*", end = " ")
    print()
```

## Programming Assignment 2:

Write a program to take an input N and print Fibonacci sequence till N terms.

The Fibonacci sequence is a set of integers (the Fibonacci numbers) that starts with a zero, followed by a one, then by another one, and then by a series of steadily increasing numbers. The sequence follows the rule that each number is equal to the sum of the preceding two numbers.

Input

7

Output

0

1

1

2

3

5

8



Code:

```
n = int(input())

n1, n2 = 0, 1
count = 0

if n == 1:
    print(n1)
else:
    while count < n:
        print(n1)
        nth = n1 + n2
        # update values
        n1 = n2
        n2 = nth
        count += 1
```

## Programming Assignment 3:

Take base B and height H as an input and write a program to print a parallelogram.

Input

8

4

Output

\*\*\*\*\*

\*\*\*\*\*

\*\*\*\*\*

\*\*\*\*\*

Code:

```
m = int(input())
n = int(input())

for i in range(1, n+1):
    for j in range(1, m+1):
        print("*", end = "")
    if i!=n:
        print()
```