Started on	Monday, 17 March 2025, 3:28 PM
State	Finished
Completed on	Monday, 17 March 2025, 4:11 PM
Time taken	43 mins 15 secs
Grade	**80.00** out of 100.00

Question **1**

Correct

Mark 20.00 out of 20.00

Write a Python program to find the square root of all elements in a list using list comprehension.

For example:

Input	Result
3 9 121 25	[9.0, 121.0, 25.0] [3.0, 11.0, 5.0]

Answer: (penalty regime: 0 %)

```
n=int(input())
l=[]
for i in range(n):
    x=float(input())
    l.append(x)
sq_l=[item**0.5 for item in l]
print(l)
print(sq_l)
```

	Input	Expected	Got	
✔	3 9 121 25	[9.0, 121.0, 25.0] [3.0, 11.0, 5.0]	[9.0, 121.0, 25.0] [3.0, 11.0, 5.0]	✔
✔	5 2 3.5 6 9 45	[2.0, 3.5, 6.0, 9.0, 45.0] [1.4142135623730951, 1.8708286933869707, 2.449489742783178, 3.0, 6.708203932499369]	[2.0, 3.5, 6.0, 9.0, 45.0] [1.4142135623730951, 1.8708286933869707, 2.449489742783178, 3.0, 6.708203932499369]	✔

Passed all tests! ✔

Correct

Marks for this submission: 20.00/20.00.

Question **2**

Incorrect

Mark 0.00 out of 20.00

Create a Parent class bird and inherit two child classes sparrow and ostrich from the bird class with the same method flight(). create oject for each class and call the methods of the class which will print the name of the bird that is flying.

For example:

Result
There are many types of birds. Most of the birds can fly but some cannot. There are many types of birds. Sparrows can fly. There are many types of birds. Ostriches cannot fly.

Answer: (penalty regime: 0 %)

Reset answer

```
1  class Bird:
2      def intro(self):
3          print("There are many types of birds.")
4
5      def flight(self):
6          print("Most of the birds can fly but some cannot.")
7
8  class sparrow(Bird):
9
10         print("Sparrows can fly.")
11
12 class ostrich(Bird):
13     def flight(self):
14
15 obj_bird=Bird()
16 obj_spr=sparrow()
17 obj_ost=ostrich()
18
19
```

Syntax Error(s)

```
Sorry: IndentationError: expected an indented block (__tester__.python3, line 15)
```

Incorrect

Marks for this submission: 0.00/20.00.

Question **3**

Correct

Mark 20.00 out of 20.00

Write a Python program to multiply two matrices with equal number of rows and columns (N X N).

For example:

Input	Result
3 1 1 1 2 2 2 3 3 3 2 2 2 2 2 2 2 2 2	Matrix: 1 1 1 2 2 2 3 3 3 Matrix: 2 2 2 2 2 2 2 2 2 Matrix: 6 6 6 12 12 12 18 18 18

Answer: (penalty regime: 0 %)

```
def read_matrix(n):
    matrix = [[0]*n for row in range(n)]
    for i in range(n):
        lines = list(map(int, input().split()))
        for j in range(n):
            matrix[i][j] = lines[j]
    return matrix
def print_matrix(M):
    print("Matrix:")
    for i in range(len(M)):
        for j in range(len(M[0])):
            print(M[i][j],end=" ")
        print()
def product(M,N):
    C=[[0]*len(N[0]) for i in range(len(M))]
    for i in range(len(M)):
        for j in range(len(N[0])):
            for k in range(len(N)):
                C[i][j] = C[i][j]+M[i][k]*N[k][j]
    return C
n=int(input())
M=read_matrix(n)
```

	Input	Expected	Got	
✔	3 1 1 1 2 2 2 3 3 3 2 2 2 2 2 2 2 2 2	Matrix: 1 1 1 2 2 2 3 3 3 Matrix: 2 2 2 2 2 2 2 2 2 Matrix: 6 6 6 12 12 12 18 18 18	Matrix: 1 1 1 2 2 2 3 3 3 Matrix: 2 2 2 2 2 2 2 2 2 Matrix: 6 6 6 12 12 12 18 18 18	✔

	Input	Expected	Got	
✔	2 1 2 3 4 2 4 3 6	Matrix: 1 2 3 4 Matrix: 2 4 3 6 Matrix: 8 16 18 36	Matrix: 1 2 3 4 Matrix: 2 4 3 6 Matrix: 8 16 18 36	✔

Passed all tests! ✔

Correct

Marks for this submission: 20.00/20.00.

Question **4**

Correct

Mark 20.00 out of 20.00

Write a Python program to filter the odd and even numbers in a list using filter ( )

For example:

Input	Result
5 34 57 89 24 11	[34, 24] [57, 89, 11]

Answer: (penalty regime: 0 %)

```
L=[]
n=int(input())
for i in range(n):
    x=int(input())
    L.append(x)
even_list=list(filter(lambda x: x % 2 == 0,L))
print(even_list)
even_list=list(filter(lambda x: x % 2 != 0,L))
print(even_list)

```

	Input	Expected	Got	
✔	5 34 57 89 24 11	[34, 24] [57, 89, 11]	[34, 24] [57, 89, 11]	✔

Passed all tests! ✔

Correct

Marks for this submission: 20.00/20.00.

Question **5**

Correct

Mark 20.00 out of 20.00

Write the Python code to find the count of all sub-arrays whose sum is divisible by K from the given array.

Input:

```
arr[] = [4, 5, 0, -2, -3, 1]
```

```
        K = 5
```

```
Output : 7
```

```
Explanation:
```

```
// there are 7 sub-arrays whose sum is divisible by K
// {4, 5, 0, -2, -3, 1}
// {5}
// {5, 0}
// {5, 0, -2, -3}
// {0}
// {0, -2, -3}
// {-2, -3}
```

Answer: (penalty regime: 0 %)

```
def create_list(N):
    L=[]
    for i in range(N):
        x=int(input())
        L.append(x)
    return L
def subarray(arr,k):
    mod =[]
    for i in range(k + 1):
        mod.append(0)
    cumSum = 0
    for i in range(len(arr)):
        cumSum = cumSum + arr[i]
        mod[((cumSum % k)+k)% k]= mod[((cumSum % k)+k)% k] + 1
    result = 0
    for i in range(k):
        if (mod[i] > 1):
            result = result + (mod[i]*(mod[i]-1))//2

    result = result + mod[0]
    return result
```

	Test	Input	Expected	Got	

✔	`n = int(input())`
	`k = int(input())`
	`arr=create_list(n)`
	`print(subarray(arr, k))`
		6
		5
		4
		5
		0
		-2
		-3
		1
			7	7	✔

Passed all tests! ✔

Correct

Marks for this submission: 20.00/20.00.