. Construct a nondeterministic finite automaton accepting $\{ab, ba\}$, and use it o find a deterministic automaton accepting the same set.

. Construct a nondeterministic finite automaton accepting the set of all strings ver $\{a, b\}$ ending in *aba*. Use it to construct a DFA accepting the same set of trings.

. The transition table of a nondeterministic finite automaton M is given in Table 2.25. Construct a deterministic finite automaton equivalent to M.

Table 2.25 Transition Table for Exercise 2.7

State	0	1	2
$\rightarrow q_0$	q_1q_4	q_4	q_2q_3
q_1		q_4	
q_2			q_2q_3
$\textcircled{q_3}$		q_4	
q_4			

8. Construct a DFA equivalent to the NDFA given in Fig. 2.8.

9. $M = (\{q_1, q_2, q_3\}, \{0, 1\}, \delta, q_1, \{q_3\})$ is a nondeterministic finite automaton, where δ is given by

$$\delta(q_1, 0) = \{q_2, q_3\} \quad \delta(q_1, 1) = \{q_1\}$$
$$\delta(q_2, 0) = \{q_1, q_2\} \quad \delta(q_2, 1) = \emptyset$$
$$\delta(q_3, 0) = \{q_2\} \quad \delta(q_3, 1) = \{q_1, q_2\}$$

Construct an equivalent DFA.

total number

14. Construct a minimum state automaton equivalent to a given automaton M whose transition table is given in Table 2.28.

Table 2.28 FA of Exercise 2.14

States	Input	
	a	b
$\rightarrow q_0$	q_0	q_3
q_1	q_2	q_5
q_2	q_3	q_4
q_3	q_0	q_5
q_4	q_0	q_6
q_5	q_1	q_4
$\textcircled{q_6}$	q_1	q_3