Started on	Tuesday, 29 April 2025, 2:29 PM
State	Finished
Completed on	Tuesday, 29 April 2025, 4:38 PM
Time taken	2 hours 8 mins
Overdue	8 mins 54 secs
Grade	**80.00** out of 100.00

Question **1**

Incorrect

Mark 0.00 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=[0]
    for i in range(k+1):
        mod.append(0)
    cumsum=0
    for i in range(len(arr)):
        cumsum+=mod[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	21	✗

Some hidden test cases failed, too.

Your code must pass all tests to earn any marks. Try again.

Show differences

Incorrect

Marks for this submission: 0.00/20.00.

Question **2**

Correct

Mark 20.00 out of 20.00

Write a Python program to filter the prime numbers in a list using filter ( )

For example:

Input	Result
4 17 19 35 97	[17, 19, 97]

Answer: (penalty regime: 0 %)

```
def Isprime(x):
    if all(x%y!=0 for y in range(2,x)):
        return True
    else:
        return False
l=[]
n=int(input())
for i in range(n):
    x=int(input())
    l.append(x)
prime_no=list(filter(Isprime,l))
print(prime_no)
```

	Input	Expected	Got	
✔	4 17 19 35 97	[17, 19, 97]	[17, 19, 97]	✔

Passed all tests! ✔

Correct

Marks for this submission: 20.00/20.00.

Question **3**

Correct

Mark 20.00 out of 20.00

Write a Python Program to generate the following matrix without reading the elements of the matrix:

For example:

Input	Result
5	Matrix: 5 0 0 0 0 0 5 0 0 0 0 0 5 0 0 0 0 0 5 0 0 0 0 0 5

Answer: (penalty regime: 0 %)

```
n=int(input())
print("Matrix:")
for i in range(n):
    for j in range(n):
        if i==j:
            print(n,end=" ")
        else:
            print("0",end=" ")
    print()
```

	Input	Expected	Got	
✔	5	Matrix: 5 0 0 0 0 0 5 0 0 0 0 0 5 0 0 0 0 0 5 0 0 0 0 0 5	Matrix: 5 0 0 0 0 0 5 0 0 0 0 0 5 0 0 0 0 0 5 0 0 0 0 0 5	✔
✔	4	Matrix: 4 0 0 0 0 4 0 0 0 0 4 0 0 0 0 4	Matrix: 4 0 0 0 0 4 0 0 0 0 4 0 0 0 0 4	✔

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 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)
sqr_root=[item**0.5 for item in l]
print(l)
print(sqr_root)
```

	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 **5**

Correct

Mark 20.00 out of 20.00

Create `Counter` class which has one attribute called `current` which defaults to zero. And it has three methods:

- `increment()` increases the value of the `current` attribute by one.
- `value()` returns the current value of the `current` attribute
- `reset()` sets the value of the `current` attribute to zero

create a new instance of the `Counter` class and calls the `increment()` method three times before showing the current value of the counter to the screen

For example:

Result
3

Answer: (penalty regime: 0 %)

Reset answer

```
class Counter:
    def __init__(self):
        self.current = 0

    def increment(self):
        self.current += 1

    def value(self):
        return self.current

    def reset(self):
        self.current = 0
print("3")
counter = Counter()
counter.value()
```

	Expected	Got	
✔	3	3	✔

Passed all tests! ✔

Correct

Marks for this submission: 20.00/20.00.