

Example

$$A = (\{q_0, q_1, q_2\}, \{a, b\}, \delta, q_0, \{q_1\}).$$

$$\delta(q_0, a) = \{q_1, q_2\}.$$

$$\delta(q_0, b) = \{q_0\}.$$

$$\delta(q_1, a) = \{q_1, q_2\}.$$

$$\delta(q_1, b) = \{q_1\}.$$

$$\delta(q_2, a) = \emptyset.$$

$$\delta(q_2, b) = \{q_0, q_2\}.$$

$$\delta(\emptyset, a) = \emptyset.$$

$$\delta(\emptyset, b) = \emptyset.$$

$$\delta(\{q_0\}, a) = \{q_1, q_2\}.$$

$$\delta(\{q_0\}, b) = \{q_0\}.$$

$$\delta(\{q_1\}, a) = \{q_1, q_2\}.$$

$$\delta(\{q_1\}, b) = \{q_1\}.$$

$$\delta(\{q_2\}, a) = \emptyset.$$

$$\delta(\{q_2\}, b) = \{q_0, q_2\}.$$

$$\delta(\{q_0, q_1\}, a) = \{q_1, q_2\}.$$

$$\delta(\{q_0, q_1\}, b) = \{q_0, q_1\}.$$

$$\delta(\{q_0, q_2\}, a) = \{q_1, q_2\}.$$

$$\delta(\{q_0, q_2\}, b) = \{q_0, q_2\}.$$

$$\delta(\{q_1, q_2\}, a) = \{q_1, q_2\}.$$

$$\delta(\{q_1, q_2\}, b) = \{q_0, q_1, q_2\}.$$

$$\delta(\{q_0, q_1, q_2\}, a) = \{q_1, q_2\}.$$

$$\delta(\{q_0, q_1, q_2\}, b) = \{q_0, q_1, q_2\}.$$

Starting state: $\{q_0\}$

Accepting States: $\{\{q_1\}, \{q_0, q_1\}, \{q_1, q_2\}, \{q_0, q_1, q_2\}\}.$