Simple Date Format (dd/mm/yyyy)

```
import java.io.*;

class Date_DDMMYY
{
   public static void main(String args[])throws IOException
   {
      BufferedReader br=new BufferedReader(new InputStreamReader(System.in));
      int l, y, d, m;
      String dd, mm, yy;

      //array storing the maximum days of every month
      int maxdays[]={0,31,28,31,30,31,30,31,31,30,31,30,31};

      //array storing the month names
      String month[]={"", "January", "February", "March", "April", "May", "June", "July",
"August",
            "September", "October", "November", "December" };

      System.out.print("Enter any date in 8 digits (ddmmyyyy) format: ");
      String date = br.readLine(); //inputting the date in String format

      l = date.length(); //finding number of digits in the given input

      if(l==8) //performing the task only when number of digits is 8
      {
         dd = date.substring(0,2); //extracting the day in String format
         mm = date.substring(2,4); //extracting the month in String format
         yy = date.substring(4); //extracting the year in String format
         d = Integer.parseInt(dd); //day in Integer format
         m = Integer.parseInt(mm); //month in Integer format
         y = Integer.parseInt(yy); //year in Integer format

         if((y%400==0) || ((y%100!=0)&&(y%4==0))) // condition for leap year
         {
            maxdays[2]=29;
         }

         /* checking whether the day, month and year are within acceptable range
         i.e. there cannot be an input like 35012013 because 35/01/2013 is unacceptable*/

         if(m<0 || m>12 || d<0 || d>maxdays[m] || y<0 || y>9999) // Performing Date
Validation
         {
            System.out.println("The day, month or year are outside acceptable limit");
         }

         else
```

```
        {
            /* First Part */
            System.out.println("Date in dd/mm/yyyy format = "+dd+"/"+mm+"/"+yy);

            /* Second Part */
            System.out.print("Date in dd, month name, yyyy format = "+dd+"
"+month[m]+", "+yy);
        }
    }

    else
        System.out.println("Wrong Input");
  }
}
```

Date Difference

```
import java.util.*;
public class Date
{
  static Scanner sc=new Scanner(System.in);
  static int day,month,year,dd,mm,yyyy;
  static int Nleap[]={0,31,28,31,30,31,30,31,31,30,31,30,31}; //NON-LEAP YEAR
  static int leap[]={0,31,29,31,30,31,30,31,31,30,31,30,31}; //LEAP YEAR

  public void setDate()
  {
    System.out.print("\fEnter The Fixed Date (DD/MM/YYYY) : "); day=sc.nextInt();
    System.out.print("\fEnter The Fixed Date (DD/MM/YYYY) : "+day+"/");
month=sc.nextInt();
    System.out.print("\fEnter The Fixed Date (DD/MM/YYYY) : "+day+"/"+month+"/");
year=sc.nextInt();
  }

  private boolean isLeapYear(int year)
  {
    if(year%400==0||year%4==0&&year%100==0)
      return true;
    else
      return false;
  }

  public int calculate(int dd,int mm,int yyyy)
  {
    int DaysCount=0; //TOTAL NO. OF DAYS

    // CALCULATE NO. OF DAYS FROM THE NEXT YEAR TILL PREV OF CURRENT YEAR
    // INPUTS : 1994 to 2011 ; CALCULATES FROM 1st JAN 1995 to 1st JAN 2011
    for(int i=year+1;i<yyyy;i++)
```

```
            if(isLeapYear(i))   DaysCount+=366;
            else    DaysCount+=365;

        // CALCULATES NO. OF DAYS FROM 1st OF NEXT MONTH TILL THE END OF YEAR
        for(int i=month+1;i<=12;i++)
            if(isLeapYear(year))   DaysCount+=leap[i];
            else   DaysCount+= Nleap[i];

        // CALCULATES NO. OF DAYS FROM THE DAY TO END OF THE MONTH
        if(isLeapYear(year))
            for(int i=day;i<=leap[month];i++)   DaysCount++;
        else
            for(int i=day;i<=Nleap[month];i++)  DaysCount++;

        // CALCULATES NO. OF DAYS FROM 1st JAN OF GIVEN MONTH TILL PREV OF GIVEN
MONTH
        for(int i=1;i<mm;i++)
            if(isLeapYear(yyyy))
                DaysCount+=leap[i];
            else
                DaysCount+=Nleap[i];

        // CALCULATES NO. OF DAYS FROM 1st OF GIVEN MONTH TO GIVEN DAY
        if(isLeapYear(yyyy))
            for(int i=1;i<=dd;i++)
                DaysCount++;
        else
            for(int i=1;i<=dd;i++)
                DaysCount++;

        // CALCULATES NO. OF DAYS IF SET YEAR = GIVEN YEAR
        if(yyyy==year)
            if(isLeapYear(yyyy))   DaysCount-=366;
            else    DaysCount-=365;

        return DaysCount;
    }

    public void setCurrent()
    {
        System.out.print("\fEnter The Current Date (DD/MM/YYYY) : "); dd=sc.nextInt();
        System.out.print("\fEnter The Current Date (DD/MM/YYYY) : "+dd+"/");
mm=sc.nextInt();
        System.out.print("\fEnter The Current Date (DD/MM/YYYY) : "+dd+"/"+mm+"/");
yyyy=sc.nextInt();
    }

    public static void main(String[]args)
    {
        Date obj=new Date();
```

```
        obj.setDate();
        obj.setCurrent();
        int total=obj.calculate(dd,mm,yyyy);
        System.out.println("\fFixed   Date (DD/MM/YYYY) : "+day+"/"+month+"/"+year);
        System.out.println("Current Date (DD/MM/YYYY) : "+dd+"/"+mm+"/"+yyyy);
        System.out.println("\nTotal No Of Days : "+total);
    }
}
```

Print Weekday Name

```
import java.io.*;

class Date_DayMethod1
{
    public static void main(String args[])throws IOException
    {
        BufferedReader br=new BufferedReader(new InputStreamReader(System.in));
        int month[]={0,31,28,31,30,31,30,31,31,30,31,30,31};
        String days[]={"","Sunday","Monday","Tuesday","Wednesday",
                                "Thursday","Friday","Saturday"};

        System.out.print("Enter the day : ");
        int d=Integer.parseInt(br.readLine());
        System.out.print("Enter the month : ");
        int m=Integer.parseInt(br.readLine());
        System.out.print("Enter the year : ");
        int y=Integer.parseInt(br.readLine());
        if((y%400==0) || ((y%100!=0)&&(y%4==0)))
        {
            month[2]=29;
        }
         // Performing Date Validation
        if(m<0 || m>12 || d<0 || d>month[m] || y<0 || y>9999)       {
            System.out.println("Invalid Date");
        }
        else
        {
            int dn=0;
            for(int i=1;i<m;i++)
            {
                dn=dn+month[i];
            }
            dn=dn+d;

            System.out.print("Enter the Day on 1st January in this year: ");
            String s=br.readLine().trim();

            //finding the day of the week which corresponds to the given day name
```

```
        int x=0;
        for(int i=1;i<=7;i++)
        {
           if (s.equalsIgnoreCase(days[i]))
              x=i;
        }

        // the main calculation of finding the name of the day of the week
              of the given date starts here
        for(int i=1;i<dn;i++)
        {
           x++;
           if(x==8)
              x=1;
        }
        System.out.print("Output : "+d+"/"+m+"/"+y+" is a "+days[x]);
     }
   }
}
```

Future Date

```
import java.io.*;
class FutureDate
{
public static void main(String args[])throws IOException
   {
      BufferedReader br=new BufferedReader(new InputStreamReader(System.in));
      int month[]={0,31,28,31,30,31,30,31,31,30,31,30,31};
      System.out.print("Enter the date in (dd/mm/yyyy) format: ");
      String date=br.readLine().trim();

      int p,q,count=0;
      p=date.indexOf("/");
      int d=Integer.parseInt(date.substring(0,p));
      q=date.lastIndexOf("/");
      int m=Integer.parseInt(date.substring(p+1,q));
      int y=Integer.parseInt(date.substring(q+1));
      System.out.println("Entered Date: "+date);

      if((y%400==0) || ((y%100!=0)&&(y%4==0))) // Checking for leap year
      month[2]=29;

      if(m<0 || m>12 || d<0 || d>month[m] || y<0 || y>9999) // Performing Date
Validation
      {
         System.out.println("Invalid Date");
      }
      else
      {
         System.out.print("Enter number of days after which future date is to be found: ");
         int days=Integer.parseInt(br.readLine());
         while(count<days)
```

```
        {
           d++;
           count++;

           /* If day exceeds the maximum days of a month then day should start from 1
              and month should increase */

           if(d>month[m])
           {
              d=1;
              m++;
           }

           /* If month exceeds 12 then month should start from 1
              and year should increase */
           if(m>12)
           {
              m=1;
              y++;
              if((y%400==0) || ((y%100!=0)&&(y%4==0)))
                 month[2]=29;
              else
                 month[2]=28;
           }
        }
        System.out.println("Future Date : "+d+"/"+m+"/"+y);
     }
  }
}
```