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.

A)

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)]))

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.

A)

def task2(n):

for i in range(n+1):

if i % 2 == 0:

yield str(i)

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

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

A)

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)]))

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.

A)

def username(email: str):

return email.split('@')[0]

print(username('john@google.com'))

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

self.length = length

def area(self):

return 0

class Square(Shape):

def area(self):

return self.length\*self.length

shape\_obj = Shape(10)

print(shape\_obj.area())

square\_obj = Square(13)

print(square\_obj.area())