



تمرین شماره ۲ درس نظریه زبان ها و ماشین ها

مهلت تحویل: ۳ آبان ۱۴۰۴

عبارت باقاعده متناظر با هر یک از ماشین های زیر را به دست آورید:

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$$Q = \{q_0, q_1, q_2\}, \Sigma = \{0, 1\}, q_0 \text{ حالت شروع}, F = \{q_2\}$$

$$\delta(q_0, 0) = q_0 \quad \delta(q_0, 1) = q_1$$

$$\delta(q_1, 0) = q_2 \quad \delta(q_1, 1) = q_1$$

$$\delta(q_2, 0) = q_0 \quad \delta(q_2, 1) = q_1$$

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$$Q = \{q_0, q_1\}, \Sigma = \{a, b\}, q_0 \text{ حالت شروع}, F = \{q_0\}$$

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

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

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$$Q = \{q_0, q_1, q_2\}, \Sigma = \{0, 1\}, q_0 \text{ حالت شروع}, F = \{q_0, q_1\}$$

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$$Q = \{q_0, q_1\}, \Sigma = \{0, 1\}, q_0 \text{ حالت شروع}, F = \{q_1\}$$

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$$Q = \{q_0, q_1, q_2\}, \Sigma = \{a, b\}, q_0 \text{ حالة شروع}, F = \{q_2\}$$

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

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$$\begin{aligned}\delta(q_0, 0) &= q_1 & \delta(q_0, 1) &= q_0 \\ \delta(q_1, 0) &= q_2 & \delta(q_1, 1) &= q_1 \\ \delta(q_2, 0) &= q_0 & \delta(q_2, 1) &= q_2\end{aligned}$$

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

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$$Q = \{q_0, q_1, q_2\}, \Sigma = \{0, 1\}, q_0 \text{ حالة شروع}, F = \{q_0, q_1\}$$

$$\begin{aligned}\delta(q_0, 0) &= q_0 & \delta(q_0, 1) &= q_1 \\ \delta(q_1, 0) &= q_0 & \delta(q_1, 1) &= q_2 \\ \delta(q_2, 0) &= q_2 & \delta(q_2, 1) &= q_2\end{aligned}$$

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$$Q = \{q_0, q_1, q_2\}, \Sigma = \{a, b\}, q_0 \text{ حالة شروع}, F = \{q_1\}$$

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