**Day – 2**

**1.Sum of series:**

def sum\_of\_squares\_loop(n):

total=0

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

total+=i\*\*2

return total

n=5

print(f”The sum of squares is:{sum\_of\_squares\_loop(n)}”)

**Output: The sum of squares is: 55**

**2.LCM and GCD of numbers:**

import math

print(math.gcd(31,10,7)

print(math.lcm(31,10,7)

**Output: 1**

**2170**

**3.Length of last word in given sentence:**

def length\_of\_last\_word(sentence):

words=sentence.script( ).split( )

return len(words[-1]) if words else 0

sentence=”How are you”

print(f”length of last word is: {length\_of \_last\_word(sentence)}”)

**Output: length of last word is: 3**

**4.Composite numbers Between Two numbers:**

m=1

n=10

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

factor=0

for j in range(1, i):

if i % j==0:

factor=j

if factor>1:

print(i, end=” “)

**Output: 4 6 8 9 10**

**5.Square, cube, and square root:**

import math

n=6

square=n\*\*2

cube=n\*\*3

square\_root=math.sqrt(n)

print(“Square is: “, square)

print(“Cube is: “, cube)

print(“Square root is: “, square\_root)

**Output: Square is: 36**

**Cube is: 216**

**Square root is: 2.4494**

**6.Combinations of number:**

import itertools

numbers=[1,2,3]

for perm in itertools.permutations(numbers):

print(perm)

**Output: (1,2,3)**

**(1,3,2)**

**(2,1,3)**

**(2,3,1)**

**(3,1,2)**

**(3,2,1)**

**7.Prime numbers between two numbers:**

m=1

n=13

print(“Prime numbers between”, n, “and”, m, ”are: ”)

for num in range(m, n+1):

if num>1:

for i in range(2, num):

if (num % i)==0:

break

else:

print(num, end=”,”)

**Output: Prime numbers between 1 and 13 are: 2,3,5,7,11,13,**

**8.Leap year or not:**

year=2020

if(year % 4 == 0 and year % 100 != 0)or(year % 400 == 0):

print(“is a leap year”)

else:

print(“is not a leap year”)

**Output: is a leap year**

**9.Palindrome or not(integer):**

def is\_palindrome(n):

str-n=str(n)

if str\_n==str\_n[:: -1]:

return True

else

return False

num=123321

if is\_palindrome(num):

print(f,”{num} is a palindrome”)

else:

print(f,”{num} is not a palindrome”)

**Output: 123321 is a palindrome**

**10. Sum of squares of odd and sum of squares of even:**

num=[1,2,3,4,5]

sum\_even=sum(x\*\*2 for x in num if x % 2 == 0)

sum\_odd=sum(x\*\*2 for xin num if x % 2 != 0)

print(“even: ”, sum\_even, “odd: ”, sum\_odd)

**Output: even: 20 odd: 35**