Nama : Alvin Valerian

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Mata Kuliah : Teori Bahasa dan Otomata

Kelas : B

Tugas (NIM Ganjil No. 5)

5. **Buatlah *Deterministic Finite Automata* yang ekuivalen dengan *Non-deterministic Finite Automata* berikut.**

   Q = {q0, q1, q2}

   ∑ = {0, 1}

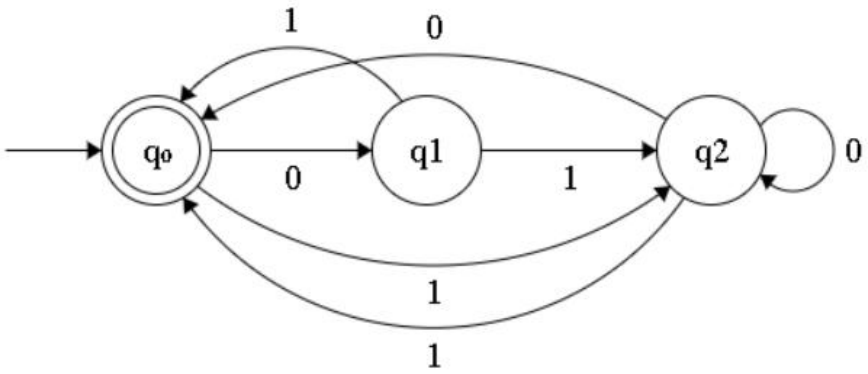
   S = q0

   F = {q0}

   Fungsi transisinya dinyatakan dalam tabel transisi berikut.

δ	0	1
q0	q1	q2
q1	Ø	q0, q2
q2	q0, q2	q0

Penyelesaian :



δ	0	1
q0	{q1}	{q2}
q1	Ø	{q0, q2}
q2	{q0, q2}	{q0}
Ø	Ø	Ø
{q0, q2}	{q0, q1}	{q0, q2}
{q0, q1}	{q1}	{q0, q2}

State {q0, q2}: **δ**(q0, 0) = {q1}

δ(q2, 0) = {q0}

= {q1} + {q0} = {q0, q1}

δ(q0, 1) = {q2}

δ(q2, 1) = {q0}

= {q2} + {q0} = {q0, q2}

State {q0, q1}: **δ**(q0, 0) = {q1}

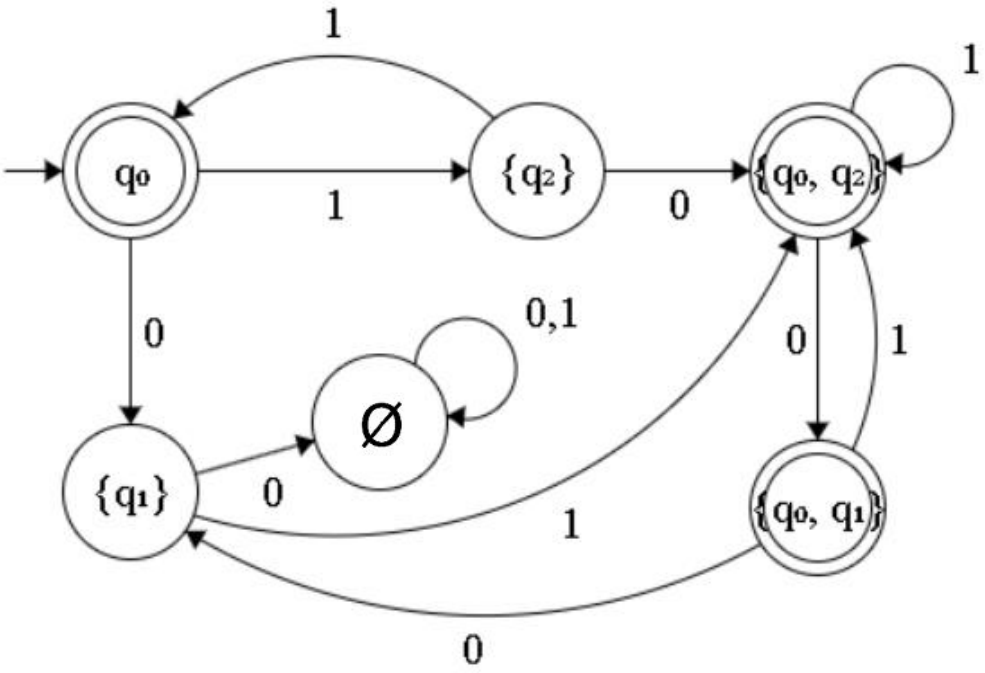
δ(q1, 0) = Ø

= {q1} + Ø = {q1}

δ(q0, 1) = {q2}

δ(q1, 1) = {q0, q2}

= {q2} + {q0, q2} = {q0, q2}


1
1
q0
{q2}
{q0, q2}
1
0
0
0,1
0
1
Ø
{q1}
0
{q0, q1}
1
0