

Linnaeus University

1DV532 – Starting out with Java

Assignment 2 Report

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# Report

## Exercise 1: Int

The exercise requires basic arithmetic for two integers in “Int” type. For the plus and div methods, we simply add or divide each of their respected field and return type “Int”.

## Exercise 2: SweID

This exercise contains lots of static classes for Swedish ID and checkers. However, we assume that users will supply ID the form of YYMMDD-XXXX, otherwise we will passthrough *inputHandlingAndConvertingIntoTheCorrectFormToFurtherProcessingIDCorrectly* method and convert it into the correct form.

* *getFirstPart* and *getSecondPart*: implying that user supply the correct form of the ID (i.e. 010203-0405), simply getting first 6 characters and last 4 characters of the ID, respectively.
* *isFemaleNumber* checks the third digit of 4 last digits is divisible by 2, otherwise it is a male number.
* *areEqual* is *toString* but worse in performance
* *isCorrect* checks if the ID is valid and requires 3 other methods: *isValidMonth, isValidDate, isValidChecksum*
  + *isValidMonth* checks if the month is between 01 to 12 (Gregorian calendar)
  + *isValidDate* check if the date is within the range of the month, meaning that if the month does not exist, *isValidDate* always returns false. It is also check if the year is leap to decide whether that February has 29 days or not.
    - *isLeap* check if the year is leap. It is the year that divisible by 4, and if the year is divisible by 100, it should also be divisible by 400.
  + *isValidChecksum* returns true if the checksum algorithm is similar as the result returned by *getChecksum*
    - *getChecksum*
  + If all those 3 methods return true then the ID is valid.

Note: since processing 2-digit years was the problem of those developers before Y2K, we shall use the Windows XP default approach when dealing with 2-digit years, or only between 1930 and 2029.

## Exercise 3: Pizza

This exercise

## Exercise 4: Money

Similar to exercise 4.

# Source code

Here is my source code for all the exercise.

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# Bibliography

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