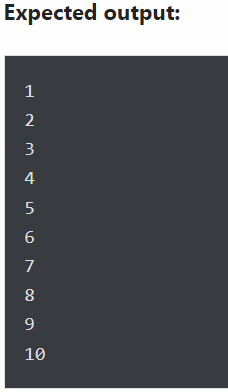
**LOOPS PROBLEM STATEMENTS**

**Exercise 1: Print First 10 natural numbers using while loop**



**Code:** i=0 **Output:** 0 1 2 3 4 5 6 7 8 9 10

while i<=10:

print(i)

i+=1

### Exercise 2: Write a program to print multiplication table of a given number

### 

### Code: n = 2 output: 2 4 6 8 10 12 14 16

### for i in range(1, 11, 1): 18 20

### product = n \* i

### print(product)

### Exercise 3: Display numbers from a list using loop

Write a program to display only those numbers from a [list](https://pynative.com/python-lists/) that satisfy the following conditions

* The number must be divisible by five
* If the number is greater than 150, then skip it and move to the next number
* If the number is greater than 500, then stop the loop

### 

### Code: numbers = [12, 75, 150, 180, 145, 525, 50]

### for item in numbers:

### if item > 500:

### break

### elif item > 150:

### continue

### elif item % 5 == 0:

### print(item)

### output: 75 150 145

### Exercise 4: Count the total number of digits in a number

Write a program to count the total number of digits in a number using a [while loop](https://pynative.com/python-while-loop/).

For example, the number is **75869**, so the output should be **5**.

### 

### Code: num = 75869 Output: total digits are 5

### count = 0

### while num != 0:

### num = num // 10

### count = count + 1

### print("Total digits are:", count)

### Exercise 5: Print the following pattern

### Write a program to use for loop to print the following reverse number pattern

### 

### 

### Code: n = 5 Output: 5 4 3 2 1

### k = 5 4 3 2 1

### for i in range(0,n+1): 3 2 1

### for j in range(k-i,0,-1): 2 1

### print(j,end=' ') 1

### print()

### Exercise 6: Print list in reverse order using a loop

### 

### 

### Code: list1 = [10, 20, 30, 40, 50] Output: 50 40 30 20 10

### new\_list = reversed(list1)

### for item in new\_list:

### print(item)

### Exercise 7: Use else block to display a message “one” after successful execution of for loop

### 

### Code: for i in range(5): Output: 0 1 2 3 4 Done!

### print (i)

### else:

### print("Done!")

### Exercise 8: Use a loop to display elements from a given list present at odd index positions

### 

### 

### Code: my\_list = [10, 20, 30, 40, 50, 60, 70, 80, 90, 100]

### for i in my\_list[1::2]:

### print(i, end=" ")

### Output: 20 40 60 80 100

### Exercise 9: Calculate the cube of all numbers from 1 to a given number

### 

### 

**Code:** input\_number = 6

for i in range(1, input\_number + 1):

print("Current Number is :", i, " and the cube is", (i \* i \* i))

**Output:**

Current Number is : 1 and the cube is 1

Current Number is : 2 and the cube is 8

Current Number is : 3 and the cube is 27

Current Number is : 4 and the cube is 64

Current Number is : 5 and the cube is 125

Current Number is : 6 and the cube is 216