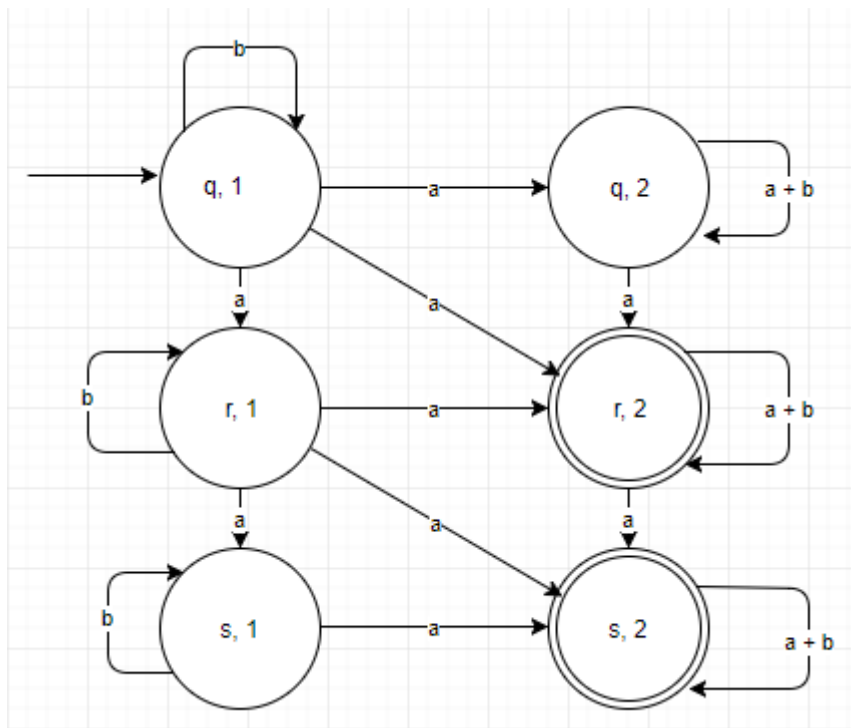


Talen en Automaten

Assignment 2

November 27, 2017

Exercise 1



a).

b). ba :

$$\delta(q_0, ba) =$$

$$\delta(\delta(q_0, b), a) =$$

$$\delta(q_0, a) =$$

$$\delta(\delta(q_0, a), \lambda) =$$

$$\delta(q_1, \lambda) =$$

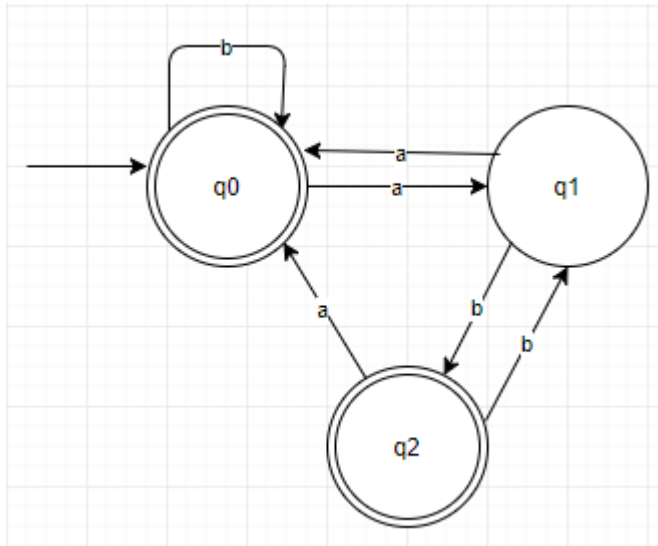
$$\lambda$$

c). $L_1 = \emptyset$,

$$L_2 = \{w \in A \mid |w|_a \text{ en } |w|_b \text{ zijn even}\},$$

$$L_3 = \{w \in A \mid ||w|_b - |w|_a| \text{ is oneven}\}$$

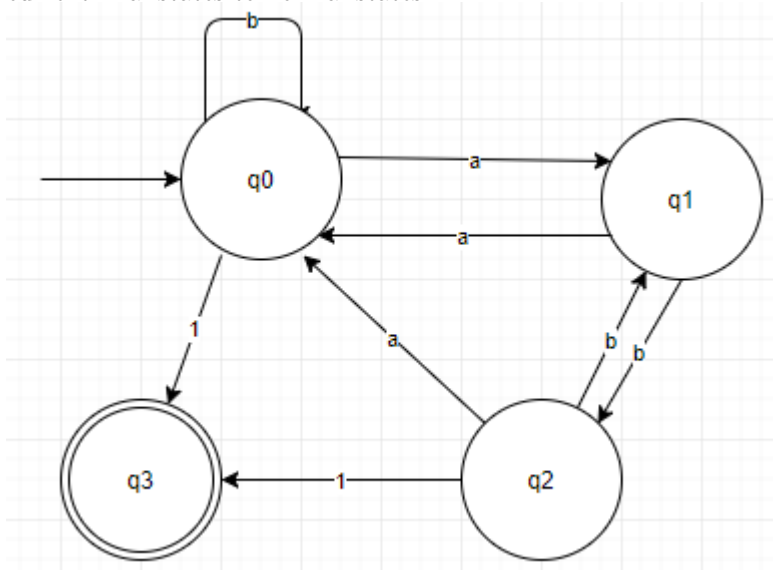
Exercise 2



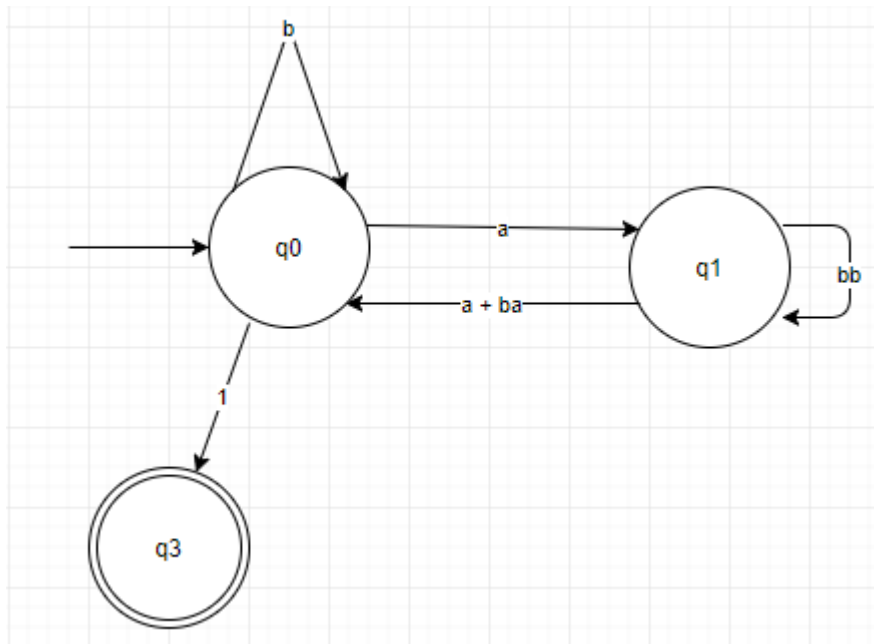
a).

b). $L = a(bb)^*(a+ba)+b$

First we have to add an extra final state with a cost of 1 to the diagram and change the current final states to normal states:



After that we can start to remove states, starting with q2:



Finally we can remove q1, which will leave us with an expression:

