Python Basic Programming 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.

In [3]:

```
def NumGenerator(n):
    for i in range(n+1):
        if i%5==0 and i%7==0:
            yield i
n=int(input())
values = []
for i in NumGenerator(n):
    values.append(str(i))
print (",".join(values))
```

```
15
0
```

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.

In [4]:

```
list1 = [10, 21, 4, 45, 66, 93]

# iterating each number in list
for num in list1:

    # checking condition
    if num % 2 == 0:
        print(num, end=" ")
```

```
10 4 66
```

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

In [5]:

```
nterms = int(input("How many terms? "))

# first two terms
n1, n2 = 0, 1
count = 0

# check if the number of terms is valid
if nterms <= 0:
   print("Please enter a positive integer")
# if there is only one term, return n1
elif nterms == 1:
   print("Fibonacci sequence upto",nterms,":")
   print(n1)
# generate fibonacci sequence
else:
   print("Fibonacci sequence:")
   while count < nterms:
       print(n1)
       nth = n1 + n2
       # update values
       n1 = n2
       n2 = nth
       count += 1
```

```
How many terms? 15
Fibonacci sequence:
0
1
1
2
3
5
8
13
21
34
55
89
144
233
377
```

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.

In [6]:

```
import re
emailAddress = 'bing@google.com'
pat2 = "(\w+)@(\w+)\.(com)"
r2 = re.match(pat2,emailAddress)
print(r2.group(2))
```

```
google
```

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 [8]:

```
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

aSquare= Square(3)
print (aSquare.area())
```

```
9
```

In [ ]:

```

```