

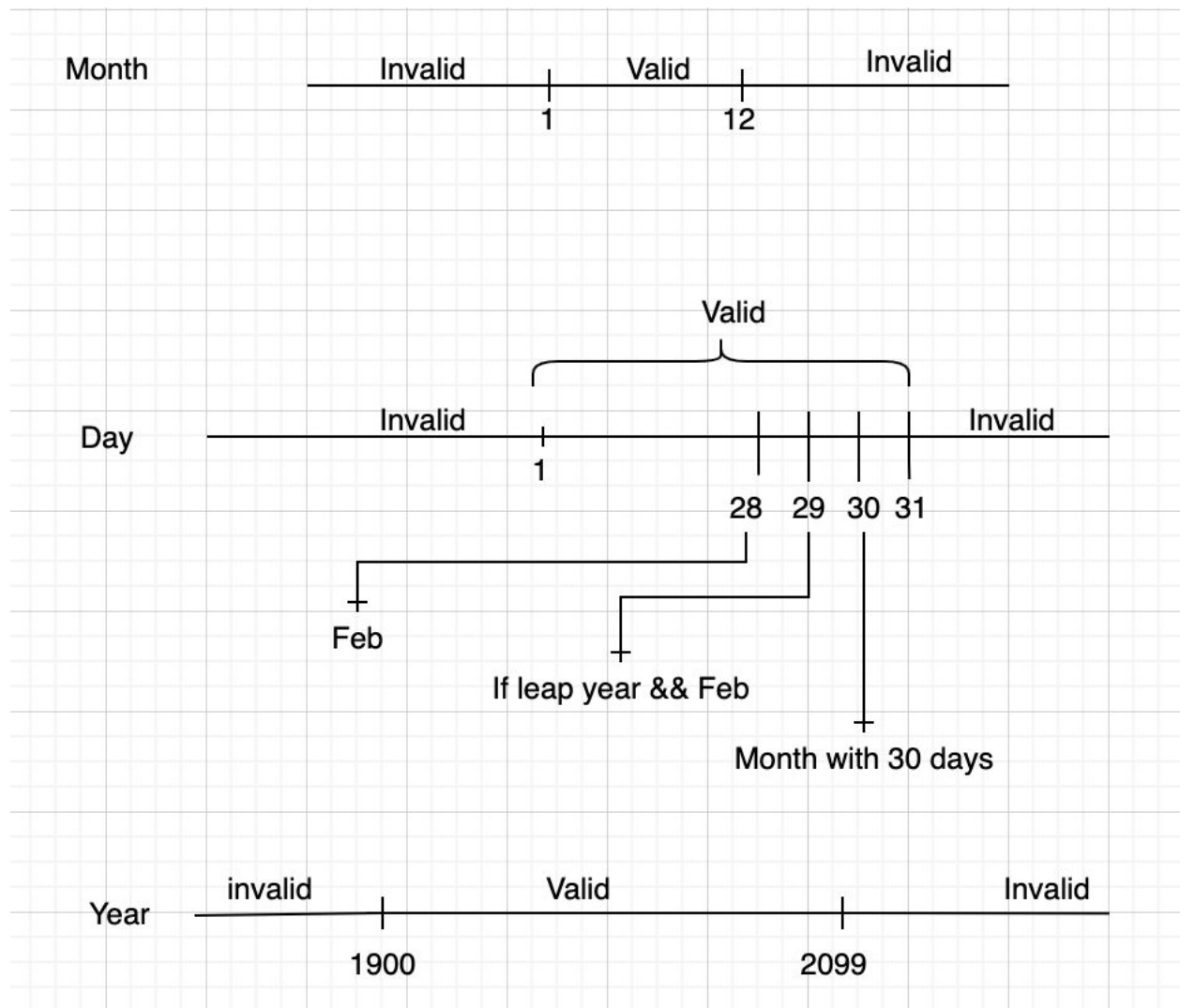
equivalentClass.java file

```
import java.util.*;
import java.io.*;
import java.text.*;

public class equivalentClass {
    public static String nextDate(String curDate) throws Exception{
        SimpleDateFormat format = new SimpleDateFormat("MM/dd/yyyy");
        try {
            Date date = format.parse(curDate);
            Calendar calendar = Calendar.getInstance();
            calendar.setTime(date);
            calendar.add(Calendar.DAY_OF_YEAR, 1);
            int year=calendar.get(Calendar.YEAR);
            if(year<=1900 || year>=2099){
                return "Year out of range";
            }
            return format.format(calendar.getTime());
        } catch (ParseException e) {
            System.out.println("Parse Exception");
        }
        return "";
    }

    public static void main(String args[]) throws Exception{
        System.out.println("Enter a date(MM/DD/YYYY): ");
        Scanner sc=new Scanner(System.in);
        String str = sc.nextLine();
        System.out.println("Next Date : "+nextDate(str));
    }
}
```

Relevant Equivalence Partitioning Diagram



Test Cases:

Test Case Number & Scenario	Input			Expected Output	Reasoning/Explanation
	Month (MM)	Day (DD)	Year (YYYY)		
TC1 - Invalid Partition (Invalid Input Format)	1	1	98	Invalid input format	Format needs to be as follows: MM/DD/YYYY
Month!=2 digits Day!=2 digits Year!= 4 digits	4	12	1987	Invalid input format	Month needs to be 2 digit input (Example: 04)
TC2 - Invalid Partition (Invalid Year Input)	09	11	1846	Invalid Year Input	Input years have to be between 1900 and 2099 (both included)
Year < 1900 Year > 2099					
TC3 - Invalid Partition (Invalid Day or Month Input)	-11	12	1999	Invalid Month Input	Input Months have to be between 1 and 12 (both included)
Day <= 0 Day > 31 Month <= 0 Month > 12	05	35	2005	Invalid Day Input	Input Days have to be between 1 and 31 (both included)
TC4 - Invalid Partition - Special Case (Non Leap Years)					
Year%4 != 0 && Month == 02 && Day > 28	02	29	2001	Invalid Day Input	February has only 28 days in a regular (non-leap) year
TC5 - Invalid Partition					
Day > 30 && Month = 04, 06, 09, OR 11	11	31	2019	Invalid Day Input	These months (04, 06, 09, 11) have only 30 days
TC6 - Valid Partition (Month with 30 days)	04	01	1900	04/02/1900	Valid input
Day<=30 && Month = 04, 06, 09, OR 11	09	30	2018	10/01/2018	Valid input since these months (04, 06, 09, 11) have 30 days
TC7 - Valid Partition (Months with 31 days)	12	01	2003	01/01/2004	Valid input
Day<=31 && Month = 01, 03, 05, 07, 08, 10 OR 12	05	31	1945	06/01/1945	Valid input since these months (01,03,05,07,08,10,12) have 31 days
TC8 - Valid Partition - Special Case (Leap Years)	02	01	2020	02/02/2020	Valid input
Year%4==0 && Month == 02 && Day <= 29	02	29	2020	03/1/2020	Valid Input since February (02) has 29 days in leap year 2020.