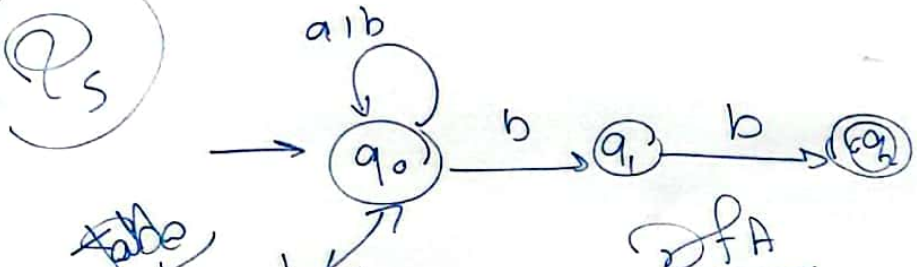
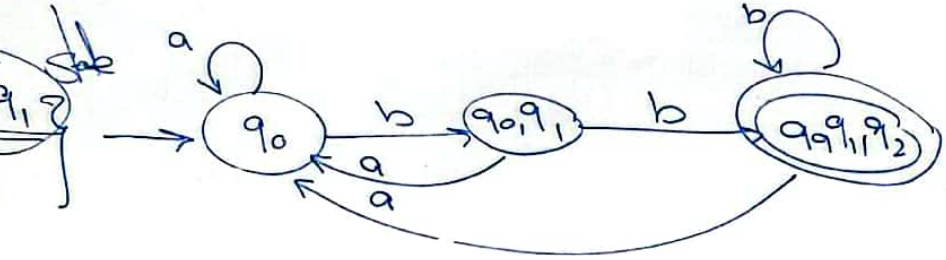
Converting NFA to DFA.

Q5



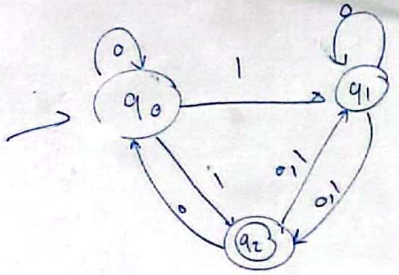
NFA

	a	b
→ q_0	q_0	q_0, q_1, q_2
q_1	—	q_2
* q_2	—	—



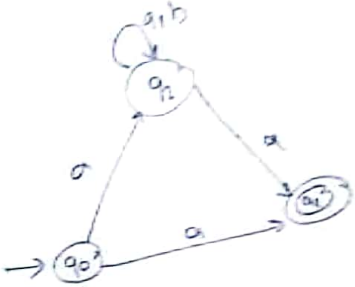
DFA

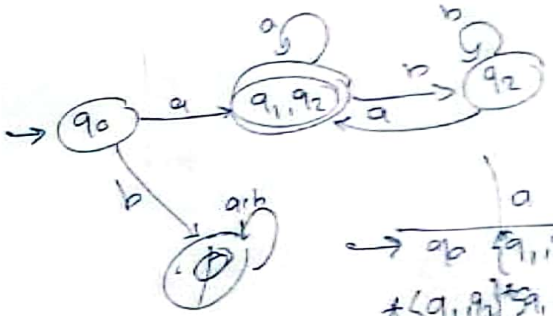
	a	b
→ q_0	q_0	$\{q_0, q_1\}$
$\{q_0, q_1\}$	q_0	$\{q_0, q_1, q_2\}$
* $\{q_0, q_1, q_2\}$	q_0	$\{q_0, q_1, q_2\}$



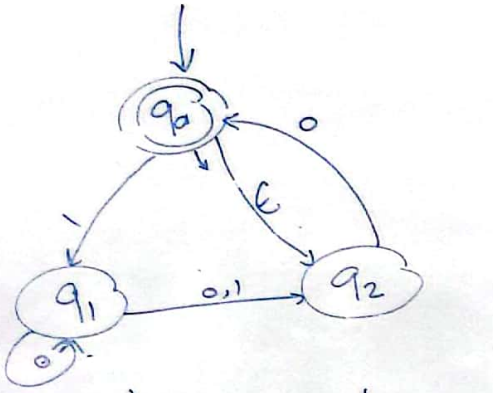
	0	1
→ q_0	q_0	q_1, q_2
q_1	q_1, q_2	q_2
* q_2	q_0, q_1	q_1

	a	b
→ q_0	q_1, q_2	—
* q_1	—	—
q_2	q_1, q_2	q_2

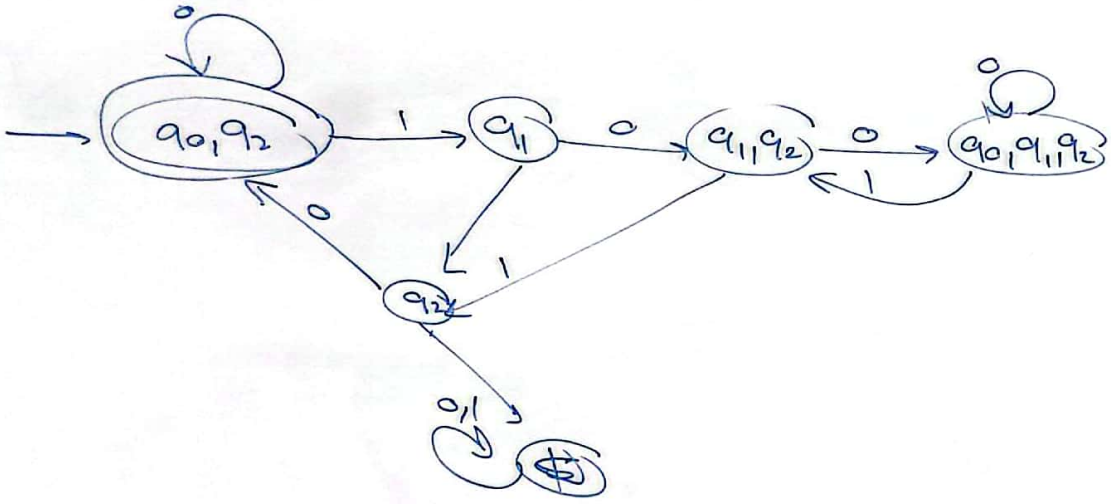


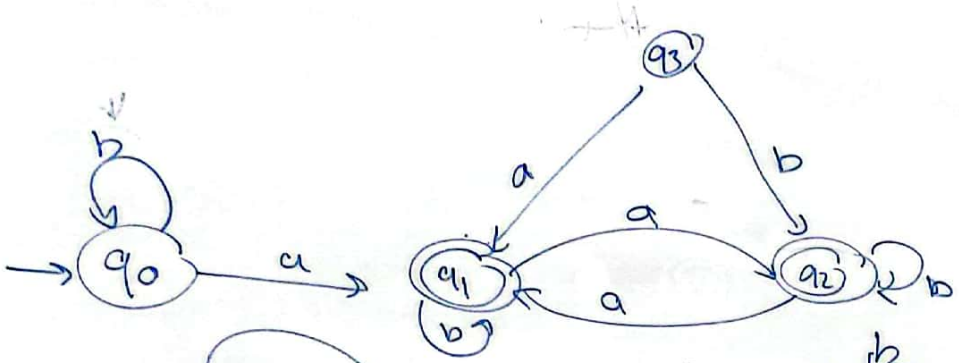


	a	b
→ q_0	$\{q_1, q_2\}$	ϕ
* $\{q_1, q_2\}$	$\{q_1, q_2\}$	q_2
q_2	$\{q_1, q_2\}$	q_2
→ ϕ	ϕ	ϕ



	0	1	ε
→ q_0	=	q_1	q_2
q_1	q_1, q_2	q_2	—
q_2	q_0	—	—

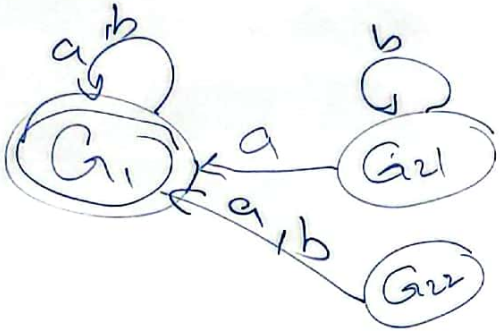




Grouth

G_1: finalstates

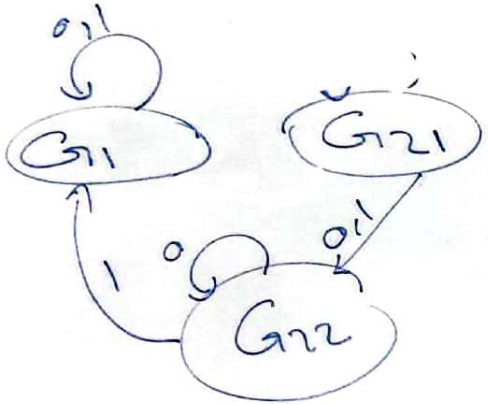
G_2: non finalstates.

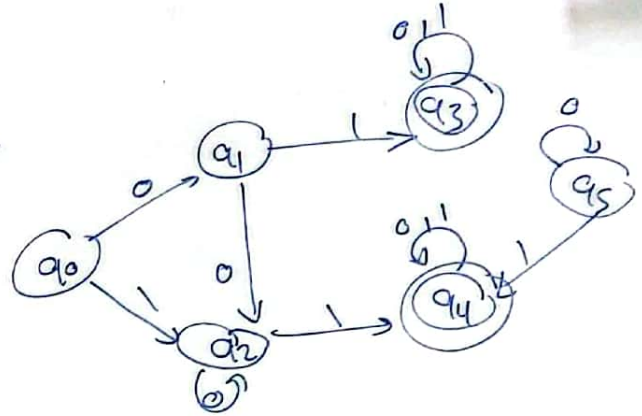


G_1

	a	b
q_1	$G_1(q_2)$ $G_2(q_1)$	$G_1(q_1)$ $G_2(q_1)$
q_2	$G_1(q_1)$ $G_2(q_2)$	$G_1(q_2)$ $G_2(q_2)$

G_{21}	a	b
q_0	$G_1(q_1)$	$G_2(q_0)$
q_3	$G_1(q_1)$	$G_2(q_2)$





G_2

	0	1
q_0	$G_{22}(q_1)\,G_{22}(q_2)$	
q_1	$G_{22}(q_2)\,G_1(q_3)$	
q_2	$G_{22}(q_2)\,G_1(q_4)$	
q_5	$G_1(q_5)\,G_1(q_4)$	

G_{21}

G_{22}

G_1

	0	1
q_3	$G_1(q_3)\,G_1(q_3)$	
q_4	$G_1(q_4)\,G_1(q_4)$	