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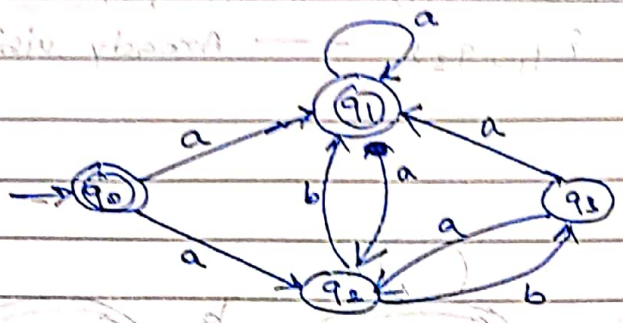
RA1811028010086
Aayush Mahajan

Q17) NFA → DFA



transition table for NFA

	a	b
→* q_0	$\{q_1, q_2\}$	-
*q_1	$\{q_1, q_2\}$	-
q_3	$\{q_1, q_2\}$	-
q_2	-	$\{q_1, q_3\}$

transition table for DFA

	a	b
→*$\{q_0\}$	$\{q_1, q_2\}$	ϕ
*$\{q_1, q_2\}$	$\{q_1, q_2\}$	$\{q_1, q_3\}$
*$\{q_1, q_3\}$	$\{q_1, q_2\}$	ϕ

① $\{q_0\}$

$\delta_D = \delta_N(\{q_0\}, a) = \{q_1, q_2\}$ —— (1)

$\{q_1, q_2\}$

$\delta_D\{q_1, q_2\} = \delta_N(\{q_1, q_2\}, a) = \delta_N\{q_1, a) \cup \delta_N(q_2, a)$

$= \{q_1, q_2\} \cup \{\phi\} = \{q_1, q_2\}$

— Already visited

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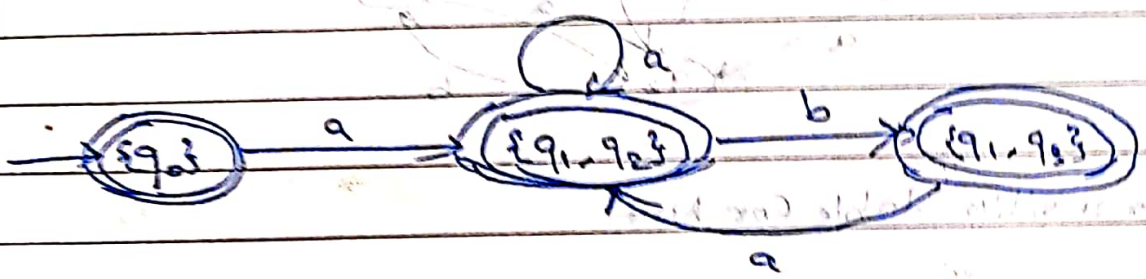
$\delta_D(\{q_1, q_3\}, a) = \delta_N(q_1, a) \cup \delta_N(q_3, a)$

$= \{q_1, q_2\}$ — Already visited

$\delta_D(\{q_1, q_2\}, b) = \delta_N(q_1, b) \cup \delta_N(q_2, b)$

$= \{q_1, q_3\}$ — Already visited



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