

# Homework Sheet 2

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## Problem 4

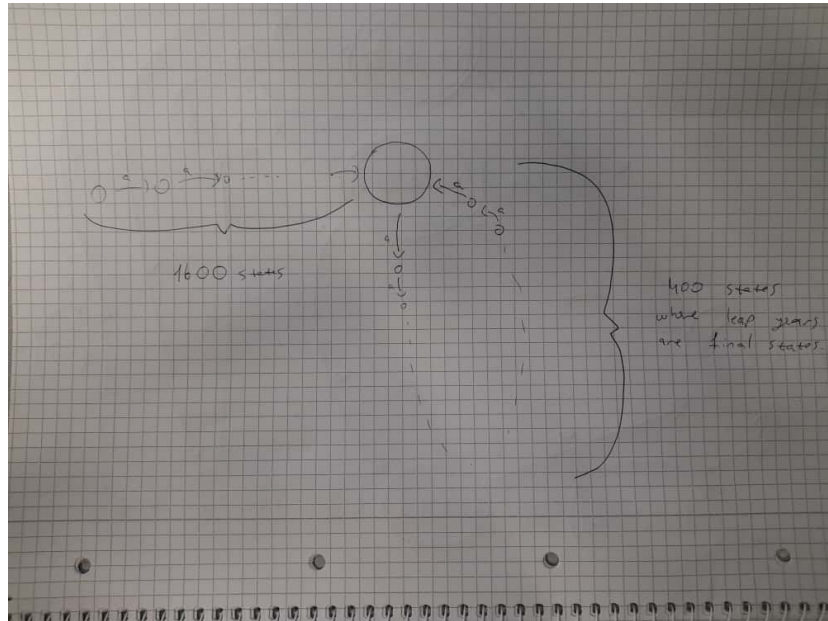


Figure 1: leap year dfa

We can design a DFA with 2000 states. The first 1600 states will be just a chain of states from 0 to 1599. After that we have a looping 400 states where leap years are final states. The chain part is for "> 1600" condition in the question. And the looping 400 states part is for detecting the leap years.