**CO2-PYTHON LAB RECOD**

1. **PGM 1**

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

**INPUT :**

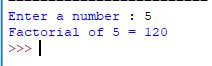
n=int(input('Enter a number : '))

f=1

for i in range(1,n+1): f=f\*i

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

**OUT PUT**



1. **PGM 2**

**Generate Fibonacci series of N terms**

**INPUT :**

n=int(input("enter the limlt"))

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

**OUT PUT**



1. **PGM 3**

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

**INPUT :**

list1 = [10, 15, 20, 25, 30]

total = sum(list1)

print("Sum of list : ",total)

**OUT PUT**



1. **PGM 4**

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

**INPUT :**

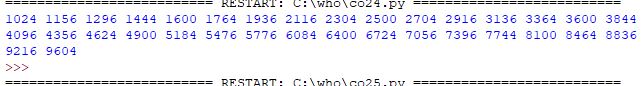
from math import sqrt as s

for i in range(1000,10000):

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

print(i,end=" ")

**OUT PUT**



1. **PGM 5**

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

**INPUT :**

rows=int(input("enter a number of rows"))

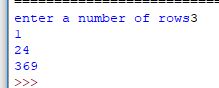
for i in range(1,rows+1):

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

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

print()

**OUT PUT**



1. PGM 6

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

**INPUT :**

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

freq = {}

for i in test\_str:

if i in freq:

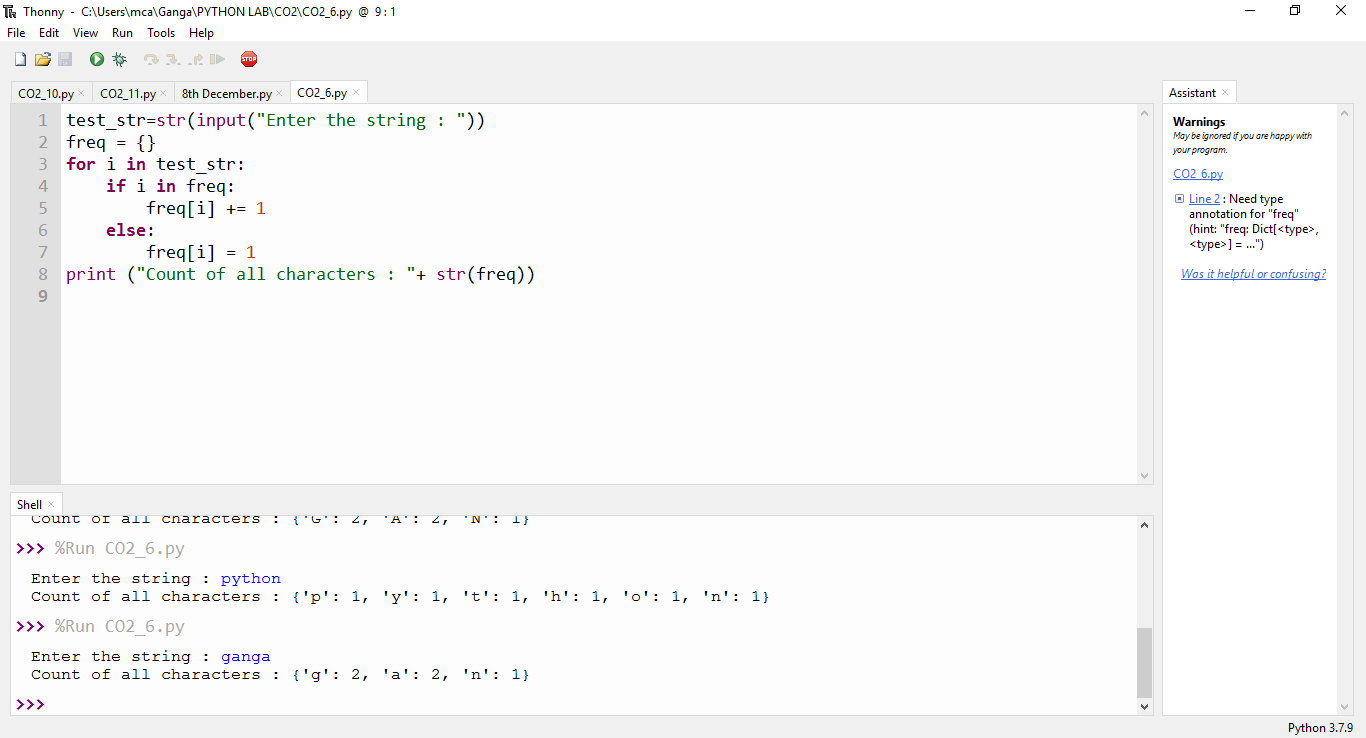
freq[i] += 1

else:

freq[i] = 1

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

**OUTPUT :**



1. PGM 7

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

**INPUT :**

str=input("enter a string")

print("inputted string is ",str)

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

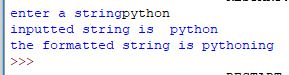
str=str+'ly'

else:

str=str+'ing'

print("the formatted string is",str)

**OUT PUT**



1. **PGM 8**

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

**INPUT :**

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):

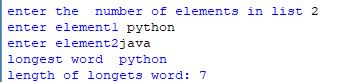
max1=len(i)

temp=i

print("longest word",temp)

print("length of longets word:",max1)

**OUT PUT**



1. **PGM 9**

**: Construct following pattern using nested loop**

# \*

**\* \***

**\* \* \***

**\* \* \* \***

**\* \* \***

**\* \***

**\***

**INPUT :**

n=int(input("enter the limit"))

for i in range(n):

for j in range(i):

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

print('')

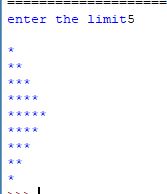
for i in range(n,0,-1):

for j in range(i):

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

print('')

**OUT PUT**



**10. PGM 10**

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

**INPUT :**

a=int(input("enter number \n"))

def fact(fact=1):

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

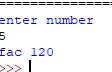
fact=fact\*i

i=i+1

print("fac",fact)

fact()

**output**

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**CO2-PGM-11**

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

**INPUT :**

import math

t\_area = lambda b,h :1/2\*b\*h

r\_area = lambda l,b :l\*b

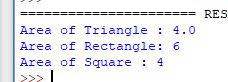
s\_area = lambda a : a\*a

print("Area of Triangle :", t\_area(4,2))

print("Area of Rectangle:", r\_area(3,2))

print("Area of Square :", s\_area(2))

**output**

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