BDSA21 Assignment 0

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1 isLeapYear

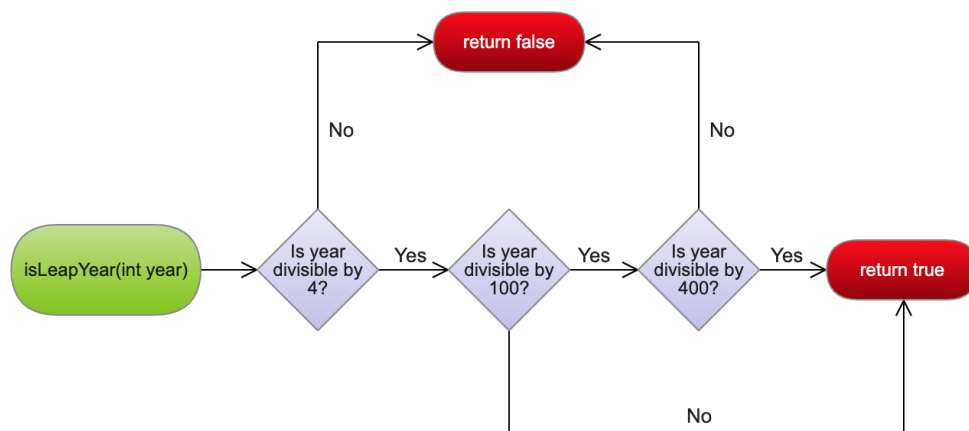Figure 1: isLeapYear

The isLeapYear-method takes a parameter of type integer and returns a boolean value corresponding to whether or not the input parameter is a leap year. This is determined by running the input parameter through three checks. First, if the input is divisible by 4, then if it is divisible by 100 and finally if it is divisible by 400. This process is shown in Figure 1.

By checking that the input parameter is divisble by 4, it can quickly be determined if it is a leap year or not. In case the input is not divisible by 4 the method returns false. However, if the input is divisible by 4, it must undergo further checks. Next step is to determine if the input is divisible by 100. If a year is not divisible by 100 it is a leap year and the method returns true. If the input is divisible by 100 a final check is made, as some years that are divisible by 4 and 100 are not leap years e.g. 1700 and 1800. The final check determines if the input is divisible by 400. If it is divisible by 400 the method returns true and if not the method returns false.