CSC 2720: Data Structures and Algorithms
Lab 1

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(1) A leap year is commonly defined as a year, occurring once every four years, that has 366 days including February 29 as an intercalary day; but this definition is actually incomplete. These extra days occur in each year which is an integer multiple of 4, except for years evenly divisible by 100, which are not leap years unless evenly divisible by 400.

- For this lab you will write a Boolean function/method/sub routine called is leap year.
- This function should take in a number to represent the year in question and will rerun true if it is a leap year and false if it is not.

(2) Fibonacci sequences are often taught as an example in how to practice the principles of recursion, but in practice this is actually far from the best way of writing that solution. For this problem you will write two functions/methods/sub routines called recursiveFibonacci, iterativeFibonacci. Both taking in an integer that will represent that number in the Fibonacci sequence that will be returned when the functions/methods/sub routines are done running.

- The recursive Fibonacci method needs to find the result using a recursive program.
- The iterative Fibonacci method needs to find the result using a loop.
- You are to comment the code to describe why you feel one is better than the other given your current understanding of algorithms, and efficiency
- Comments graded for accuracy and understanding.