

CS 222 Hw

Hw 9 Finite machines Jeremiah Webb

1.

$$S = \{q_0, q_1, q_2, q_3, q_4\}$$

$$\Sigma = \{0, 1\}$$

$$q_0 = q_0$$

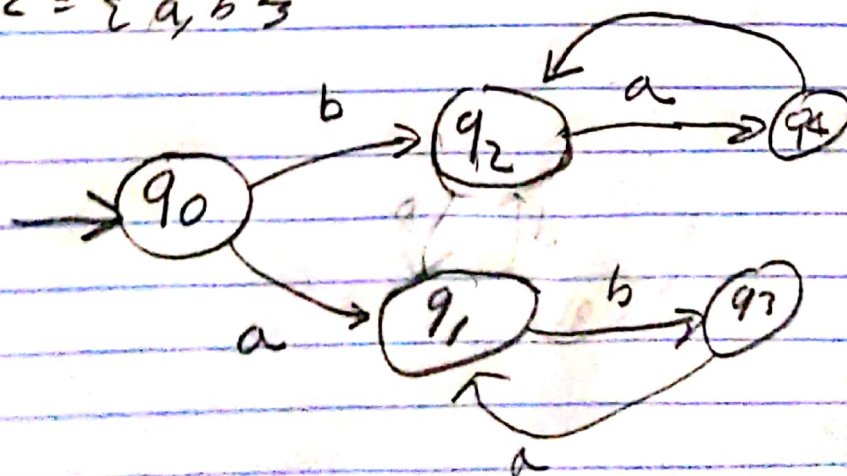
$$F = \{q_3, q_4\}$$

States	0	1
q_0	q_1	q_2
q_1	q_3	q_2
q_2	q_1	q_4
q_3	q_3	q_2
q_4	q_1	q_4

2.

$$S = \{q_0, q_1, q_2, q_3, q_4\}$$

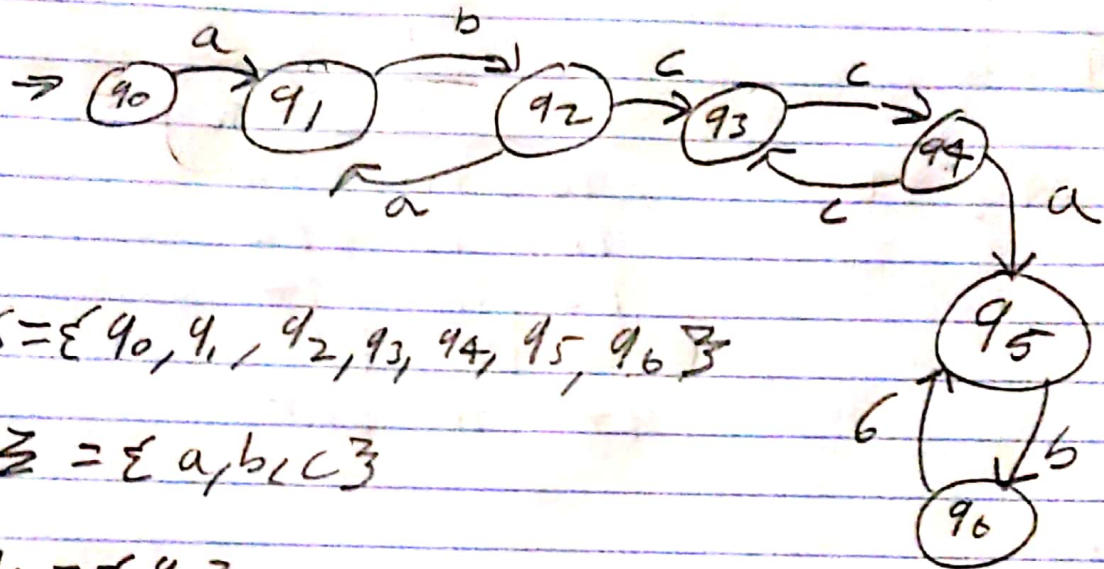
$$\Sigma = \{a, b\}$$



3.

$$L = (ab)^* + (cc)^* + (ab)^*$$

$$M = \{S, \varepsilon, q_0, F, \delta\}$$



$$S = \{q_0, q_1, q_2, q_3, q_4, q_5, q_6\}$$

$$\Sigma = \{a, b, c\}$$

$$q_0 = \{q_0\}$$

$$F = \{q_6\}$$

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

$$\delta(q_1, b) = q_2$$

$$\delta(q_2, a) = q_1$$

$$\delta(q_2, c) = q_3$$

$$\delta(q_3, c) = q_4$$

$$\delta(q_4, a) = q_5$$

$$\delta(q_4, c) = q_5$$

$$\delta(q_5, b) = q_6$$

$$\delta(q_6, c) = q_5$$