**CO2 PROGRAMS**

**CO2\_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)

**OUTPUT :**



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**CO2\_2 : Generate Fibonacci series of N terms**

**INPUT :**

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

**OUTPUT :**



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**CO2\_3 : Find the sum of all items in a list**

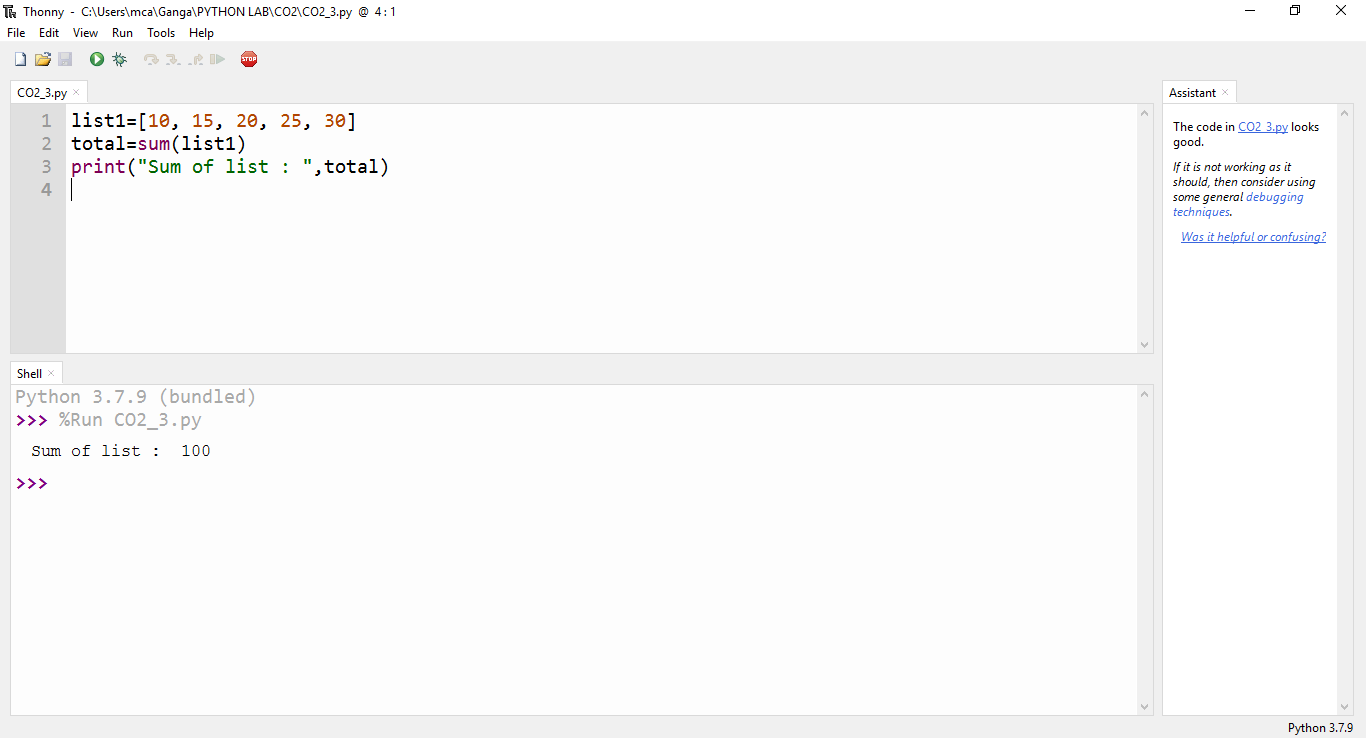
**INPUT :**

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

total=sum(list1)

print("Sum of list : ",total)

**OUTPUT :**



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**CO2\_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 :**

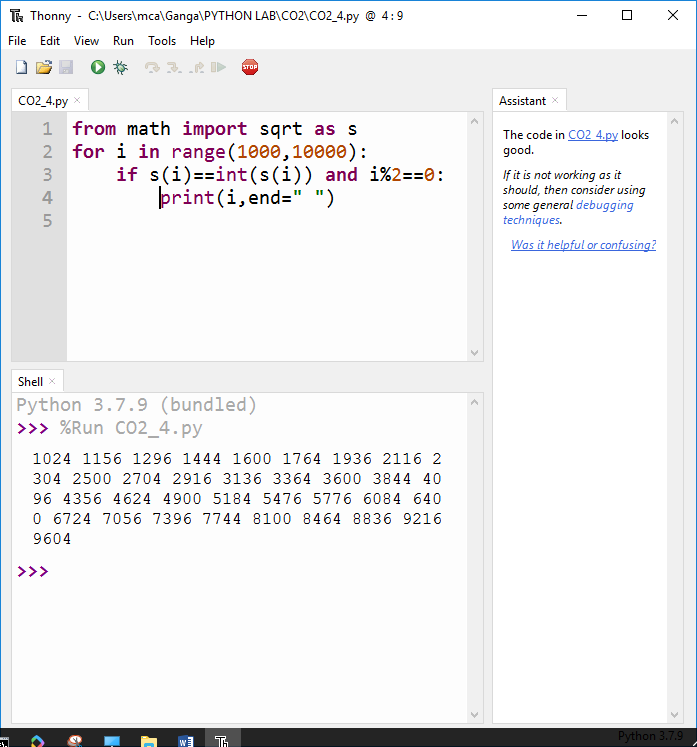
from math import sqrt as s

for i in range(1000,10000):

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

print(i,end=" ")

**OUTPUT :**



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**CO2\_5 : Display the given pyramid with step number accepted from user.**

**INPUT :**

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()

**OUTPUT :**



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**CO2\_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:

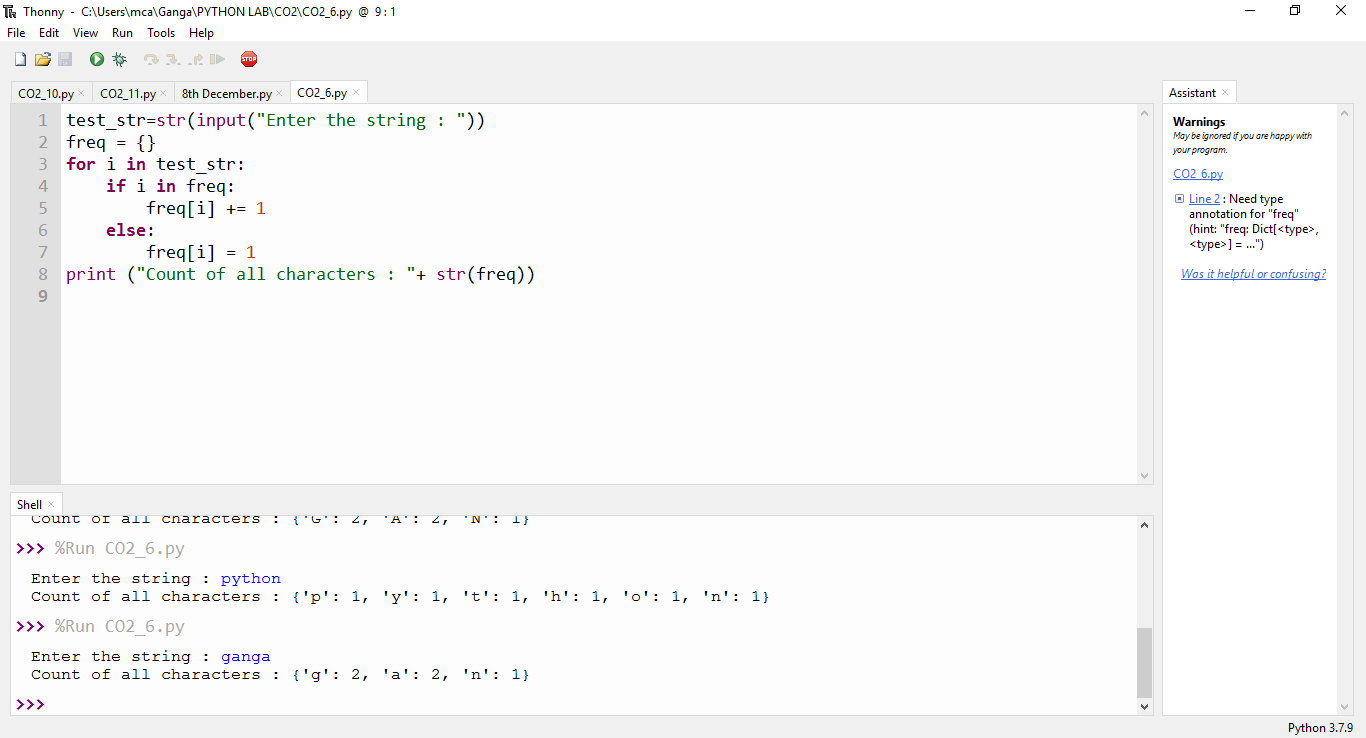
freq[i] += 1

else:

freq[i] = 1

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

**OUTPUT :**



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**CO2\_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("inputed string is:",str)

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

str=str+'ly'

else:

str=str+'ing'

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

**OUTPUT :**



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**CO2\_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):

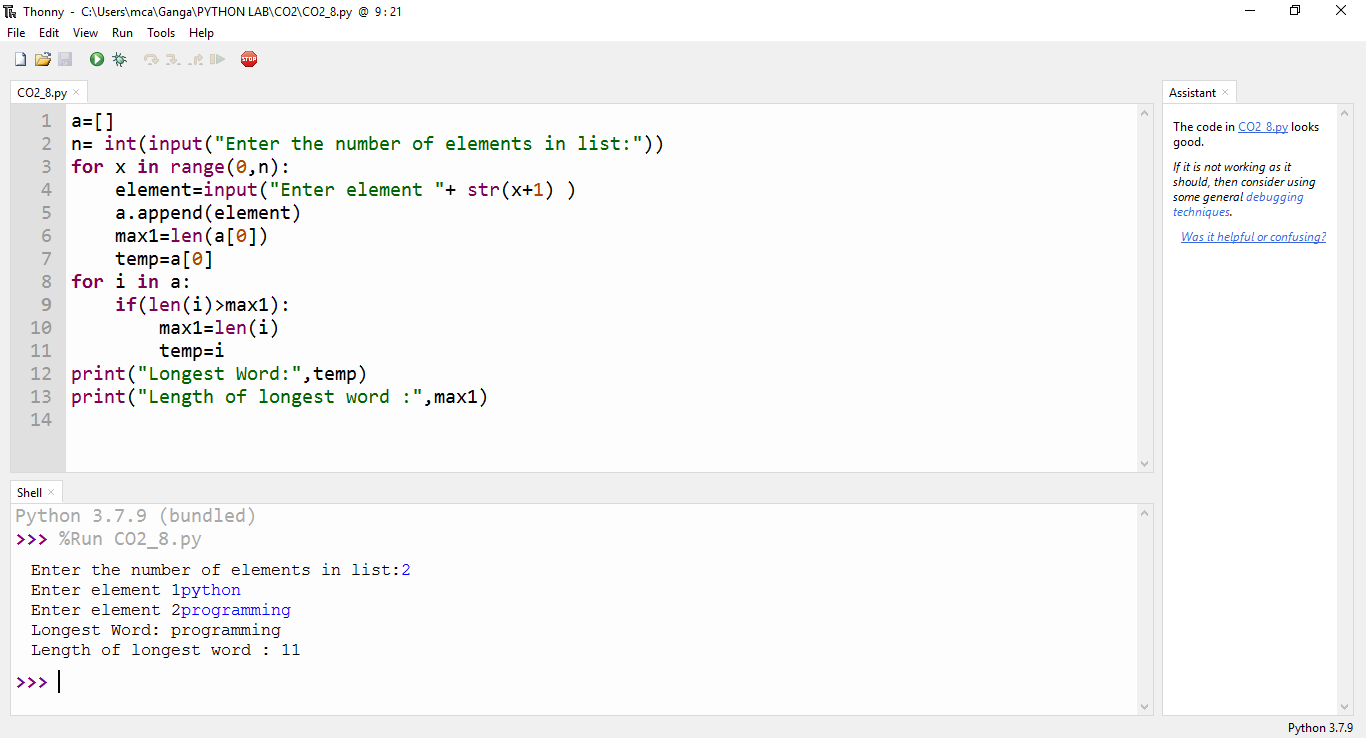
max1=len(i)

temp=i

print("Longest Word:",temp)

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

**OUTPUT :**



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**CO2\_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('')

**OUTPUT :**



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**CO2\_10 : Generate all factors of a number. def print\_factors(x)**

**INPUT :**

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)

**OUTPUT :**



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**CO2\_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(10,20))

print("Area of Rectangle:", r\_area(30,20))

print("Area of Square :", s\_area(15))

**OUTPUT :**

