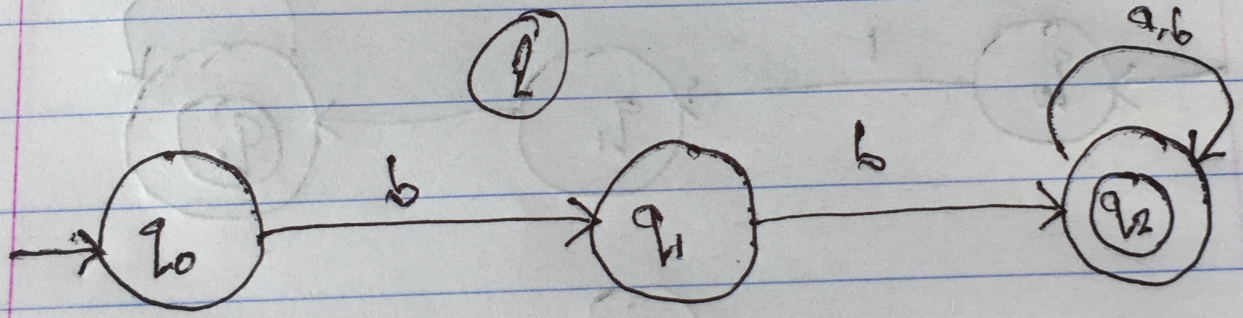
Finite Automata

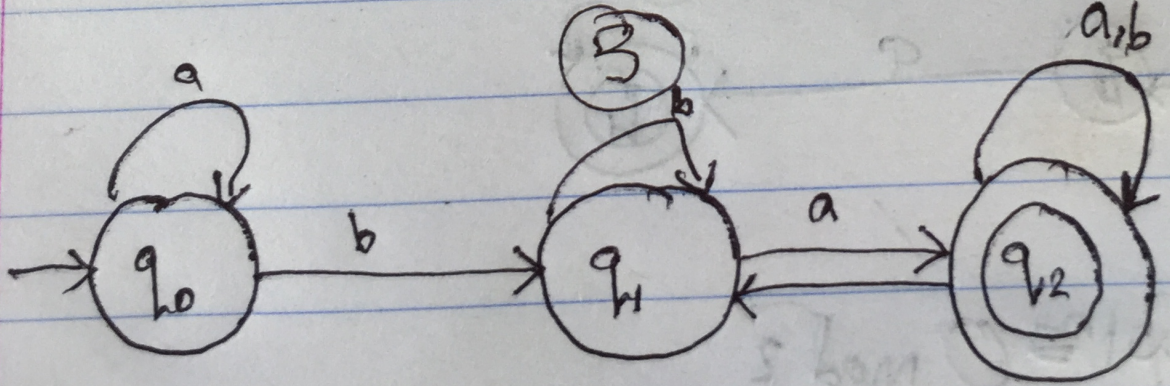
1 Finite automata is a simple idealized machine used to recognize patterns within input taken from some characters set (or alphabet).

Finite automata can be represented by input tapes and finite control.

i Input tape:- It is a linear tape having some numbers of cells. Each input symbol is placed in each cell.

ii Finite Control: It decides the next state on receiving particular input from input tape.

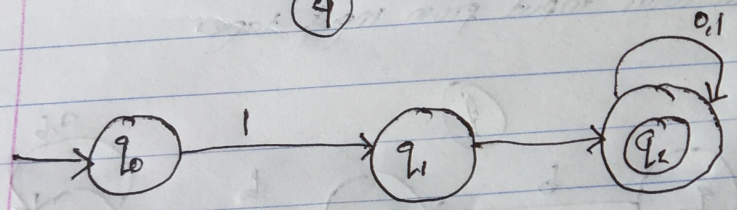




The transition table;

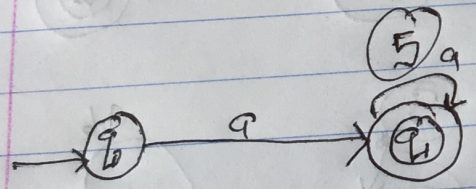
	a	b
q_0	q_0	q_1
q_1	q_2	q_1
q_2	q_2	q_2

(4)

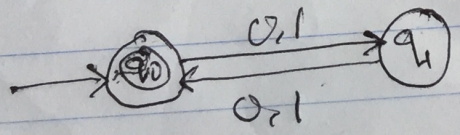


i

(5)



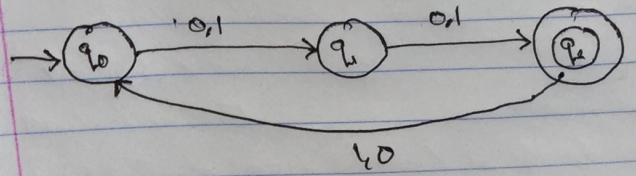
ii $|w| \equiv 0 \bmod 2$



Ex

$\{2, 5, 8, 4\} = \{00, 01, 111, 11, 1111, \ldots\}$

iii $|w| \equiv 2 \bmod 3$



iv at most 3 i.e $\{0, 1, 2, 3\}$