**OBJECT ORIENTED PROGRAMMING LAB**

**NAME: SEJAL WASULE**

**ROLL NO: 48**

**SEC: B**

**BRANCH: ELECTRONICS**

**EXPERIMENT NO. 1**

**AIM**: a. Write a Python program to print ‘n terms of Fibonacci series

b. Create a list (Example: list of fruits), use "for", "While" loop to:

    i. access each item of the list and print  
    ii. Use break, continue, pass statement in each loop  
    iii. Use if else statements in each loop to check any conditional statement of your choice  
    iv. Show the usage of nested loop

* **SOFTWARE USED:** Google Collaboratory
* **ALGORITHM:**
* **For printing n terms of Fibonacci series:**

Step 1: Start

Step 2: Initialize variable current, next and sum

Step 4: Take input n from user

Step 5: For every value of variable i in range 1 to n

Step 5.1: Print sum

Step 5.2: make current term equal to next and next term equal to sum

Step 5.3: make sum equal to sum of current and next term

Step 5.4: repeat steps from 5.1 until i>n.

Step 6: Stop.

**FLOWCHART:**

* **CODE Part A)**

current = 0

next = 1

sum = 0

n = int(input("Enter the value of n:"))

print(n,"terms of fibonacci series are:")

for i in range(1,n+1):

   print(sum)

   current = next        # Copy n-1 to n-2

   next = sum            #Copy current to n-1

   sum = current + next  #New term

**FOR PART B:**

**CODE**

#Create a list (Example: list of fruits), use "for", "While" loop

 to:access each item of the list and print

list=[0,1,2,3,4,5,6,7,8,9,10,11,12,13,-1,-2,-3,-4,0.5,0.3,0.2,100]

# printing the list using while loop

count=0

print("Printed using WHILE loop:")

while (count < len(list)):

    print (list[count], end=",")

    count= count+1

print("\nPrinted using FOR loop:")

#Using for loop

for x in list:

    print(x,end= ",")

#ii) Use break, continue, pass statement in each loop

list=[0,1,2,3,4,5,6,7,8,9,10,11,12,13,-1,-2,-3,-4,0.5,0.3,0.2,13,14,15]

for x in list:

  if(x<0):

    pass

  elif(x>=0 and x%2==0):

    print(x,":EVEN")

  elif(0<x<1):

    continue

  else:

    print(x,":ODD")

#Use if else statements in each loops to check any conditional statement of your choice

#Program for determining an entered year is a leap year or not

year =int(input(' enter year:'))

if (year>1900):

  if(year%100==0):

    if(year%400==0):

      print(year," is a leap year")

    else:

      print("Not leap")

  else:

    if(year%4==0):

      print("leap")

    else:

      print("Not leap")

else:

     print("Enter Correct year")

#Use of nested loop

H= int (input("enter max value of (\*)): ") )

for x in range(0,H+1):

  for y in range(0,x):

    print("\*",end=" ")

  print("")

for x in range(H-1,0,-1):

  for y in range(0,x):

    print("\*",end=" ")

  print("")

* **OUTPUT SCREENSHOT:**









