

recognize patterns within input taken
some character set

to automata. Can be represented by
a type and finite control

input tape: is a linear tape having some

number of cells. Each input symbol is
written in each cell

Control: It decides the ^{next} ~~next~~ state on

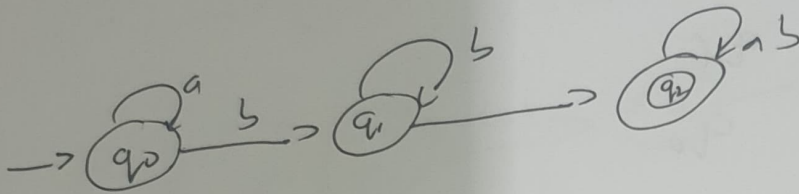
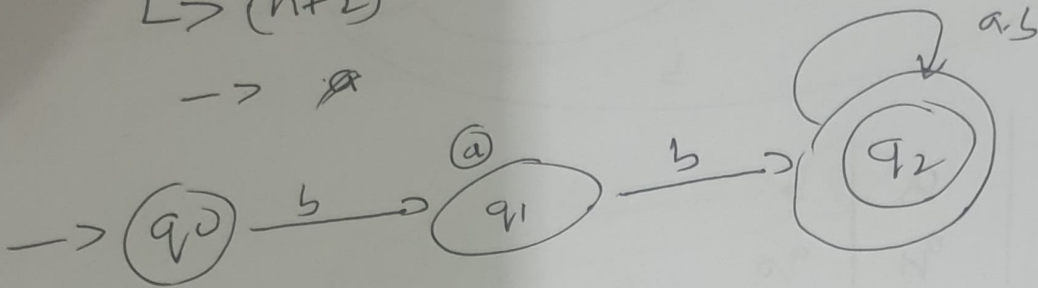
receiving particular input from input tape.

②

$$\text{Regexp} = \rightarrow \cdot bb(a+b)^*$$

$$L \rightarrow (n+2) = (2+2) = 4$$

\rightarrow ~~A~~



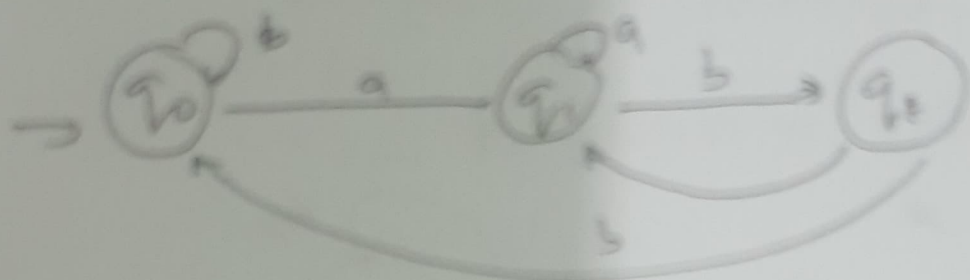
Transition table

	a	b
q0	q0	q1
q1	q2	q1
q2	q2	q2

① regular $(a+b)^*$ a^*b^*

$$L \supseteq n+1 \geq (a+b) \geq 3$$

- a^*b^*
- a^*b
- a^*ba^*



State	a	b
q_0	q_1	q_0
q_1	q_1	q_2
q_2	q_1	q_0

$$L \rightarrow n+1 = (2+1) = 3$$

④

regular $(11^* (1+0)^*)$

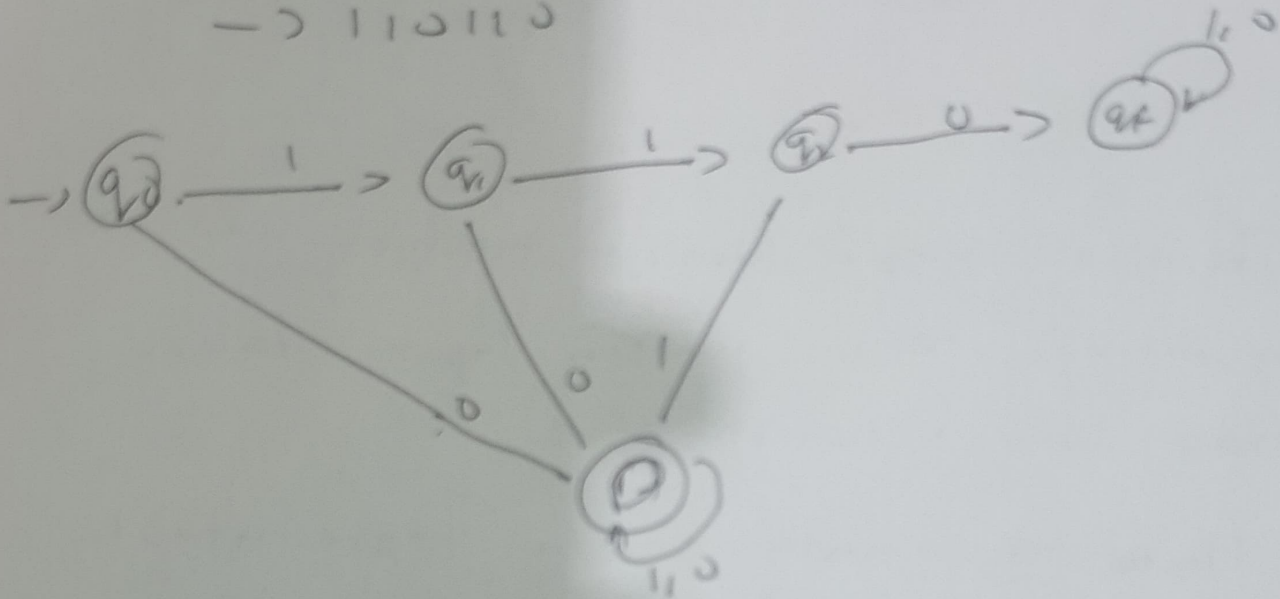
$$L \rightarrow (n+2) = (3+2) = 5$$

$\rightarrow 110$

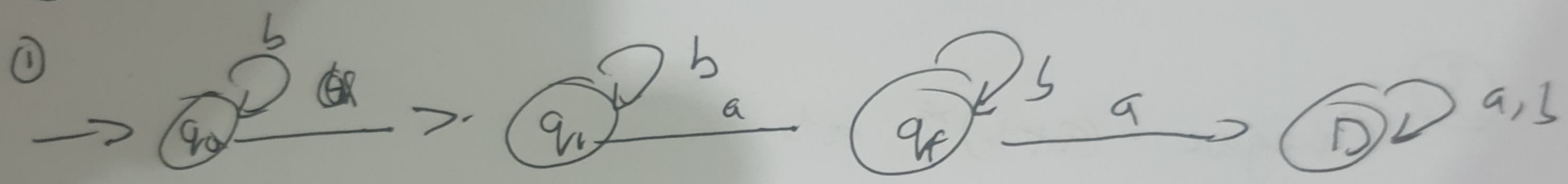
$\rightarrow 1101$

$\rightarrow 11011$

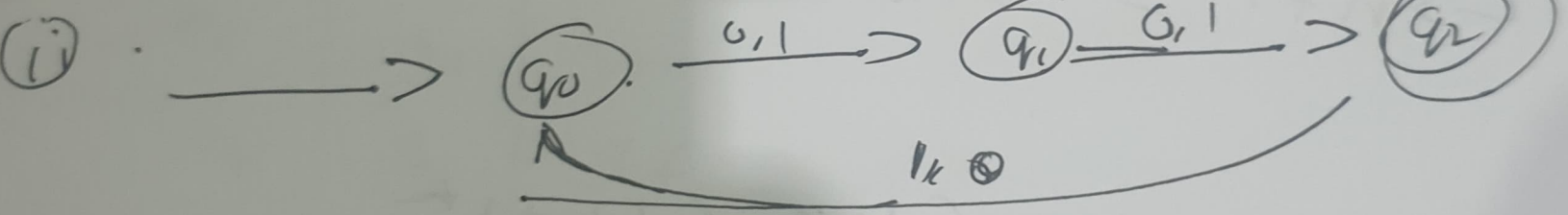
$\rightarrow 110110$



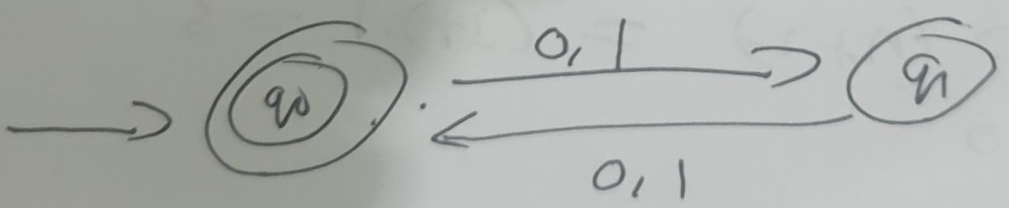
(i)



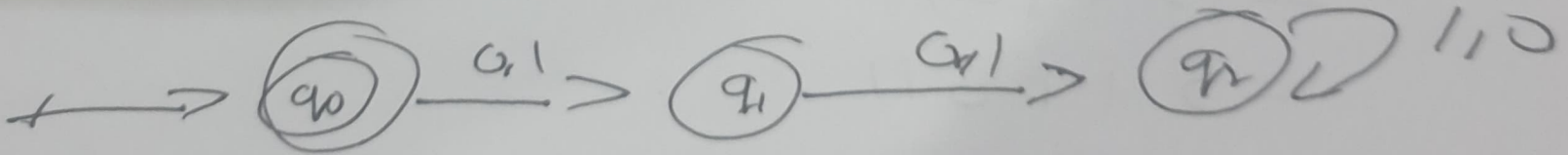
(ii)



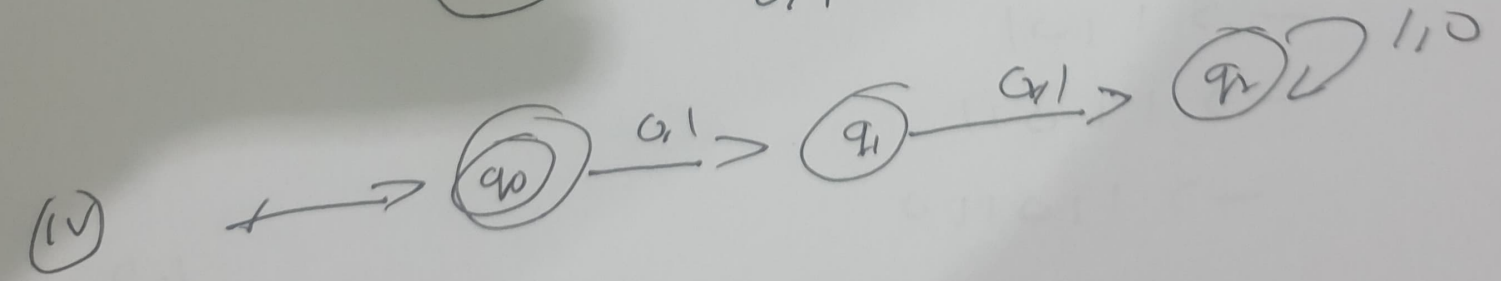
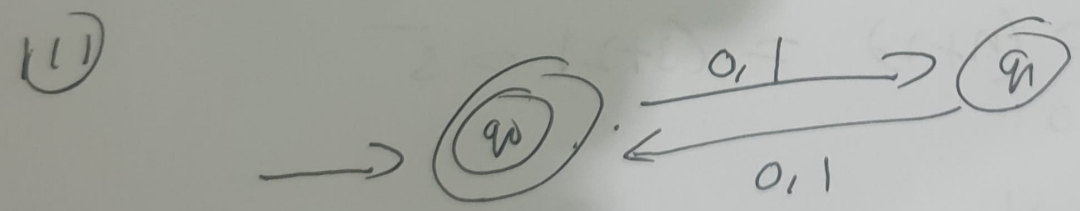
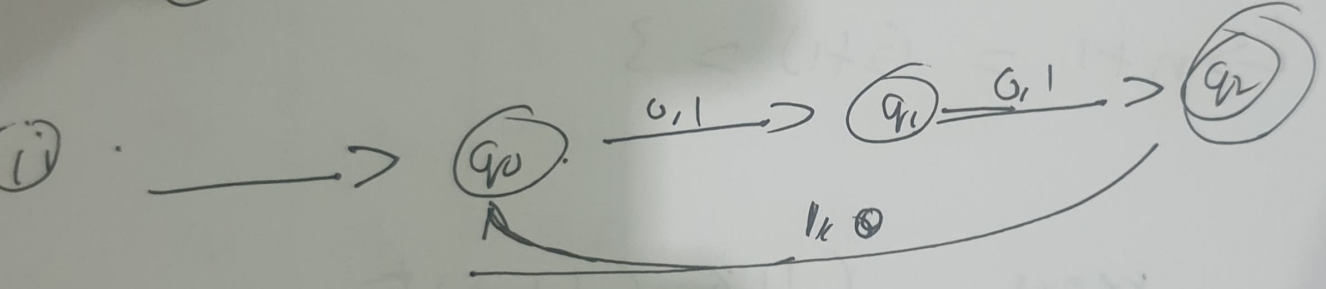
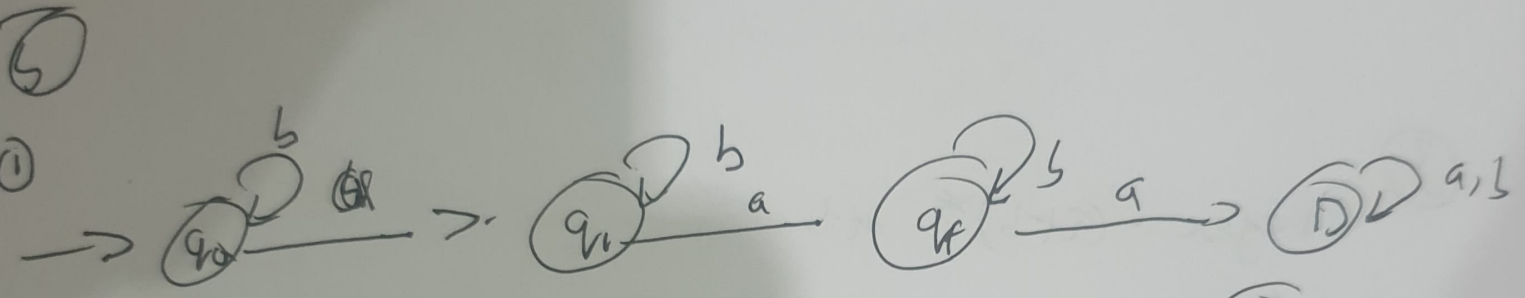
(iii)



(iv)



- a b
 - a a b
 - a b a b



This is a simple idealized machine used to