

CS1020 Lab #0

Exercise #2: Date Conversion

http://www.comp.nus.edu.sg/~cs1020/3_ca/labs.html

Objectives:

1. Input/output
2. Using String class
3. Using Integer class
4. Writing user-defined method

Task statement:

There are two common formats used for dates. For example “December 25, 2012” is more commonly used in the UK, whereas “25 December 2012” is more popular with the Americans.

Write a program **DateConvert.java** that reads a string in the UK date format and outputs the equivalent American format, and also whether the year is a leap year.

The input consists of the month, a space, the day, a comma, a space, and the year. You may assume that all inputs follow this format, and that the input date is a valid date.

You are to define a class method **isLeapYear(int)** that takes in an integer parameter which represents the year, and returns **true** if it is a leap year, or **false** otherwise. A year is a leap year if it satisfies one of the following two conditions:

- It is divisible by 400; or
- It is divisible by 4 but not by 100

For example, 2012, 1996, and 2000 are leap years, but 1998, 2013, 2100 and 2200 are not.

Note that you are not allowed to use the **Date** class, the **SimpleDateFormat** class or any other date formatter class in the API.

The commas here makes it not possible to simply scanner.next(), scanner.nextInt()

Sample runs:

Enter date in UK format: December 25, 2012
Date in American format: 25 December 2012
2012 is a leap year.

Enter date in UK format: March 7, 2013
Date in American format: 7 March 2013
2013 is not a leap year.