

BDSA - Assignment 0

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Exercise 7, 8 & 9

Below is a visualization describing the `IsLeapYear` algorithm. This method takes a parameter of type `int`, which is the year that needs to be checked if it is a leap year or not. In order for it to be a leap year, certain requirements need to be met:

- It must be divisible by 4
- It must be divisible by 400
- It must not be divisible by 100

Which is simply what this algorithms checks. It starts by checking if the input is divisible by 400. If that holds true, we know the year is a leap year no matter what, hence why we can move forward. It then checks if the year is not divisible by 100 and if it is divisible by 4. If it is, the algorithm will return true.

This algorithm knows whether a number is divisible by another number by taking the modulo of it and checking if the result is zero. If it is, it means they are indeed divisible.

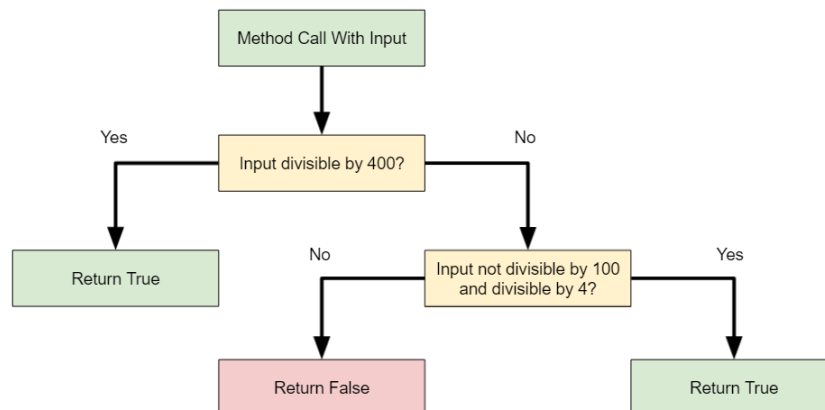


Diagram visualizing the algorithm