###for loop in python

for number in range(101,210+1) print number

o/p : 101 102 103 ... 210

In [7]:
```
def alternateValues(start,end):
    for value in range(start,end+1,4):
        print(value,end=" ")
    return


alternateValues(500,525)
```

```
500 504 508 512 516 520 524
```

In [17]:
```
#function to print reverse of given in the range exclusive

def reverseRange(start,end):
    for value in range(end,start,-1):
        print(value,end=" ")
    return

reverseRange(1,10)
```

```
10 9 8 7 6 5 4 3 2
```

In [18]:
```
#function to print reverse of given in the range inclusive.

def reverseRange(start,end):
    for value in range(end,start-1,-1):
        print(value,end=" ")
    return

reverseRange(1,10)
```

```
10 9 8 7 6 5 4 3 2 1
```

In [21]:
```
# function to print the odd numbers in the reverse order in a range.

def oddRange(start,end):
    for i in range(end,start-1,-1):
        if i%2 != 0:
            print(i,end = " ")
    return
oddRange(123,130)
```

```
129 127 125 123
```

In [24]:
```
# fucntion to calculate the sum of the numbers in a given range.

def sumRange(start,end):
    sum = 0
    for i in range(start,end+1):
        sum = sum+i
    return sum


sumRange(100,200)
```

Out[24]:
```
15150
```

In [27]:
```
#function to calculate the average of a given range

def averageRange(start,end):
    sum = 0
    count = 0
    for i in range(start,end+1):
        sum = sum+i#sum calculation
       # count = count+1 #counting number of values
    return sum/(end-start)

averageRange(1000,5000)
```

Out[27]:
```
3000.75
```

In [41]:
```
# Function to generate all leap years ina a given time period


def isLeapYear(year):
    if year%400==0 or(year%100!=0 and year%4==0):
        return True
    return False

def generateLeapYears(startyear,endyear):
    for year in range(startyear,endyear+1):
        if isLeapYear(year):
            print(year,end=" ")
    return


generateLeapYears(1919,2019)
```

```
1920 1924 1928 1932 1936 1940 1944 1948 1952 1956 1960 1964 1968 1972 1976 1980
1984 1988 1992 1996 2000 2004 2008 2012 2016
```

In [45]:
```
# calculate number of days in a given time period using leapyear

def noofDays(startyear,endyear):
    sum = 0
    for year in range(startyear,endyear+1):
        if isLeapYear(year):
            sum = sum+366
        else:
            sum = sum+365
    return sum

noofDays(1975,2000)
```

Out[45]: 9497

In [1]:
```
# calculate number of hours in a given time period using leapyear
#(13,1994,3,1999)



def numberOfDaysMonth(month, year):
    if month == 2:
        if isLeapYear(year):
            return 29
        return 28
    elif (month <= 7 and month % 2!= 0) or (month >= 8 and month % 2 == 0):
        return 31
    else:
        return 30

def daysInStartYear(startmonth, startyear):
    days = 0
    for month in range(startmonth, 13):
        days += numberOfDaysMonth(month, startyear)
    return days

def daysInEndYear(endmonth, endyear):
    days = 0
    for month in range(1, endmonth+1):
        days += numberOfDaysMonth(month, endyear)
    return days

def numberOfHours(startmonth, startyear, endmonth, endyear):
    days = 0
    if startyear != endyear:
        days += daysInStartYear(startmonth, startyear)
        days += daysInEndYear(endmonth, endyear)
        if endyear - startyear == 2: # 2019 - 2017
            days += numberOfDays(startyear+1, startyear+1)
        elif endyear - startyear > 2:
            days += numberOfDays(startyear+1, endyear-1)
    else:
        for month in range(startmonth, endmonth+1):
            days += numberOfDaysMonth(month, startyear)
    return 24 * days

numberOfHours(6, 2018, 7, 2018)
```

Out[1]: 1464

In [ ]: