

Nama : Syukrillah

NIM : 22552011247

Kelas : TIF RP 222PA

1. (q_2, q_6) indistinguishable

$$\delta(q_2, 1) = q_4$$

$$\delta(q_6, 1) = q_4$$

$$\delta(q_2, 0) = q_4$$

$$\delta(q_6, 0) = q_4$$

q_2 dan q_6 dapat di gabung menjadi satu state

2. Buat DFA yang ekivalen dengan NFA berikut

$$Q = \{q_0, q_1, q_2\}$$

$$\Sigma = \{0, 1\}$$

$$S = \{q_0\}$$

$$F = \{q_1\}$$

| δ | 0 | 1 |
|----------|----------------|----------------|
| q_0 | $\{q_1, q_2\}$ | $\{q_2\}$ |
| q_1 | $\{q_1\}$ | $\{q_2\}$ |
| q_2 | \varnothing | $\{q_0, q_2\}$ |

$$\begin{aligned} & \{(q_1, q_2)\} \cup \{(q_1, 0)(q_2, 0)\} \cup \{(q_1, 1)(q_2, 1)\} \\ & \cup \{(q_1)\} \cup \{(q_0, q_2)\} \cup \{(q_1)\} \cup \{(q_0, q_2)\} \end{aligned}$$

$$\begin{aligned} & \{(q_0, q_2)\} \cup \{(q_0, 0)(q_2, 0)\} \cup \{(q_0, 1)(q_2, 1)\} \\ & \cup \{(q_1, q_2)\} \cup \{(q_1)\} \cup \{(q_0, q_2)\} \cup \{(q_1, q_2)\} \cup \{(q_0, q_2)\} \end{aligned}$$

