

# Programming\_Assingment15

## 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

In [1]:

```
def putNumbers(n):
    i = 0
    while i < n:
        j = i
        i += 1
        if j % 7 == 0 and j % 5 == 0:
            yield j
n = int(input('enter n : '))
num = []
for i in putNumbers(n):
    num.append(str(i))

print(','.join(num))
enter n : 100
0,35,70
```

## 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

In [2]:

```
def putNumbers(n):
    i = 0
    while i < n:
        j = i
        i += 1
        if j % 2 == 0:
            yield j
n = int(input('enter n : '))
num = []
for i in putNumbers(n):
    num.append(str(i))

print(','.join(num))
enter n : 10
0,2,4,6,8
```

### 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

Then, the output of the program should be:

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

In [3]:

```
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))

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

## Question 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.

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 [4]:

```
email = input("Enter the email address : ").split('@')
company = str(email[1]).split('.')
print("User name : ",email[0])
print("Company name : ",company[0])

Enter the email address : john@google.com
User name : john
Company name : google
```

In [5]:

```
#using Regular expression
import re
emailAddress = input("Enter the email address : ")
pat2 = "(\\w+)@(\\w+)\\. (com)"
r2 = re.match(pat2,emailAddress)
print('User name :',r2.group(1))
```

```
print('Company name :',r2.group(2))
Enter the email address : john@google.com
User name : john
Company name : google
```

### 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.

In [7]:

```
class Shape(object):
    def __init__(self):
        pass

    def area(self):
        return 0

class Square(Shape):
    def __init__(self, l):
        Shape.__init__(self)
        self.length = l

    def area(self):
        return self.length*self.length

objSquare= Square(5)
print(objSquare.area())
```

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