**Co-2**

**1 Fibnocci series of n term:**

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**

enter the limit5

fibonacci series 0 1 1 2 3

>>>

**2 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)

**output**

Enter a number : 5

Factorial of 5 = 120

>>>

Enter a number : 8

Factorial of 8 = 40320

**3 sum of all items in a list**

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

total = sum(list1)

print("Sum of list : ",total)

**output**

enter the limit5

fibonacci series 0 1 1 2 3

Sum of list : 100

**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**

1024 1156 1296 1444 1600 1764 1936 2116 2304 2500 2704 2916 3136 3364 3600 3844 4096 4356 4624 4900 5184 5476 5776 6084 6400 6724 7056 7396 7744 8100 8464 8836 9216 9604

>>>

**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**

1

2 4

3 6 9

>>>

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

str=input("enter a string")

print("input string is",str)

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

str=str+'ly'

else:

str=str+'ing'

print("formated string is",str)

**output**

enter a stringplay

input string is play

formated string is playing

>>>

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

a=[]

n=int(input("enter the number of element 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:",max

**output**

Enter the number of elements in list:4

Enter element 1:python

Enter element 2:programming

Enter element 3:is

Enter element 4:simple

Longest Word : programming

Length of longest word : 11

**8. Construct the 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**

Enter the limit:3

\*

\* \*

\* \* \*

\* \*

\*

**9.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)

**OUTPUT**

Enter a number : 5

Factorial of 5 = 120

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

def factor(x):

print("the factor of",x,"are:")

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

if x%i == 0:

print(i)

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

factor(n)

**OUTPUT**

*enter a number:6*

*the factor of 6 are:*

*1*

*2*

*3*

*6*

>>>

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

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(30,10))

print("area of square:",s\_area(15))

**output**

area of triangle: 100.0

area of rectangle: 300

area of square: 225

>>>