Problem: *Day of the Programmer*

Marie invented a Time Machine and wants to test it by time-traveling to visit Russia on the Day of the Programmer(the day of the year) during a year in the inclusive range from to .
From to , Russia's official calendar was the Julian calendar; since they used the Gregorian calendarsystem. The transition from the Julian to Gregorian calendar system occurred in , when the next day after January was February . This means that in , February was the day of the year in Russia.
In both calendar systems, February is the only month with a variable amount of days; it has days during a *leap year*, and days during all other years. In the Julian calendar, leap years are divisible by ; in the Gregorian calendar, leap years are either of the following:

- Divisible by .
- Divisible by and *not* divisible by .

Given a year, , find the date of the 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 .

Input Format

A single integer denoting year .

Constraints

-

Output Format

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

Sample Input 0

```
2017
```

Sample Output 0

```
13.09.2017
```

Explanation 0

In the year , January has days, February has days, March has days, April has days, May has days, June has days, July has days, and August has days. When we sum the total number of days in the first eight months, we get . Day of the Programmer is the day, so then calculate to determine that it falls on day of the 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 is a leap year, so February has days but all the other months have the same number of days as in . When we sum the total number of days in the first eight months, we get . Day of the Programmer is the day, so then calculate to determine that it falls on day of the month (September). We then print the full date in the specified format, which is `12.09.2016`.

Solution:

```
int main( )
        {
                int year;
                cin>>year;

                if ( year==1918 )  { cout<<"26.09.1918"; }   //The Transitioning year

                else if(year<=1917)     //This is the Julian Calendar with leap year divisible by 4
                    {  ( year%4==0  ?  cout<<"12.09."<<year   :  cout<<"13.09."<<year ); }

                Else                          //This is the Gregorian calendar
                  {
                        If (   (year%400==0) || (year%100!=0  &&  year%4==0)   )
                              {
                                    cout<<"12.09."<<year;
                                                //It's a leap year with 29 days in the February
                              }
                           Else
                              {
                                    cout<<"13.09."<<year;        //It's a Common year
                              }
                  }
 return 0;

}
```

- Anshul Aggarwal