1. **Print First 10 natural numbers using while loop .**

**Code:**

num = 1

count = 0

while count < 10:

print(num, end=' ')

num += 1

count += 1

### 2) Calculate the sum of all numbers from 1 to a given number

Write a program to accept a number from a user and calculate the sum of all numbers from 1 to a given number

For example, if the user entered **10** the output should be **55** (1+2+3+4+5+6+7+8+9+10)

Code:

def sum\_of\_numbers(n):

sum = 0

for i in range(1, n + 1):

sum += i

return sum

num = int(input("Enter a number: "))

result = sum\_of\_numbers(num)

print(f"Sum of all numbers from 1 to {num} is: {result}")

### 3) Display numbers from a list using loop

Write a program to display only those numbers from a list 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:

def display\_numbers(numbers):

for num in numbers:

if num > 500:

break

if num > 150:

continue

if num % 5 == 0:

print(num)

numbers = [10, 25, 80, 145, 200, 250, 300, 400, 550]

display\_numbers(numbers)

### 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.

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

Code:

|  |
| --- |
| def count\_digits(number):  count = 0  while number > 0:  number //= 10  count += 1  return count  num = 75869  print(f"Total number of digits in {num} is:", count\_digits(num)) |

### 5) Use a loop to display elements from a given list present at odd index positions

**Given:**

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

**Expected output:**

20 40 60 80 100

**Code:**

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

for i in range(1, len(my\_list), 2):

print(my\_list[i], end=' ')