**Programming Assignment 15**

Q.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.

Ans.)

def task1(n):

    for i in range(n+1):

        if i % 5 == 0 and i % 7 == 0:

            yield str(i)+' '

task1(100)

print(', '.join([i for i in task1(100)]))

Q.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.

Ans.)

def task2(n):

    for i in range(n+1):

        if i % 2 == 0:

            yield str(i)

print(', '.join([i for i in task2(10)]))

Q.3) Please write a program using list comprehension to print the Fibonacci Sequence in comma separated form with a given n input by console.

Ans.)

def fibo(n):

    i = 0

    j = 1

    for k in range(n+1):

        yield i

        i,j = j, i+j

print(','.join([str(num) for num in fibo(7)]))

Q.4) Assuming that we have some email addresses in the "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.

Ans.)

def username(email: str):

    return email.split('@')[0]

username('john@google.com')

Q.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:

    def \_\_init\_\_(self, length):

        self.length = length

    def area(self):

        return 0

class Square(Shape):

    def area(self):

        return self.length\*self.length