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

**n=int(input("Enter the Number:"))**

**s=1**

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

**s=s\*i**

**print("The Factorial is:",s)**

**output:**

**Enter the Number:4**

**The Factorial is: 24**

# CO 2 :Pgrm 2

**Generate Fibonacci series of N terms**

**n=int(input("Enter the Number:"))**

**a=0**

**b=1**

**c=0**

**f=0**

**while(f<n):**

**a=b**

**b=c**

**c=a+b**

**f=f+1**

**print(c ,end=" ")**

**output:**

**Enter the Number:6**

**1 1 2 3 5 8**

# CO 2 :Pgrm 3

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

**l1=[3,44,6,4,6,477,5]**

**s=sum(l1)**

**print("Sum is:",s)**

**output:**

**Sum is: 545**

# CO 2 :Pgrm 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**

# CO 2 :Pgrm 5

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

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

**for i in range(1,n+2):**

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

**print(j,end="")**

**print()**

**output:**

**Enter the n:3**

**1**

**12**

**123**

# CO 2 :Pgrm 6

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

**n=input("Enter the String")**

**f={}**

**for i in n:**

**if i in f:**

**f[i]=f[i]+1**

**else:**

**f[i]=1**

**print("Count:",f)**

**output:**

**Enter the Stringananthu**

**Count: {'a': 2, 'n': 2, 't': 1, 'h': 1, 'u': 1}**

**Co2 prgm 7:Add ‘ing’ at the end of a given string. If it already ends with ‘ing’, then add ‘ly’**

**str=input("Enter the String")**

**n=len(str)**

**if(str[n-3:]=="ing"):**

**str1=str.replace("ing","ly")**

**print(str1)**

**else:**

**str2=str+"ing"**

**print(str2)**

**output:**

**Enter the Stringgo**

**going**

# CO 2 :Pgrm 8

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

**a=[]**

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

**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**

**Enter the limit:4**

**Enter element 1ananthu**

**Enter element 2suresh**

**Enter element 3hi**

**Enter element 4helloo**

**Longest Word: ananthu**

**Length of longest word : 7**

# CO 2 :Pgrm 9

Construct following pattern using nested loop

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

**i=0**

**j=0**

**for i in range(0,n):**

**for j in range(0,i):**

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

**print()**

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

**for j in range(0,i):**

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

**print()**

**output:**

**Enter the limit:5**

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**\*\***

**\*\*\***

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

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

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

**\*\*\***

**\*\***

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**CO 2 :Pgrm 10**

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

**def factor(n):**

**m=n;**

**i=int(m/n)**

**while(i<=m):**

**if(m%i==0):**

**print(i,end=" ")**

**i=i+1**

**n=int(input("Enter the Number:"))**

**factor(n)**

**output:**

**Enter the Number:6**

**1 2 3 6**

# CO 2 :Pgrm 11

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

**l,b=int(input("Enter L and B of rectangle:")),int(input())**

**rarea=lambda l,b:l\*b**

**print("Area of Rectangle is:",rarea(l,b))**

**s=int(input("Enter Side of square:"))**

**sarea=lambda s:s\*s**

**print("Area of Square is:",sarea(s))**

**s1,h=int(input("Enter Lenght and height of triangle ")),int(input())**

**tarea=lambda s1,h:0.5\*s1\*h**

**print("Area of Triangle is:",tarea(s1,h))**

**output:**

**Enter L and B of rectangle:5**

**6**

**Area of Rectangle is: 30**

**Enter Side of square:5**

**Area of Square is: 25**

**Enter Lenght and height of triangle 5**

**7**

**Area of Triangle is: 17.5**