Indirect Method:

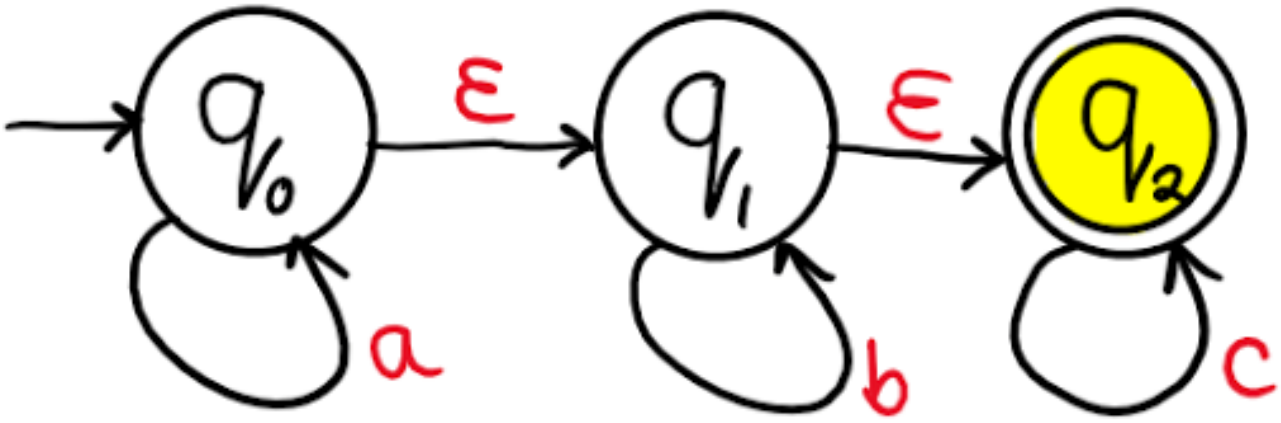
In this method,

Step 01: Convert NFA with ∈ moves to NFA without ∈ moves.

Step 02: Than NFA without ∈ moves is converted to the DFA.

RGPV PYQs:

Convert the following NFA with ε in to DFA using the indirect method of conversion.

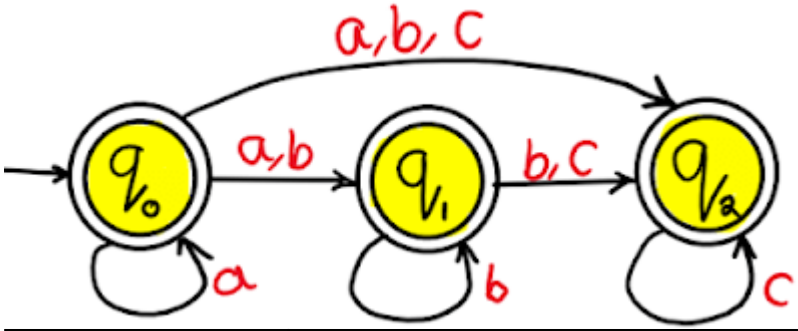


NFA with ∈

Solution:

Step 01: Convert NFA with ∈ moves to NFA without ∈ moves.

- ∈-Closure of q0: {q0, q1, q2}
- ∈-Closure of q1: {q1, q2}
- ∈-Closure of q2: {q2}



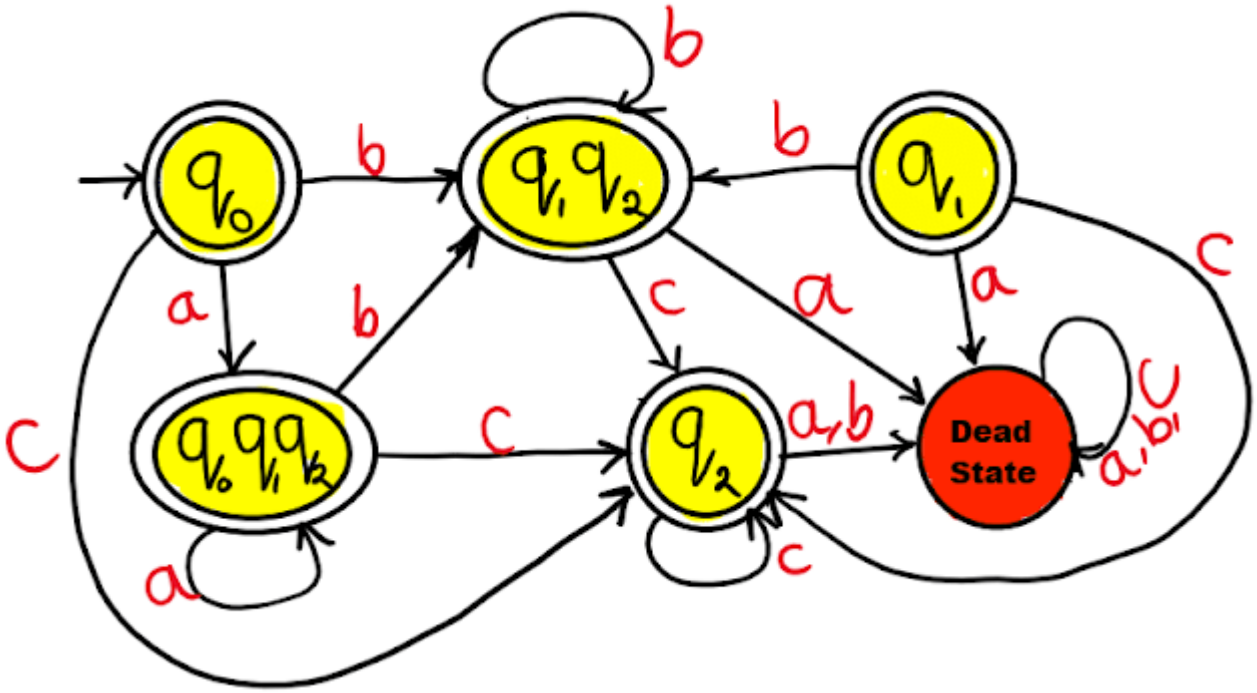
State	a	b	C
è q0	{q0, q1, q2}	{q1, q2}	{q2}
q1	Φ	{q1, q2}	{q2}
q2	Φ	Φ	{q2}

Transition table: NFA without ∈

Step 02: NFA without ∈ moves is converted to the DFA using the subset construction method.

State	a	b	C
{q0}	{q0, q1, q2}	{q1, q2}	{q2}
{q1}	DeadState	{q1, q2}	{q2}

{q2}	DeadState	DeadState	{q2}
{q0, q1, q2}	{q0, q1, q2}	{q1, q2}	{q2}
{q1, q2}	DeadState	{q1, q2}	{q2}
DeadState	DeadState	DeadState	DeadState



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