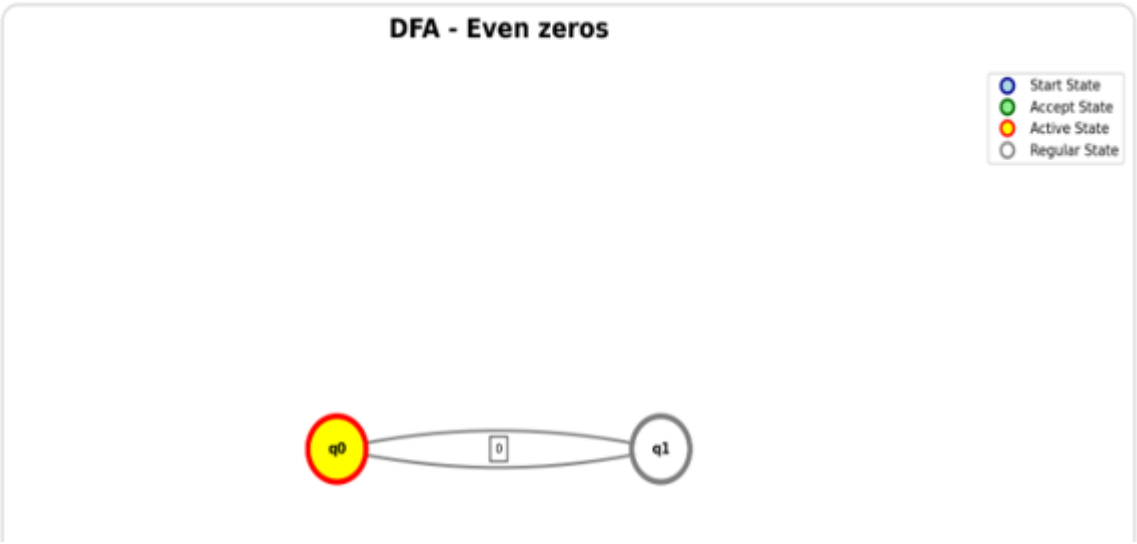
State Diagram



Processing Steps & History

[20:34:40] DFA | Input: '00100' → ACCEPTED

State Sequence: `['q0', 'q1', 'q0', 'q0', 'q1', 'q0']`

Final State: `q0`

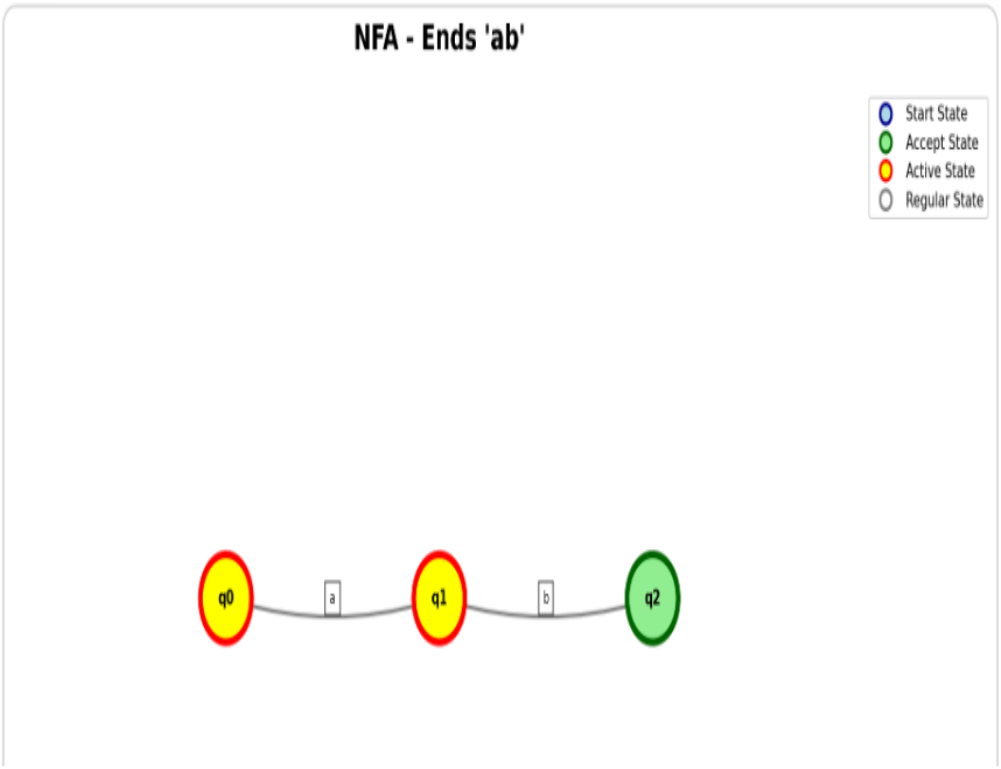
Sequence Length: `6`

Initial: Initial state: q0

Step	Current State	Read	Next State
1	q0	'0'	q1
2	q1	'0'	q0
3	q0	'1'	q0
4	q0	'0'	q1
5	q1	'0'	q0

GENERATING RANDOM TEST CASE FOR DFA

State Diagram



Processing Steps & History

[20:37:13] NFA | Input: 'bbbaa' → ❌ REJECTED

State Sequence: `[{'q0'}, {'q0'}, {'q0'}, {'q0'}, {'q0', 'q1'}, {'q0', 'q1'}]`

Final State: `{'q0', 'q1'}`

Sequence Length: `6`

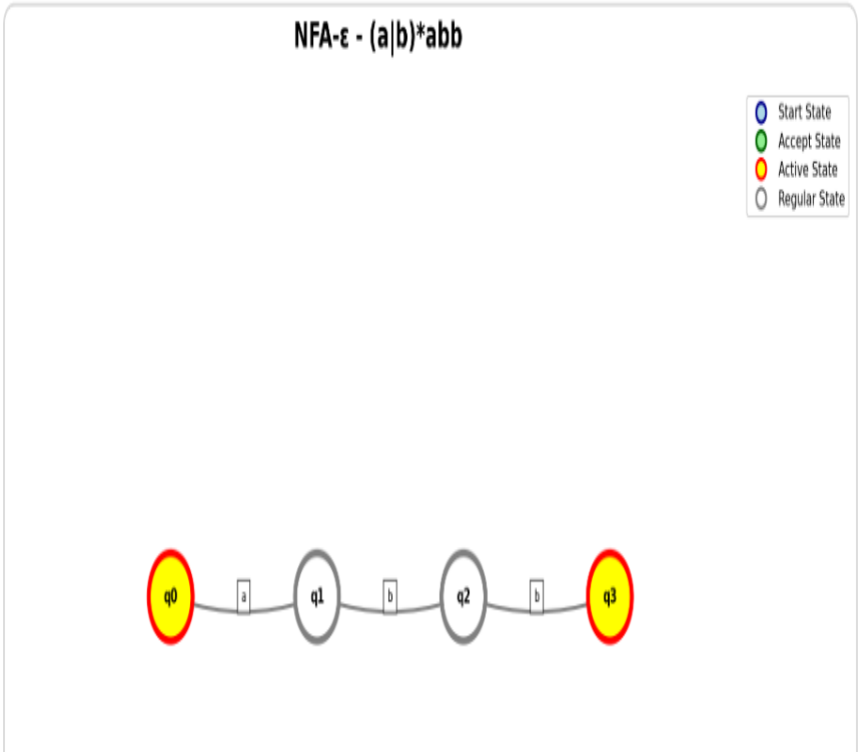
Initial: Initial states: {q0}

Final: Final states: {q0, q1}

Step	Read	Current States	Next States
1	'b'	{q0}	{q0}
2	'b'	{q0}	{q0}
3	'b'	{q0}	{q0}
4	'a'	{q0}	{q0, q1}
5	'a'	{q0, q1}	{q0, q1}

GENERATING RANDOM TEST CASE FOR NFA

State Diagram



Processing Steps & History

[20:40:35] NFAe | Input: 'aabb' → ✅ ACCEPTED

State Sequence: `[{'q0'}, {'q0', 'q1'}, {'q0', 'q1'}, {'q2', 'q0'}, {'q0', 'q3'}]`

Final State: `{'q0', 'q3'}`

Sequence Length: `5`

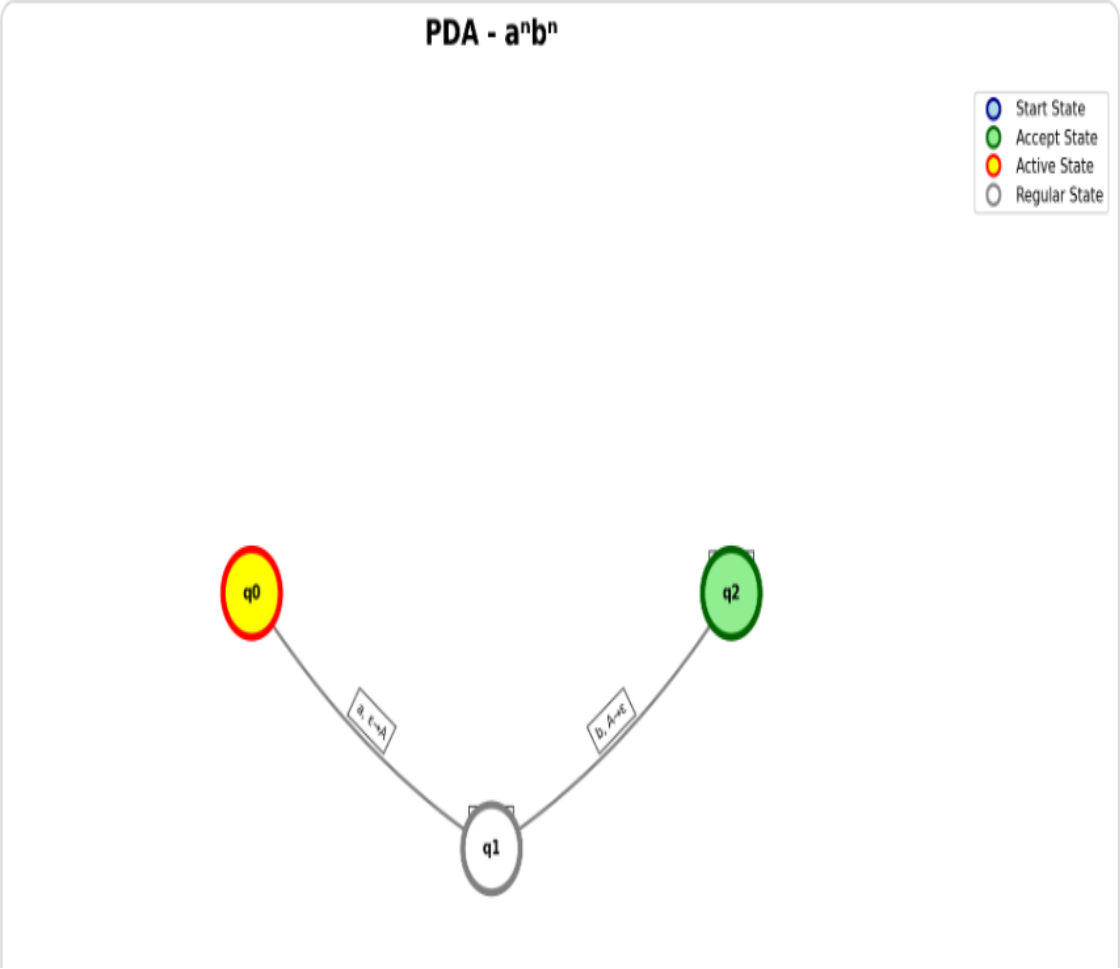
Initial: Initial states: {q0}

Final: Final states: {q0, q3}

Step	Read	Current States	Next States
1	'a'	{q0}	{q0, q1}
2	'a'	{q0, q1}	{q0, q1}
3	'b'	{q0, q1}	{q0, q2}
4	'b'	{q0, q2}	{q0, q3}

🎲 GENERATING RANDOM TEST CASE FOR NFAe

State Diagram



Processing Steps & History

[20:41:53] PDA | Input: '' → ✅ ACCEPTED

State Sequence: `['q0']`

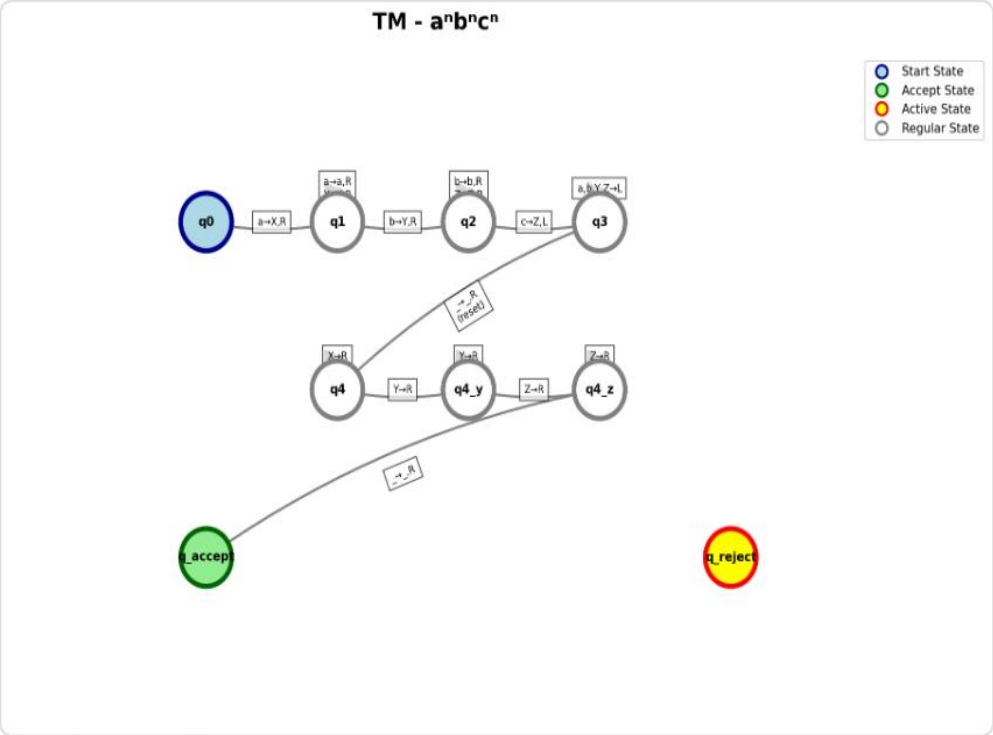
Final State: `q0`

Sequence Length: `1`

Initial: Initial: State=q0, Stack=[Z]

Empty string: n=0

State Diagram



Active State: `q_reject`

Processing Steps & History

[20:44:17] TM | Input: 'aabbcc' → ❌ REJECTED

State Sequence: `['q0', 'q1', 'q1', 'q2', 'q2', 'q3', 'q3', 'q3', 'q3', 'q3', 'q4', 'q4', 'q_reject']`

Final State: `q_reject`

Sequence Length: `13`

Initial: Initial tape: aabbcc

Final: Final tape: XaYbZc_____

Total steps: 12

Step	State	Action	Head Position
1	q1	Read 'a', write 'X', move R	1
3	q2	Read 'b', write 'Y', move R	3
5	q3	Read 'c', write 'Z', move L	3
10	q4	Reset head to start, begin final check	0

🎲 GENERATING RANDOM TEST CASE FOR TM