1. Please write a program using generator to print the numbers which can be divisible by 5 and 7 between 0 and n in comma separated form while n is input by console ?

Example:

If the following n is given as input to the program: 100

Then, the output of the program should be: 0,35,70

def showDivisible(in\_num):

for ele in range(0,in\_num):

if (ele%5 == 0) and (ele%7 == 0):

yield ele

for ele in showDivisible(100):

print(ele,end=' ')

0 35 70

2.Please write a program using generator to print the even numbers between 0 and n in comma separated form while n is input by console ?

Example:

If the following n is given as input to the program: 10

Then, the output of the program should be: 0,2,4,6,8,10

def genEvenNumbers(in\_num):

for ele in range(in\_num+1):

if ele%2 == 0:

yield ele

for ele in genEvenNumbers(10):

print(ele,end=' ')

0 2 4 6 8 10

3.The Fibonacci Sequence is computed based on the following formula below, Please write a program using list comprehension to print the Fibonacci Sequence in comma separated form with a given n input by console ?

f(n)=0 if n=0

f(n)=1 if n=1

f(n)=f(n-1)+f(n-2) if n>1

def genFibonaci(in\_num):

if in\_num == 0:

return 0

elif in\_num == 1:

return 1

else:

return genFibonaci(in\_num-1)+genFibonaci(in\_num-2)

print([genFibonaci(x) for x in range(20)])

[0, 1, 1, 2, 3, 5, 8, 13, 21, 34, 55, 89, 144, 233, 377, 610, 987, 1597, 2584, 4181]

4.Assuming that we have some email addresses in the "username@companyname.com" format, please write program to print the user name of a given email address. Both user names and company names are composed of letters only ?

Example:

If the following email address is given as input to the program: john@google.com

Then, the output of the program should be: john

def getUsernames():

in\_string = input('Enter Email Address(es): ')

out\_string = in\_string.split('@')

print(f'Username of {in\_string} is {out\_string[0]}')

for i in range(3):

getUsernames()

Enter Email Address(es): amanovishnu@gmail.com

Username of amanovishnu@gmail.com is amanovishnu

Enter Email Address(es): support.query@ineuron.ai

Username of support.query@ineuron.ai is support.query

Enter Email Address(es): manovishnu@outlook.com

Username of manovishnu@outlook.com is mahavishnu

5.Define a class named Shape and its subclass Square. The Square class has an init function which takes a length as argument. Both classes have a area function which can print the area of the shape where Shape's area is 0 by default.

class Shape:

def area(self):

return 0

class Square(Shape):

def \_\_init\_\_(self, length):

self.length = length

def area(self):

return self.length\*self.length

square = Square(50)

print(square.area())

2500