Lab lecture exercises – Week 4

Assume again the `Date` class from week 2. It allows to create dates such as `Date today = new Date(23, "October", 2019)` but also dates that do not make sense such as `Date nonsense = new Date(35, "Monday", 2019)`.

1. Write a method `public static boolean admissible(int day, String month, int year)` that returns `true` if and only if the year is greater than 0, the month is one of the twelve Strings `"January"`, ..., `"December"`, and the day is a number between (inclusively) 1 and the maximal number of days in the particular month. Particularly difficult is the month `February`, which may have 28 or 29 days, depending on whether the year is a leap year. For all years (greater than or equal to 1), a leap year is a year that is divisible by 4, exceptions are years that are divisible by 100 but not divisible by 400.

2. Use the method `admissible` from above to change the constructor and the setters so that the arguments are only accepted if they are admissible, otherwise an `IllegalArgumentException` is to be thrown.