CO2 PROGRAMS

1. **Program to find the factorial of a number**

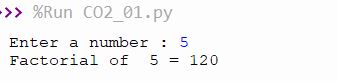
n=int(input('Enter a number : '))

f=1

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

f=f\*i

print ('Factorial of ',n, '=',f)



**2.Generate Fibonacci series of N terms**

n = int(input("Enter the limit : "))

a = 0

b = 1

sum = 0

count = 1

print("Fibonacci Series :",end= " ")

while(count <= n):

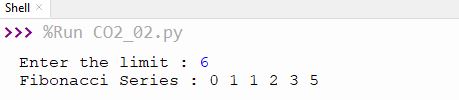
print(sum, end = " ")

count += 1

a = b

b = sum

sum = a + b



**3.Find the sum of all items in a list**

list1 = [10, 20, 30, 40, 50]

total = sum(list1)

print("Sum of list : ",total)



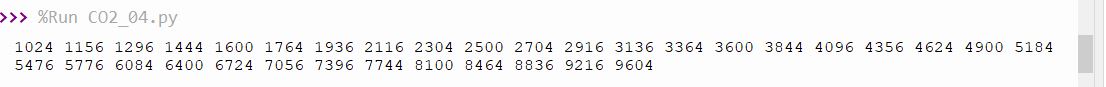
**4.Generate a list of four digit numbers in a given range with all their digits even and the number is a perfect square.**

from math import sqrt as s

for i in range(1000,10000):

if s(i)==int(s(i)) and i%2==0:

print(i,end=" ")



**5.Display the given pyramid with step number accepted from user**

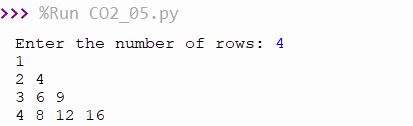
rows = int(input("Enter the number of rows: "))

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

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

print(i \* j, end=' ')

print()

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**6.Count the number of characters (character frequency) in a string.**

test\_str=str(input("Enter the string : "))

freq = {}

for i in test\_str:

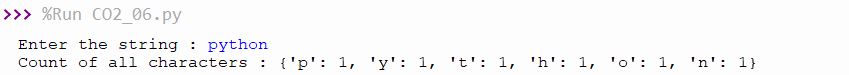
if i in freq:

freq[i] += 1

else:

freq[i] = 1

print ("Count of all characters : "+ str(freq))



**7.Add ‘ing’ at the end of a given string. If it already ends with ‘ing’, then add ‘ly’**

str=input("enter a string:")

print("inputed string is : ",str)

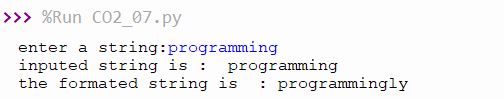
if(str.endswith("ing")):

str=str+'ly'

else:

str=str+'ing'

print("the formated string is :",str)

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**8.Accept a list of words and return length of longest word.**

a=[]

n= int(input("Enter the number of elements in list : "))

for x in range(0,n):

element=input("Enter element "+ str(x+1) )

a.append(element)

max1=len(a[0])

temp=a[0]

for i in a:

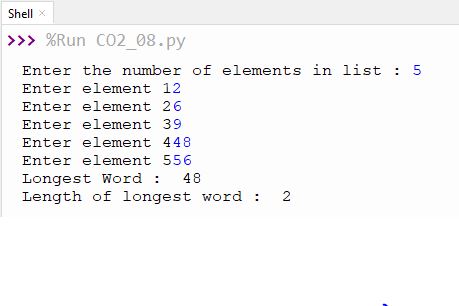
if(len(i)>max1):

max1=len(i)

temp=i

print("Longest Word : ",temp)

print("Length of longest word : ",max1)



**9.Construct following pattern using nested loop**

n= int(input("Enter the limit:"))

for i in range(n):

for j in range(i):

print ('\* ', end="")

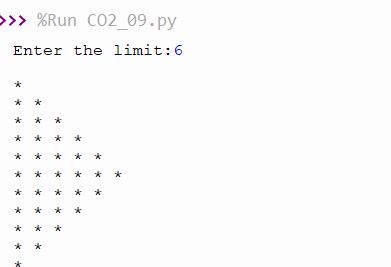
print('')

for i in range(n,0,-1):

for j in range(i):

print('\* ', end="")

print('')



**10.Generate all factors of a number. def print\_factors(x):**

def factors(x):

    print("The factors of",x,"are:")

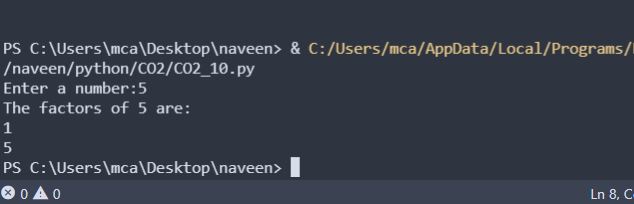
    for i in range(1, x + 1):

        if x % i == 0:

            print(i)

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

factors(n)



**11.Write lambda functions to find area of square, rectangle and triangle.**

import math

tarea = lambda b,h : 1/2\*b\*h

rarea = lambda l,b : l\*b

sarea = lambda a : a\*a

print("Area of Triangle :", tarea(20,60))

print("Area of Rectangle:", rarea(10,30))

print("Area of Square :", sarea(14))

