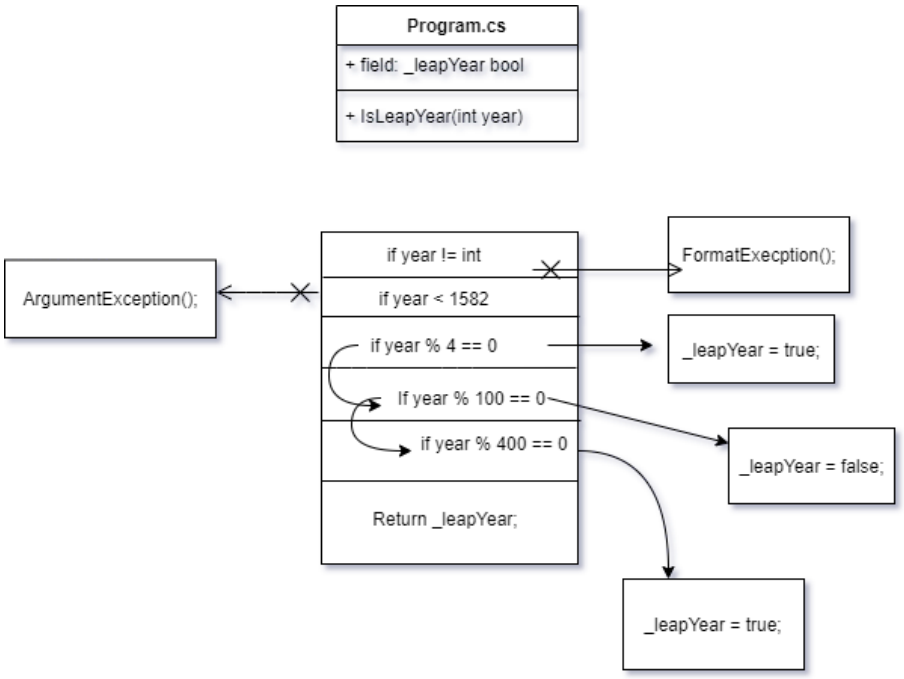

Figur 1: Figure of the function/algorithm

1 Exercise 9

The latest `IsLeapYear`

The figure above visualises the workflow of the `IsLeapYear`, or more precise `IsLeapYear` and the main method of the program.
The application asks the user to type in a year in the console. If the user does not type in a year, the program will throw a `FormatException()`, tell the user they need to give an integer instead of letters or decimals, and the program terminates. When the user types a year, `IsLeapYear` will first check if the year is later than 1582.
If the year is earlier than 1582, say 1444, the program will throw an `ArgumentException()`, and tell the user to type in a year that is year 1582 or later. If the user types in an accepted year, the algorithm will check if the year is divisible (modulo) with 4 and will set the boolean field `_leapYear` to true if the year is divisible by 4, otherwise false. The algorithm will then check if the year is divisible by 100 and set `_leapYear` to false if it is.
Finally, it checks if the year is divisible by 400, sets `_leapYear` to true if it is divisible by 400, false otherwise, and then returns `_leapYear`.
Then the program writes to the user *yay* or *nay* accordingly to whether `_leapYear` is true or false.