Function to print reverse of a given range in the same line

In [4]:
```
def reverseRange(lb,ub):
    for i in range(ub,lb-1,-1):
        print(i,end=' ')
    return
reverseRange(13,20)
```

```
20 19 18 17 16 15 14 13
```

Function to print odd numbers in reverse order in a range

In [7]:
```
def revOdd(lb,ub):
    for i in range(ub,lb-1,-1):
        if i%2!=0:
            print(i,end=' ')
    return
revOdd(10,20)
```

```
19 17 15 13 11
```

Function to calculate sum of all numbers in the range

In [10]:
```
def sumNum(lb,ub):
    s=0
    for i in range(lb,ub+1):
        s=s+i
    return s
sumNum(100,200)
```

Out[10]:
```
15150
```

Function to calculate average of a given range

In [15]:
```
def AVG(lb,ub):
    #c=0
    s=0
    a=1
    for i in range(lb,ub+1):
        #c=c+1
        s=s+i
    a=s/(ub-lb+1)
    return a
AVG(1,5)
```

Out[15]:
```
3.0
```

Function to generate the leap year in a given time period

In [30]:
```
def isLeap(n):
    if(n%400==0 or(n%100!=0 and n%4==0)):
        return True
    return False
def genLeap(lb,ub):
    for i in range(lb,ub+1):
        if(isLeap(i)):
            print(i,end=' ')
    return
genLeap(2000,2020)
```

```
2000 2004 2008 2012 2016 2020
```

Calculate number of days in a given time period

In [52]:
```
def Days(lb,ub):
    #l=0
    #nl=0
    s=0
    for i in range(lb,ub+1):
        if(isLeap(i)):
            s=s+366
        else:
            s=s+365
    return s
Days(2017,2018)
```

Out[52]:
```
730
```

Function to calculate number of hour for a given period in the format (month1,year1,month2,year2)

numHours(5, 2019, 6, 2019) --> 1464

No of hours = 24 * No of days

3 steps

1. Start month year to end of year - calculate number of days

2. Calculate days for all years between start year and end year exclusive.

2017, 2018 - 365 * no of years

3. Calculate days from January to end month year

Excluding February

First 6 months- 1,3,4,5,6 - All odd months have 31 days, All even months have 30 days

Last 6 months- 8,9,10,11 - All even months have 31 days, All odd months have 30 days

31 days- (month <= 7 and month % 2 != 0) or (month >=8 and month % 2 == 0)

30 days- (month <= 7 and month % 2 == 0) or (month >=8 and month % 2! == 0)

In [51]:
```
def numDaysMonth(month,year):
    if month == 2:
        if isLeap(year):
            return 29
        return 28
    elif (month<=7 and month % 2!=0) or (month>=8 and month % 2==0):
        return 31
    else:
        return 30
numDaysMonth(7,2019)

def DaysinStartYear(startmonth,startyear):
    days = 0
    for month in range(startmonth,12+1):
        days += numDaysMonth(month,startyear)
    return days
DaysinStartYear(12,2020)

def DaysinEndYear(endmonth,endyear):
    days = 0
    for month in range(1,endmonth+1):
        days += numDaysMonth(month,endyear)
    return days
DaysinEndYear(2,2019)

def numofHours(sm,sy,em,ey):
    days = 0

    days += DaysinStartYear(sm,sy)
    days += DaysinEndYear(em,ey)
    if ey - sy == 2:
        days += Days(sy+1, sy+1)
    elif ey - sy > 2:
        days += Days(sy+1, ey-1)
    return 24 * days

numofHours(11,1975,3,1999)
```

Out[51]: 205248

In [ ]:

In [ ]: