

# CPSC 351 — Tutorial Exercise #6

## Equivalence of Deterministic Finite Automata and Nondeterministic Finite Automata

### 1 About This Exercise

This exercise is intended to help you to understand the relationship between nondeterministic finite automata and deterministic finite automata, and the process for the conversion of a nondeterministic finite automaton to a deterministic finite automaton with the same language included in the lecture notes.

### Problems To Be Solved

1. Design a deterministic finite automaton for the language  $L(M)$  of the following nondeterministic finite automaton — which has alphabet  $\Sigma = \{a, b\}$  — and (if possible) confirm that your answer is correct.

