# **Assignment 15**

#### 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

In [1]:

**def** showDivisible(in\_num):  
 **for** ele **in** range(0,in\_num):  
 **if** (ele**%5** == 0) and (ele%7 == 0):  
 **yield** ele  
for ele **in** showDivisible(100):  
 print(ele,end**=**' ')

0 35 70

#### 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

In [2]:

**def** genEvenNumbers(in\_num):  
 **for** ele **in** range(in\_num**+**1):  
 **if** ele**%2** == 0:  
 **yield** ele  
  
for ele **in** genEvenNumbers(10):  
 print(ele,end**=**' ')

0 2 4 6 8 10

#### 3.The Fibonacci Sequence is computed based on the following formula below, Please write a program using list comprehension to print the Fibonacci Sequence in comma separated form with a given n input by console ?

f(n)=0 if n=0 f(n)=1 if n=1 f(n)=f(n-1)+f(n-2) if n>1

In [21]:

**def** genFibonaci(in\_num):  
 **if** in\_num **==** 0:  
 **return** 0  
 **elif** in\_num **==** 1:  
 **return** 1  
 **else**:  
 **return** genFibonaci(in\_num**-**1)**+**genFibonaci(in\_num**-**2)  
   
print([genFibonaci(x) **for** x **in** range(20)])

[0, 1, 1, 2, 3, 5, 8, 13, 21, 34, 55, 89, 144, 233, 377, 610, 987, 1597, 2584, 4181]

#### 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

In [9]:

**def** getUsernames():  
 in\_string **=** input('Enter Email Address(es): ')  
 out\_string **=** in\_string**.**split('@')  
 print(f'Username of {in\_string} is {out\_string[0]}')  
  
for i **in** range(3):  
 getUsernames()

Enter Email Address(es): [amanovishnu@gmail.com](mailto:amanovishnu@gmail.com)Username of [amanovishnu@gmail.com](mailto:amanovishnu@gmail.com) is amanovishnu  
Enter Email Address(es): [support.query@ineuron.ai](mailto:support.query@ineuron.ai)Username of [support.query@ineuron.ai](mailto:support.query@ineuron.ai) is support.query  
Enter Email Address(es): [manovishnu@outlook.com](mailto:manovishnu@outlook.com)Username of [manovishnu@outlook.com](mailto:manovishnu@outlook.com) is manovishnu

#### 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.

In [11]:

**class** Shape:  
 **def** area(self):  
 **return** 0  
  
class Square(Shape):  
 **def** \_\_init\_\_(self, length):  
 self**.**length **=** length  
 **def** area(self):  
 **return** self**.**length**\***self**.**length  
  
square **=** Square(50)  
print(square**.**area())

2500