**Question 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 divisible\_by\_5\_and\_7(n):

for i in range(n+1):

if i % 5 == 0 and i % 7 == 0:

yield i

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

result = list(divisible\_by\_5\_and\_7(n))

print(','.join(map(str, result)))

**Question 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 even\_numbers(n):

for i in range(n+1):

if i % 2 == 0:

yield i

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

result = list(even\_numbers(n))

print(','.join(map(str, result)))

**Question 3:**

**The Fibonacci Sequence is computed based on the following formula:**

**f(n)=0 if n=0**

**f(n)=1 if n=1**

**f(n)=f(n-1)+f(n-2) if n&gt;1**

**Please write a program using list comprehension to print the Fibonacci Sequence in comma**

**separated form with a given n input by console.**

**Example:**

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

**7**

**Then, the output of the program should be:**

**0,1,1,2,3,5,8,13**

def fibonacci(n):

if n <= 0:

return []

elif n == 1:

return [0]

elif n == 2:

return [0, 1]

else:

fib\_list = [0, 1]

for i in range(2, n):

fib\_list.append(fib\_list[-1] + fib\_list[-2])

return fib\_list

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

result = fibonacci(n)

print(','.join(map(str, result)))

**Question 4:**

**Assuming that we have some email addresses in the &quot;username@companyname.com&quot; 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**

Here is a python program to extract the username from an email address in the "username@companyname.com" format:

email = input("Enter an email address: ")

username = email.split('@')[0]

print("Username:", username)

**Question 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&#39;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(4)

print("Area of the square:", square.area())