**Write a python program using a function to print fibonacci series up to n numbers**

def fibo(n):

first=0

second=1

print(first,second,end=" ")

third=first + second

count=2

while third<n:

print(third,end=" ")

first=second

second=third

third=first+second

count=count+1

n = int(input("enter the Limit\n"))

fibo(n)

**Write a Menu driven program in python to find factorial, and sum of natural Numbers using a function**

def fact(n):

if (n==1 or n==0):

return 1

else:

return n \* fact(n - 1);

def sum(n):

if (n==0):

return 0

else:

return n+sum(n-1);

num = int(input("Enter any number : "))

print("1-To find the factorial, 2-To find the sum, 3-Exit")

opt=int(input("Enter the option between 1-3 : "))

if (opt==1):

print("Factorial of ",num,"is : ",fact(num))

elif(opt==2):

print("Sum of first ",num,"is : ",sum(num))

else:

print("program terminated")

**3. Write a python program using user defined function to calculate interest amount using simple interest method and compound interest method and find the difference of interest amount between the two methods.**

def sint(principle,time,rate):

si = float(principle\*time\*rate/100)

return si

def cint(principle,time,rate):

ci = float(principle \* ((1+rate/100)\*\*time - 1))

return ci

principle = float(input('Enter principle amount: '))

time = float(input('Enter time: '))

rate = float(input('Enter rate: '))

si=sint(principle,time,rate)

ci=cint(principle,time,rate)

print("Simple interest is Rs.",si)

print("Compound interest is Rs.",ci)

diffint=ci-si;

print("Difference between compound intrest and simple intrest is",diffint)

Enter amount: 45000

Enter time: 3

Enter rate: 12.5

Simple interest is Rs. 16875.0

Compound interest is Rs. 19072.265625

Difference between compound intrest and simple intrest is 2197.265625

4. Write a Python Program to read a text file and display the number of vowels, consonants, uppercase and lowercase characters in the file