**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 = ','.join(str(x) for x in divisible\_by\_5\_and\_7(n))

print(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 = ','.join(str(x) for x in even\_numbers(n))

print(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>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**

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

fibonacci = [0, 1]

[fibonacci.append(fibonacci[-1] + fibonacci[-2]) for i in range(2, n+1)]

result = ','.join(str(x) for x in fibonacci)

print(result)

**Question 4:**

**Assuming that we have some email addresses in the "**[**username@companyname.com**](mailto: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**](mailto:john@google.com)

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

**John**

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

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

print(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'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 \*\* 2