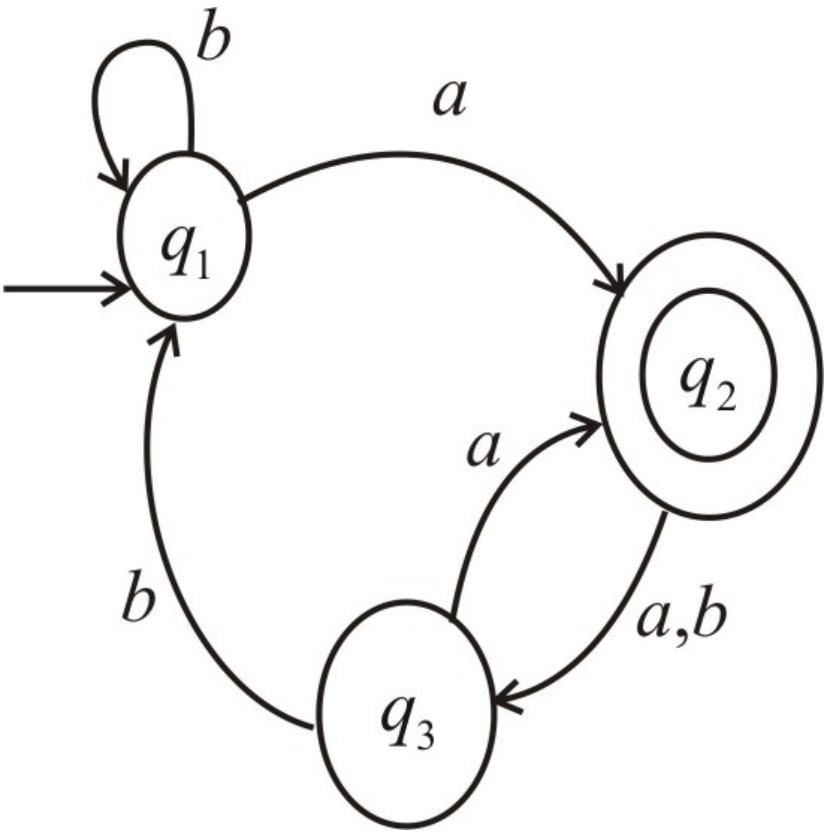
获得的答案 **返回**

Given state diagram for the machine M_1 is



Formal definition of a finite automata is

A finite automaton is a 5-tupel (Q,Σ,δ,q_0,F)

Where

1. Q is a finite set called states

2. Σ is a finite set called alphabet

3. $\delta : Q \times \Sigma \to Q$ is the transition function.

4. $q_0 \in Q$ is the start state

5. $F \subseteq Q$ is the set of accept states.

Now we can describe M_1 formally by writing $M_1 = (Q,\Sigma,\delta,q_1,F)$, where

1. $Q = \{q_1,q_2,q_3\}$

2. $\Sigma = \{a,b\}$

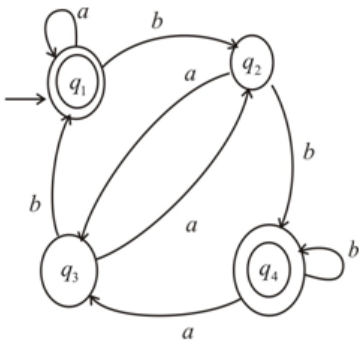
3. δ is described as

	a	b
q_1	q_2	q_1
q_2	q_3	q_3
q_3	q_2	q_3

4. q_1 is the start state

5. Set of accept states $F = \{q_2\}$.

Given state diagram for the machine M_2 is



M_2

Now we can describe M_2 formally by writing

$M_2 = (Q, \Sigma, \delta, q_1, F)$, where

1. Set of states $Q = \{q_1, q_2, q_3, q_4\}$

2. Set of alphabet $\Sigma = \{a, b\}$

3. δ is described as

	a	b
q_1	q_1	q_2
q_2	q_3	q_4
q_3	q_2	q_1
q_4	q_3	q_4

4. q_1 is the start state

5. Set of accept states $F = \{q_1, q_4\}$