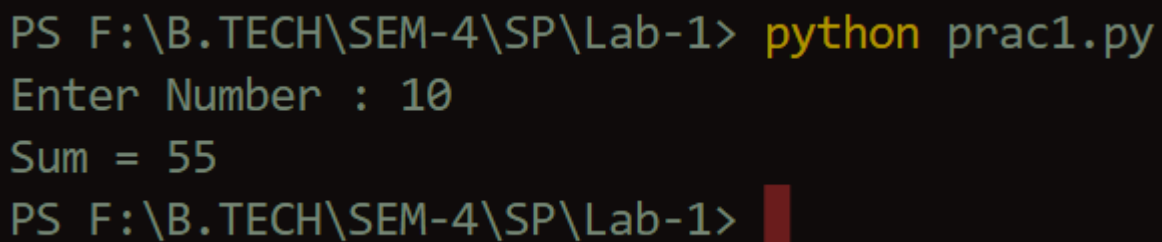# LAB-1

AIM : To learn the basics of Python programming language.

Q-1 Calculate the sum of all numbers from 1 to a given number

Code :

```python
n = input("Enter Number : ")
sum = 0
for i in range(0, (int(n) + 1)) :
    sum += i
print("Sum = " + str(sum))
```

Output

```
PS F:\B.TECH\SEM-4\SP\Lab-1> python prac1.py
Enter Number : 10
Sum = 55
PS F:\B.TECH\SEM-4\SP\Lab-1>
```
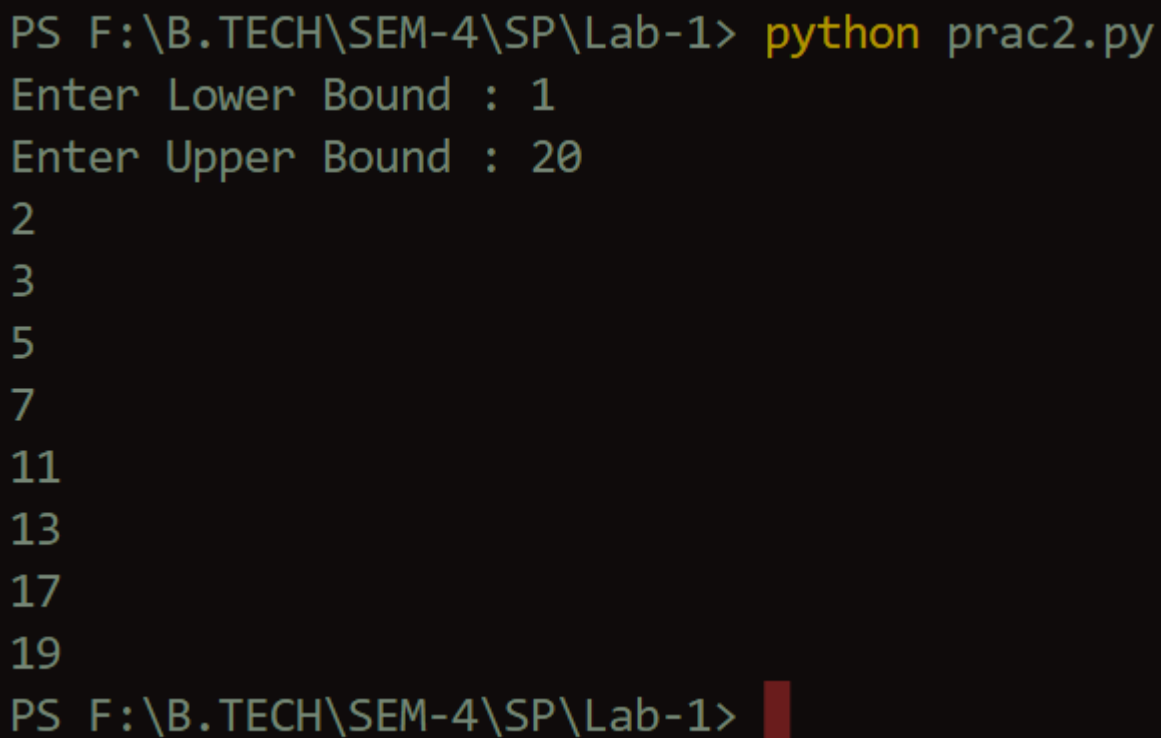
Q-2 Write a program to display all prime numbers within a range

Code :

```
a = int(input("Enter Lower Bound : "))
b = int(input("Enter Upper Bound : "))

for i in range(a, int(b) + 1) :
    if i == 1 :
        continue
    for j in range(2, i) :
        if (i % j == 0) :
            break
    else :
        print(i)
```

Output

```
PS F:\B.TECH\SEM-4\SP\Lab-1> python prac2.py
Enter Lower Bound : 1
Enter Upper Bound : 20
2
3
5
7
11
13
17
19
PS F:\B.TECH\SEM-4\SP\Lab-1>
```
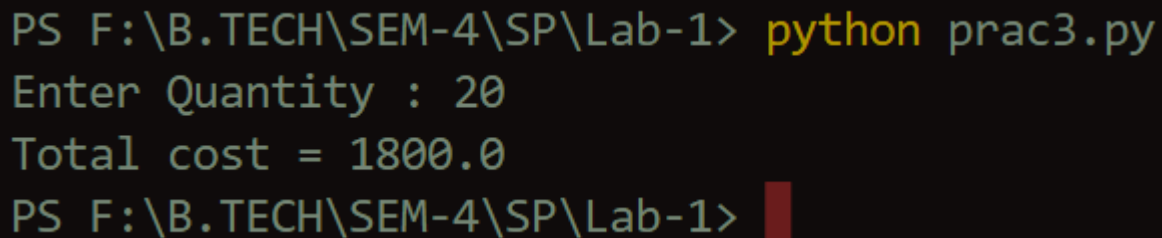
Q-3 A shop will give discount of 10% if the cost of purchased quantity is more than 1000. Ask user for quantity Suppose, one unit will cost 100. Judge and print total cost for user.

Code :

```
quantity = int(input("Enter Quantity : "))
totalCost = int(100 * quantity)

if(totalCost >= 1000) :
    discount = (10 * totalCost) / 100
    totalCost -= discount

print("Total cost = " + str(totalCost))
```

Output

```
PS F:\B.TECH\SEM-4\SP\Lab-1> python prac3.py
Enter Quantity : 20
Total cost = 1800.0
PS F:\B.TECH\SEM-4\SP\Lab-1>
```

Q-4 A school has following rules for grading system:
a. Below 25 - F
b. 25 to 45 - E
c. 45 to 50 - D
d. 50 to 60 - C
e. 60 to 80 - B
f. Above 80 - A
Ask user to enter marks and print the corresponding grade.

Code :

```python
marks = int(input("Enter Marks : "))

if(marks > 80) :
   print("A")
elif(marks > 60 and marks <= 80) :
   print("B")
elif(marks > 50 and marks <= 60) :
   print("C")
elif(marks > 45 and marks <= 50) :
   print("D")
elif(marks > 25 and marks <= 45) :
   print("E")
else :
   print("F")
```

Output

```
PS F:\B.TECH\SEM-4\SP\Lab-1> python prac4.py
Enter Marks : 89
A
PS F:\B.TECH\SEM-4\SP\Lab-1>
```
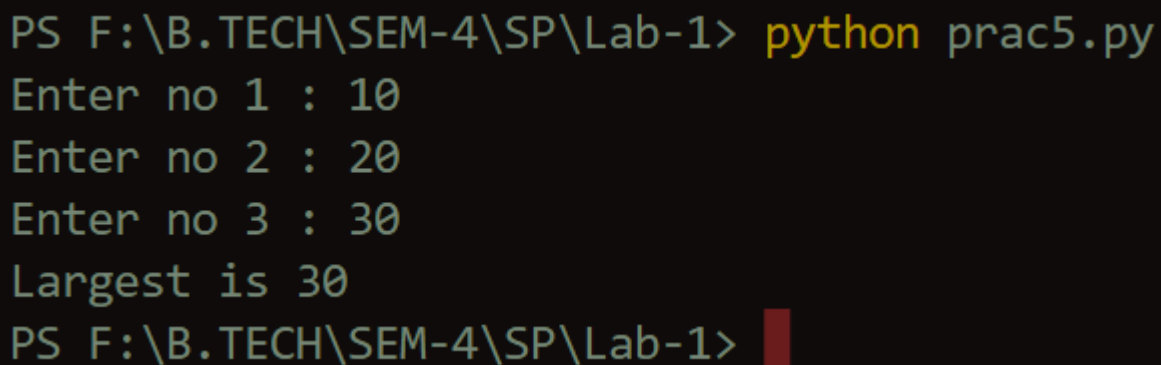
Q-5 Write a program to find largest number out of three numbers enterd by the user.

Code :

```python
no1 = int(input("Enter no 1 : "))
no2 = int(input("Enter no 2 : "))
no3 = int(input("Enter no 3 : "))

if(no1 > no2 and no1 > no3) :
    print("Largest is " + str(no1))
elif(no2 > no1 and no2 > no3) :
    print("Largest is " + str(no2))
else :
    print("Largest is " + str(no3))
```

Output

```
PS F:\B.TECH\SEM-4\SP\Lab-1> python prac5.py
Enter no 1 : 10
Enter no 2 : 20
Enter no 3 : 30
Largest is 30
PS F:\B.TECH\SEM-4\SP\Lab-1>
```