

Object Oriented Software Development Lab

Exercise 3 (10 Points)

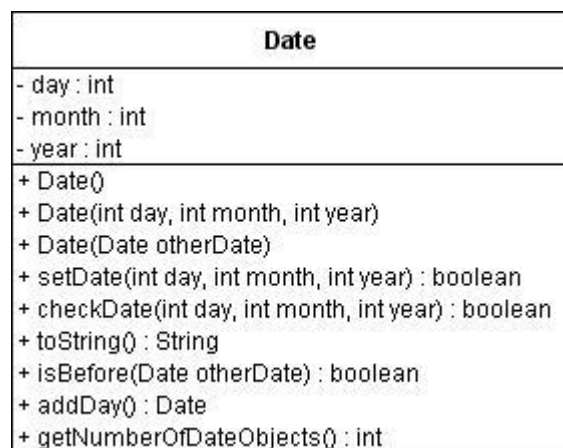
Please implement a **Date** class containing day, month and year as int (see lecture). Make sure that objects of the class **never contain invalid dates** by implementing and using a checkDate(...) (see below). The date class should understand and implement following methods:

- Date() // constructor that initializes the date with default value 1.1.1970
- Date(int newDay, int newMonth, int newYear) // constructor for a new date
- Date(Date other) // copy constructor
- boolean setDate(int newDay, int newMonth, int newYear) // sets the new value for the Date
- boolean checkDate(int cday, int cmonth, int cYear) // check month and day for proper values, should take different month lengths into account as well as leap years (every 4 years is a leap year, every 100 years is no leap year except for years divisible by 400 which are leap years) For this method I would like to have a javadoc comment!
- String toString() // returns a String of the form "dd.mm.yyyy"
- boolean isBefore(Date otherDate) // returns true if this date is before the passed date
- Date addDay() // returns a new Date object that is one day later as this date; please write as few as possible new code for this
- int getNumberOfDateObjects() // returns the number of Date objects created so far

Remarks:

To distinguish different cases you can use the if(condition) { statement } else {statement} java command. Please implement some simple tests in a main method to make sure your program works as expected. Please make sure to use class and method names as specified here.

UML



Upload

Once your program works correctly, please upload the File Date.java to Moodle (exercise3 upload).