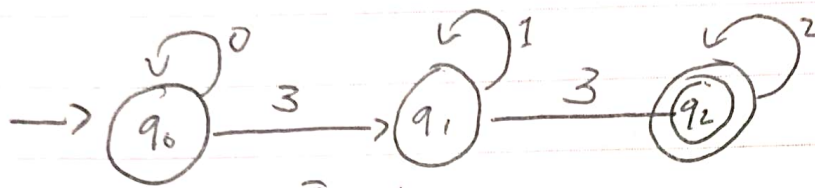


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Soal



Jawaban

1. Tabel Transisi

S	0	1	2
q_0	q_0	\emptyset	\emptyset
q_1	\emptyset	q_1	\emptyset
q_2	\emptyset	\emptyset	q_2

2. ϵ -closure setiap state

$$\epsilon\text{-closure}(q_0) = (q_0, q_1, q_2)$$

$$\epsilon\text{-closure}(q_1) = (q_1, q_2)$$

$$\epsilon\text{-closure}(q_2) = (q_2)$$

3. Tentukan δ'

$$\delta'(q_0, 0) = \epsilon\text{-closure}(\delta(\epsilon\text{-closure}(q_0), 0))$$

$$= \epsilon\text{-closure}(\delta(q_0, q_1, q_2), 0)$$

$$= \epsilon\text{-closure}(\emptyset)$$

$$= (q_0, q_1, q_2)$$

$$\delta(q_0, 1) = \epsilon\text{-closure}(\delta(\epsilon\text{-closure}(q_0), 1))$$

$$= \epsilon\text{-closure}(\delta(q_0, q_1, q_2), 1)$$

$$= \epsilon\text{-closure}(q_1)$$

$$= (q_1, q_2)$$

No.

Date. / /

$$\begin{aligned}
 \delta'(q_0, 2) &= \epsilon\text{-closure}(\delta(\epsilon\text{-closure}(q_0, 2))) \\
 &= \epsilon\text{-closure}(\delta(q_0, q_1, q_2, 2)) \\
 &= \epsilon\text{-closure}(q_2) \\
 &= (q_2)
 \end{aligned}$$

$$\begin{aligned}
 \delta'(q_1, 0) &= \epsilon\text{-closure}(\delta(\epsilon\text{-closure}(q_1, 0))) \\
 &= \epsilon\text{-closure}(\delta(q_1, q_2, 0)) \\
 &= \epsilon\text{-closure}(\emptyset) \\
 &= \text{null} / \emptyset
 \end{aligned}$$

$$\begin{aligned}
 \delta'(q_1, 1) &= \epsilon\text{-closure}(\delta(\epsilon\text{-closure}(q_1, 1))) \\
 &= \epsilon\text{-closure}(\delta(q_1, q_2, 1)) \\
 &= \epsilon\text{-closure}(q_1) \\
 &= (q_1, q_2)
 \end{aligned}$$

$$\begin{aligned}
 \delta'(q_1, 2) &= \epsilon\text{-closure}(\delta(\epsilon\text{-closure}(q_1, 2))) \\
 &= \epsilon\text{-closure}(\delta(q_1, q_2, 2)) \\
 &= \epsilon\text{-closure}(q_2) \\
 &= (q_2)
 \end{aligned}$$

$$\begin{aligned}
 \delta'(q_2, 0) &= \epsilon\text{-closure}(\delta(\epsilon\text{-closure}(q_2, 0))) \\
 &= \epsilon\text{-closure}(\delta(q_2, 0)) \\
 &= \epsilon\text{-closure}(\emptyset) \\
 &= \text{null} / \emptyset
 \end{aligned}$$

$$\begin{aligned}
 \delta'(q_2, 1) &= \epsilon\text{-closure}(\delta(\epsilon\text{-closure}(q_2, 1))) \\
 &= \epsilon\text{-closure}(\delta(q_2, 1)) \\
 &= \epsilon\text{-closure}(\emptyset) \\
 &= \text{null} / \emptyset
 \end{aligned}$$

$$\begin{aligned}
 \delta'(q_2, 2) &= \epsilon\text{-closure}(\delta(\epsilon\text{-closure}(q_2, 2))) \\
 &= \epsilon\text{-closure}(\delta(q_2, 2)) \\
 &= \epsilon\text{-closure}(q_2) \\
 &= (q_2)
 \end{aligned}$$

4. Tabel Transisi NFA tanpa ϵ -move

δ	0	1	2
q_0	q_0, q_1, q_2	q_1, q_2	q_2
q_1	\emptyset	q_1, q_2	q_2
q_2	\emptyset	\emptyset	\emptyset

5. State Akhir

- himpunan state akhir semula adalah $\{q_2\}$
- ϵ -closure yang memuat state q_2 adalah $\epsilon\text{-closure}(q_2) = \{q_2\}$
- $f = \{q_2\}$

