

# BDSA2021 / Assignment0

kalw@itu.dk

September 2021

## 1 Description of IsLeapYear method

The method is public and returns a boolean which determines whether the given input year is in fact a leap year or not. The input parameter is of the type integer.

The algorithm of the method works as following:

1. First the algorithm checks whether or not the input year is divisible by four, if it is, then move on to step 2. If it is not the method simply returns false.
2. Afterwards, the algorithm checks whether the input year is not divisible by 100 or is divisible by 400. Only one of these criteria have to be met to move on to step 3, this is ensured by using the logical OR operator. If non of the two criteria are met, then the method will return false.
3. Lastly, the algorithm checks if the input year is at least 1582 or above. If it is, the method returns true and the input year can be verified as a leapyear after the year of 1582. If it is not, the method will return false.

The algorithm can be visualized by the following UML diagram

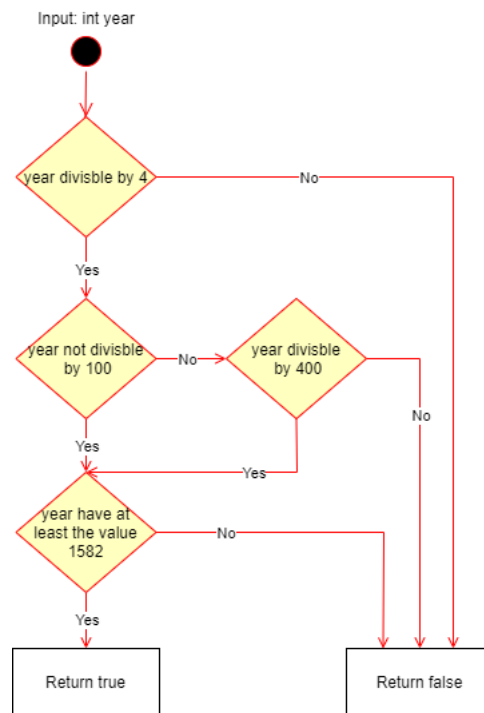


Figure 1: UML diagram of the IsLeapYear algorithm