**CO2**

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

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

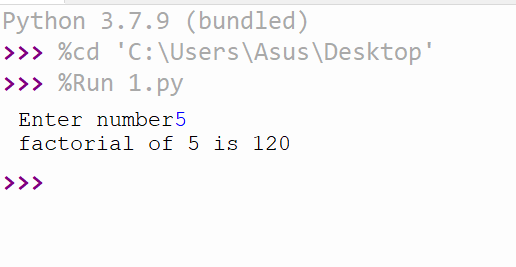
f=1

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

f=f\*i

print("factorial of",n,"is",f)

OUTPUT



---------------------------------------------------------------------------------------------------------------------------------------------------

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

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

a=0

b=1

sum=0

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

i=1

while(i<=n):

print(sum,end=" ")

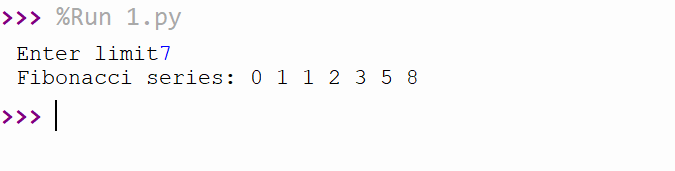
a=b

b=sum

sum=a+b

i=i+1

OUTPUT



---------------------------------------------------------------------------------------------------------------------------------------------------

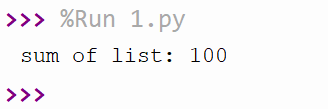
**3. Find the sum of all items in a list**

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

total=sum(list1)

print("sum of list:",total)

OUTPUT



---------------------------------------------------------------------------------------------------------------------------------------------------

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

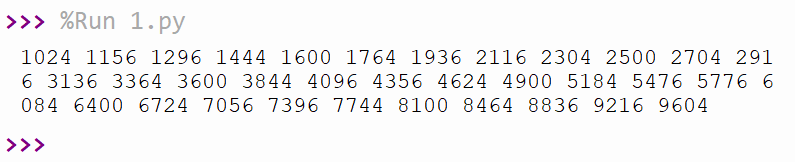
from math import sqrt as s

for i in range(1000,10000):

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

print(i,end=" ")

OUTPUT



---------------------------------------------------------------------------------------------------------------------------------------------------

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

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

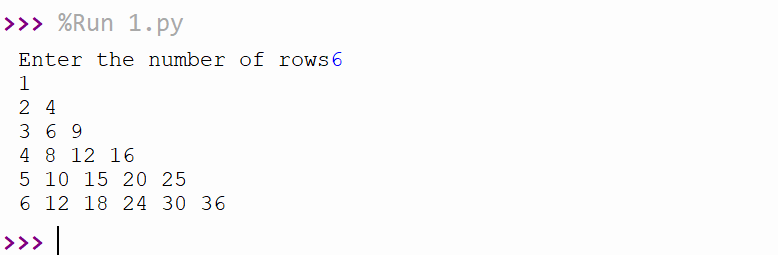
for i in range(1,rows+1):

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

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

print()

OUTPUT



---------------------------------------------------------------------------------------------------------------------------------------------------

**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:

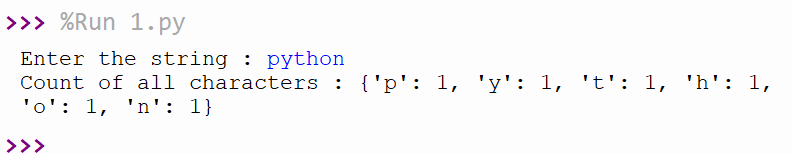
freq[i] += 1

else:

freq[i] = 1

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

OUTPUT



---------------------------------------------------------------------------------------------------------------------------------------------------

**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")):

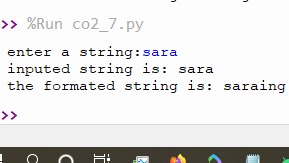
str=str+'ly'

else:

str=str+'ing'

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

output:



---------------------------------------------------------------------------------------------------------------------------------------------------

**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):

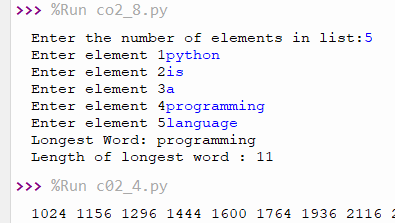
max1=len(i)

temp=i

print("Longest Word:",temp)

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

OUTPUT



---------------------------------------------------------------------------------------------------------------------------------------------------

**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('')

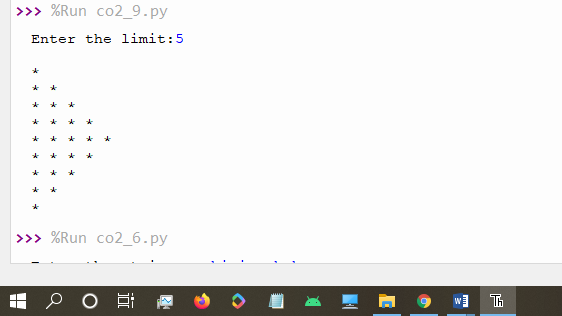
for i in range(n,0,-1):

for j in range(i):

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

print('')

OUTPUT



---------------------------------------------------------------------------------------------------------------------------------------------------

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

def print\_factors(n):

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

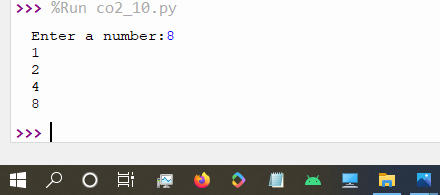
if(n%i==0):

print(i)

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

print\_factors(n)

OUTPUT



---------------------------------------------------------------------------------------------------------------------------------------------------

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

s\_area=lambda a:a\*a

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

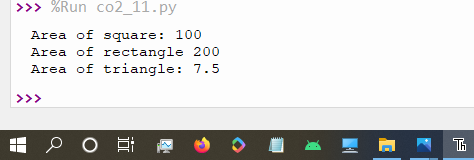
t\_area=lambda b,h:1/2\*b\*h

print("Area of square:",s\_area(10))

print("Area of rectangle",r\_area(10,20))

print("Area of triangle:",t\_area(5,3))

OUTPUT



---------------------------------------------------------------------------------------------------------------------------------------------------