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 : using namespace std;

// Result generator with N

int NumGen(int n)

{

// Iterate from 0 to N

for(int j = 1; j < n + 1; j++)

{

// Short-circuit operator is used

if (j % 5 == 0 || j % 7 == 0)

cout << j << " ";

}

return n;

}

// Driver code

int main()

{

// Input goes here

int N = 50;

// Iterating over generator function

NumGen(N);

return 0;

}

// This code is contributed by Code\_Mech

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 f(n):

if n==0:

return 0

else:

return f(n-1)+100

n=int(raw\_input())

print f(n)

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

Ans : def fib(n):

if n == 0:

return 0

elif n == 1:

return 1

else:

return fib(n-1)+fib(n-2)

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

values = [str(fib(x)) for x in range(0, n+1)]

print(",".join(values))

Then, the output of the program should be:

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

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 : email = input("Enter the email address : ").split('@')

company = str(email[1]).split('.')

print("User name : ",email[0])

print("Company name : ",company[0])

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 Circle(object):

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

self.radius = r

def area(self):

return self.radius\*\*2\*3.14

aCircle = Circle(2)

print aCircle.area()