

1 Aufgabe

$$G = (T, N, S, P) \quad (1)$$

$$T = \{a, b, c\} \quad (2)$$

$$N = \{S, X\} \quad (3)$$

$$P = \{S \mapsto X \quad (4)$$

$$X \mapsto XX \quad (5)$$

$$X \mapsto aa \quad (6)$$

$$X \mapsto bb \quad (7)$$

$$X \mapsto cc\} \quad (8)$$

Konstruktion eines DEA:

$$\Sigma = T \quad (9)$$

$$Q = N \cup \{q_2\} = \{q_0, q_1, q_2, q_3\} \quad (10)$$

$$q_0 = S \quad (11)$$

$$F = \{q_f\} = q_0 \quad (12)$$

$$\delta(q_0, a) = q_1 \quad (13)$$

$$\delta(q_1, a) = q_1 \quad (14)$$

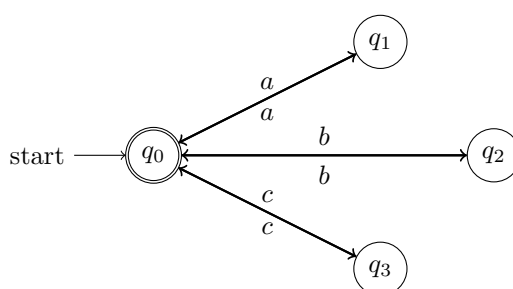
$$\delta(q_0, b) = q_1 \quad (15)$$

$$\delta(q_2, b) = q_1 \quad (16)$$

$$\delta(q_0, c) = q_1 \quad (17)$$

$$\delta(q_3, c) = q_1 \quad (18)$$

$$(19)$$



2 Aufgabe

| | a | b | c |
|----------------|----------------|----------------|----------------|
| q ₀ | q ₁ | q ₃ | q ₅ |
| q ₁ | - | q ₂ | q ₆ |
| q ₂ | - | - | q ₀ |
| q ₃ | q ₂ | - | q ₄ |
| q ₄ | q ₀ | - | - |
| q ₅ | q ₆ | q ₄ | - |
| q ₆ | - | q ₀ | - |

$$G = (T, N, S, P) \quad (20)$$

$$T = \{a, b, c\} \quad (21)$$

$$N = \{S, A, B, C, D, E, F\} \quad (22)$$

$$P = \{S \mapsto aA \quad (23)$$

$$A \mapsto bD \quad (24)$$

$$A \mapsto cE \quad (25)$$

$$D \mapsto cS \quad (26)$$

$$D \mapsto c \quad (27)$$

$$S \mapsto bB \quad (28)$$

$$B \mapsto aD \quad (29)$$

$$B \mapsto cF \quad (30)$$

$$E \mapsto bS \quad (31)$$

$$E \mapsto b \quad (32)$$

$$S \mapsto cC \quad (33)$$

$$C \mapsto aE \quad (34)$$

$$C \mapsto bF \quad (35)$$

$$F \mapsto aS \quad (36)$$

$$F \mapsto a \quad (37)$$