**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**

**ANS:-**

**# Python3 program to print all the numbers**

**# divisible by 5 or 7 for a given number**

**# Result generator with N**

**def NumGen(n):**

**# iterate from 0 to N**

**for j in range(1, n+1):**

**# Short-circuit operator is used**

**if j % 5 == 0 or j % 7 == 0:**

**yield j**

**# Driver code**

**if \_\_name\_\_ == "\_\_main\_\_":**

**# input goes here**

**N = 50**

**# Iterating over generator function**

**for j in NumGen(N):**

**print(j, end = " ")**

**Output:**

5 7 10 14 15 20 21 25 28 30 35 40 42 45 49 50

**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**

**ANS:-**

**def EvenGenerator(n):**

**i=0**

**while i<=n:**

**if i%2==0:**

**yield i**

**i+=1**

**n=int(raw\_input())**

**values = []**

**for i in EvenGenerator(n):**

**values.append(str(i))**

**print ",".join(values)**

**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**

**ANS:-**

**def f(n):**

**if n < 2:**

**fibo[n] = n**

**return fibo[n]**

**fibo[n] = f(n-1) + f(n-2)**

**return fibo[n]**

**n = int(input())**

**fibo = [0]\*(n+1) # initialize a list of size (n+1)**

**f(n) # call once and it will set value to fibo[0-n]**

**fibo = [str(i) for i in fibo] # converting integer data to string type**

**ans = ",".join(fibo) # joining all string element of fibo with ',' character**

**print(ans)**

**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**

**ANS:-**

**import re**

**emailAddress = input()**

**pat2 = "(\w+)@(\w+)\.(com)"**

**r2 = re.match(pat2,emailAddress)**

**print(r2.group(2))**

**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.**

**ANS:-**

**class Shape(object):**

**def \_\_init\_\_(self):**

**pass**

**def area(self):**

**return 0**

**class Square(Shape):**

**def \_\_init\_\_(self, l):**

**Shape.\_\_init\_\_(self)**

**self.length = l**

**def area(self):**

**return self.length\*self.length**

**aSquare= Square(3)**

**print aSquare.area()**