```java
import java.util.*;

public class days {
    public static void main(String args[]) {
        Scanner sc = new Scanner(System.in);
        int n, day, year, i, p, k = 0;
        int ar[] = { 0, 31, 59, 90, 120, 151, 181, 212, 243, 273, 304, 334, 365 };
        String month[] = { "", "January", "February", "March", "April", "May",
"June", "July", "August", "September",
                "October", "November", "December" };
        System.out.print("DAY NUMBER: ");
        day = sc.nextInt();
        System.out.print("YEAR: ");
        year = sc.nextInt();
        System.out.print("DATE AFTER (N DAYS): ");
        n = sc.nextInt();
        p = day + n;
        int a = 1, b = 1, date = 0, nday = 0, year1 = year;
        if (year % 4 == 0) {
            for (i = 2; i <= 12; i++) {
                ar[i] += 1;
            }
        }
        if (day >= 1 && day <= ar[12]) {
            for (i = 0; i <= 12; i++) {
                if (ar[i] < day) {
                    a = i;
                }
                if (ar[i] > day) {
                    break;
                }
            }
            date = day - ar[a];
        } else {
            k = 1;
        }
        if (k == 1) {
            System.out.println("Days are out of Range");
        } else if (k != 1 && n >= 1 && n <= 100) {
            if (p > ar[12]) {
                p = p - ar[12];
                year1 = year1 + 1;
            }
            for (i = 0; i <= 12; i++) {
                if (ar[i] < p) {
                    b = i;
                }
                if (ar[i] > p) {
                    break;
                }
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            }
            nday = p - ar[b];
        } else {
            k = 1;
            System.out.println("N Days are out of range ");
        }
        if (k != 1) {
            System.out.println("DATE : " + date + "th " + month[a + 1] + " " + year);
            System.out.println("DATE AFTER " + n + " DAYS: " + nday + "th " + month[b
+ 1] + " " + year1);
        }
    }
}
```