



Day of the Programmer



Problem

Submissions

Leaderboard

Discussions

Editorial

Marie invented a [Time Machine](#) and wants to test it by time-traveling to visit Russia on the [Day of the Programmer](#) (the **256th** day of the year) during a year in the inclusive range from **1700** to **2700**.

From **1700** to **1917**, Russia's official calendar was the [Julian calendar](#); since **1919** they used the [Gregorian calendar](#) system. The transition from the Julian to Gregorian calendar system occurred in **1918**, when the next day after January **31st** was February **14th**. This means that in **1918**, February **14th** was the **32nd** day of the year in Russia.

In both calendar systems, February is the only month with a variable amount of days; it has **29** days during a *leap year*, and **28** days during all other years. In the Julian calendar, leap years are divisible by **4**; in the Gregorian calendar, leap years are either of the following:

- Divisible by **400**.
- Divisible by **4** and *not* divisible by **100**.

Given a year, **y**, find the date of the **256th** day of that year *according to the official Russian calendar during that year*. Then print it in the format `dd.mm.yyyy`, where `dd` is the two-digit day, `mm` is the two-digit month, and `yyyy` is **y**.

Input Format

A single integer denoting year **y**.

Constraints

- $1700 \leq y \leq 2700$

Output Format

Print the full date of *Day of the Programmer* during year **y** in the format `dd.mm.yyyy`, where `dd` is the two-digit day, `mm` is the two-digit month, and `yyyy` is **y**.

Sample Input 0

```
2017
```

Sample Output 0

```
13.09.2017
```

Explanation 0

In the year **y = 2017**, January has **31** days, February has **28** days, March has **31** days, April has **30** days, May has **31** days, June has **30** days, July has **31** days, and August has **31** days. When we sum the total number of days in the first eight months, we get

$31 + 28 + 31 + 30 + 31 + 30 + 31 + 31 = 243$. Day of the Programmer is the **256th** day, so then calculate $256 - 243 = 13$ to determine that it falls on day **13** of the **9th** month (September). We then print the full date in the specified format, which is `13.09.2017`.

Sample Input 1

2016

Sample Output 1

12.09.2016

Explanation 1

Year $y = 2016$ is a leap year, so February has **29** days but all the other months have the same number of days as in **2017**. When we sum the total number of days in the first eight months, we get $31 + 29 + 31 + 30 + 31 + 30 + 31 + 31 = 244$. Day of the Programmer is the **256th** day, so then calculate $256 - 244 = 12$ to determine that it falls on day **12** of the **9th** month (September). We then print the full date in the specified format, which is 12.09.2016.



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Max Score: 15

Difficulty: Easy

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Java 7



```
1 import java.io.*;
2 import java.util.*;
3 import java.text.*;
4 import java.math.*;
5 import java.util.regex.*;
6
7 public class Solution {
8
9     static String solve(int year){
10         // Complete this function
11     }
12
13     public static void main(String[] args) {
14         Scanner in = new Scanner(System.in);
15         int year = in.nextInt();
16         String result = solve(year);
17         System.out.println(result);
18     }
19 }
20
```

Line: 1 Col: 1

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