

# Assignment 15 Solutions

**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 [2]:

```
1 def putNumbers(n):
2     i = 0
3     while i < n:
4         j = i
5         i += 1
6         if j % 7 == 0 and j % 5 == 0:
7             yield j
8 n = int(input('enter n : '))
9 num = []
10 for i in putNumbers(n):
11     num.append(str(i))
12
13 print(','.join(num))
```

enter n : 100

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 [1]:

```

1 def putNumbers(n):
2     i = 0
3     while i < n:
4         j = i
5         i += 1
6         if j % 2 == 0:
7             yield j
8 n = int(input('enter n : '))
9 num = []
10 for i in putNumbers(n):
11     num.append(str(i))
12
13 print(','.join(num))

```

enter n : 10  
0,2,4,6,8

**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  $n>1$

**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

In [2]:

```

1 def fib(n):
2     if n == 0:
3         return 0
4     elif n == 1:
5         return 1
6     else:
7         return fib(n-1)+fib(n-2)
8 n=int(input('Enter a number :'))
9 values = [str(fib(x)) for x in range(0, n+1)]
10 print(",".join(values))

```

Enter a number :7  
0,1,1,2,3,5,8,13

**4.Assuming that we have some email addresses in the "[username@companyname.com](mailto: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

Then, the output of the program should be: john

In [3]:

```
1 def getUsernames():
2     in_string = input('Enter Email Address(es): ')
3     out_string = in_string.split('@')
4     print(f'Username of {in_string} is {out_string[0]}')
5
6 for i in range(3):
7     getUsernames()
```

```
Enter Email Address(es): john@google.com
Username of john@google.com is john
Enter Email Address(es): sudhanshu@ineuron.ai
Username of sudhanshu@ineuron.ai is sudhanshu
Enter Email Address(es): krish@ineuron.ai
Username of krish@ineuron.ai is krish
```

**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 [6]:

```
1 class Shape:
2     def area(self):
3         return 0
4
5 class Square(Shape):
6     def __init__(self, length):
7         self.length = length
8     def area(self):
9         return self.length*self.length
10
11 square = Square(40)
12 print(square.area())
```

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