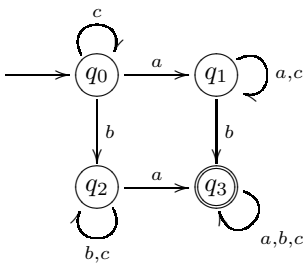
Formeel Denken 2006
Uitwerkingen Toets 4: Automaten

1.



2.

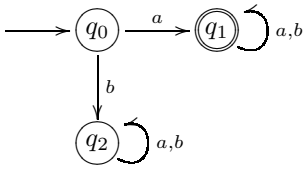
$$\begin{aligned} S &\rightarrow abS \mid aaC \mid baS \mid bbC \\ C &\rightarrow aC \mid bC \mid \lambda \end{aligned}$$

3.

$$M_2 = \langle \{a,b\}, \{q_0,q_1,q_2,q_3\}, q_0, \{q_3\}, \delta \rangle$$

$$\begin{gathered} \delta(q_0,a) = q_1 \\ \delta(q_0,b) = q_2 \\ \delta(q_1,a) = q_3 \\ \delta(q_1,b) = q_0 \\ \delta(q_2,a) = q_0 \\ \delta(q_2,b) = q_3 \\ \delta(q_3,a) = q_3 \\ \delta(q_3,b) = q_3 \end{gathered}$$

4. Deze grammatica produceert precies de taal $a\{a,b\}^*$.



(De clou van deze opgave is dat je moet inzien dat B iedere string in $\{a,b\}^*$ produceert, omdat $B \rightarrow S \rightarrow aB$.)

5.