

Talen en Automaten

Additional assignments for exercise class on Fri 24th Nov, 2017

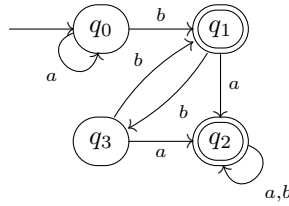
a) Let L be the following language over $A = \{a, b\}$.

$$L = \{w \in A^* \mid |w|_a \text{ is even and } w \text{ does not contain } bb \text{ as a subword}\}$$

i) Use the constructions for product and complement automata, given in the lecture, to construct an automaton M with $\mathcal{L}(M) = L$.

ii) Give the accepting computation in M for $abab$, and show that M does not accept abb .

b) Consider the following automaton, which we call M .



Use the state elimination method to construct a regular expression e such that $\mathcal{L}(e) = \mathcal{L}(M)$.