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 div\_n(n):

for i in range(n+1):

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

yield i

num = int(input('input n: '))

for i in div\_n(num):

print(i, end=',')

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 div\_n(n):

for i in range(n+1):

if i%2 ==0:

yield i

num = int(input('input n: '))

for i in div\_n(num):

print(i, end=',')

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

def fibo(n):

fl = [0,1]

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

return fl

num = int(input('Enter amount: '))

for i in fibo(num):

print(i,end=',')

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

s1 = input('enter the email: ').split('@') #split the string at @

print(s1[0]) #fetch the first split

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):

print('area is 0')

class Square(Shape):

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

self.length = length

def area(self):

print('area is',self.length\*\*2)