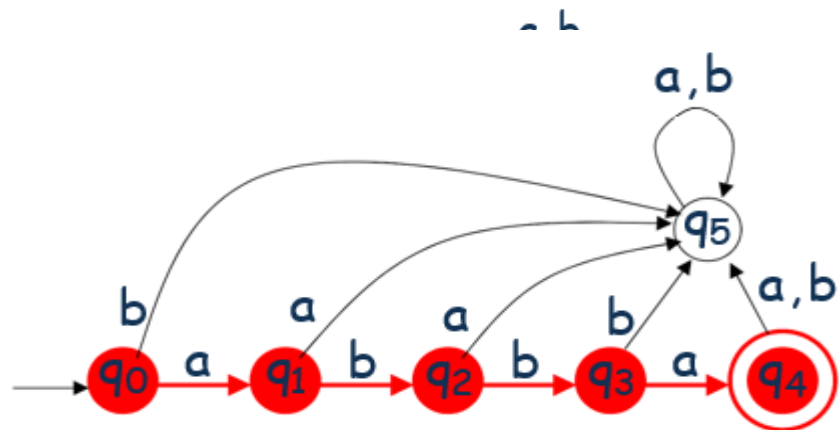
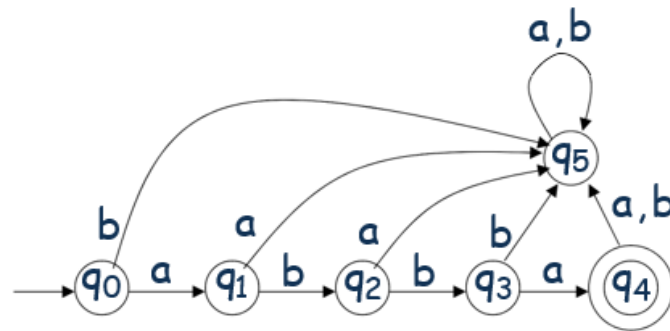


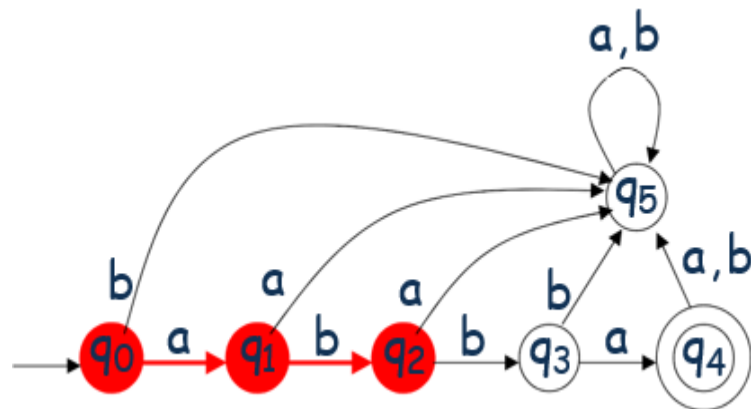


5. Memperpanjang Fungsi Transisi δ^*

$$\delta^* : Q \times \Sigma^* \rightarrow Q$$

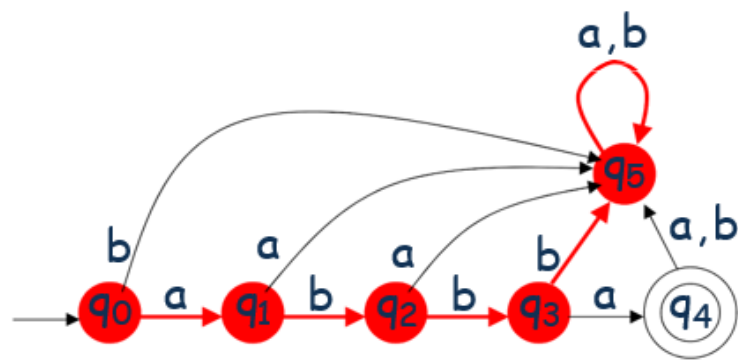


$$\delta^*(q_0, ab) = q_2$$



$$\delta^*(q_0, abba) = q_4$$

$$\delta^*(q_0, abbbbaa) = q_5$$



E. Bahasa yang diterima oleh FA

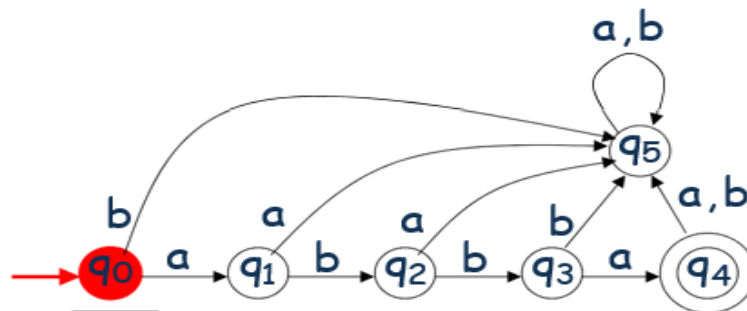
$$FA = M$$

Bahasa $L(M)$ yang terdiri dari seluruh inputan string yang diterima oleh M .

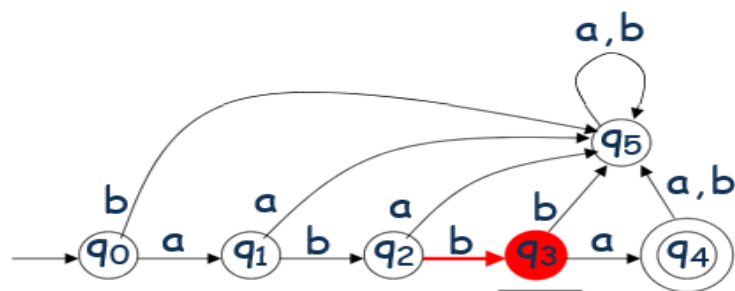
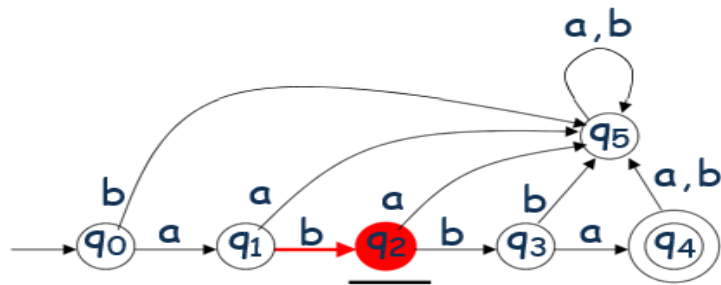
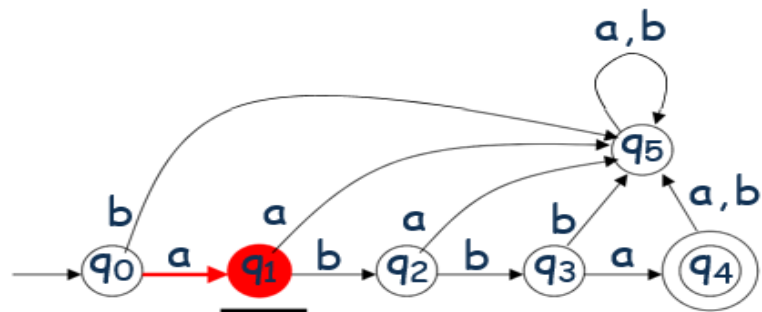
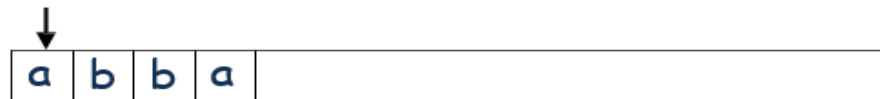
$L(M)$ = string yang dibawa oleh M untuk dapat diterima oleh state.

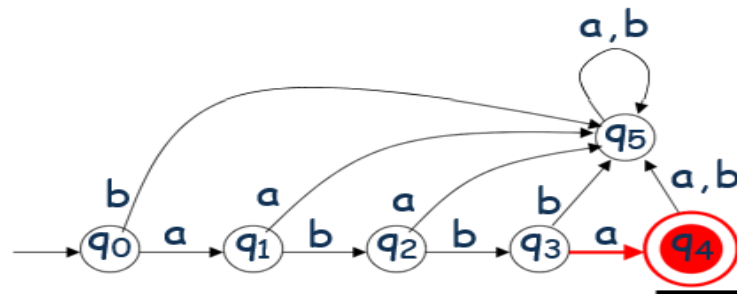
1. Inisial Configurasi (Pertama Kali)

Input String

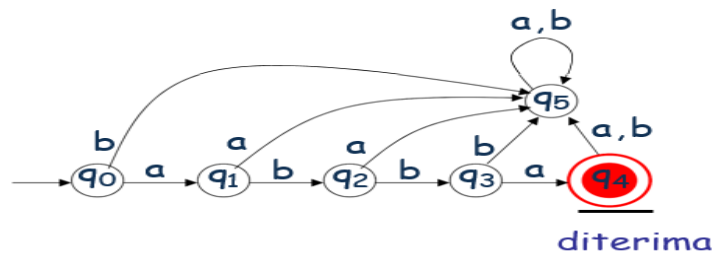


Membaca Input

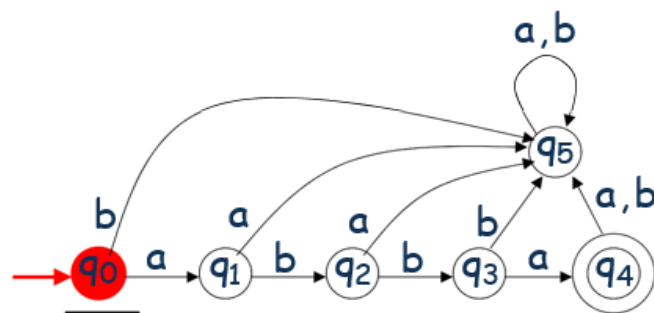




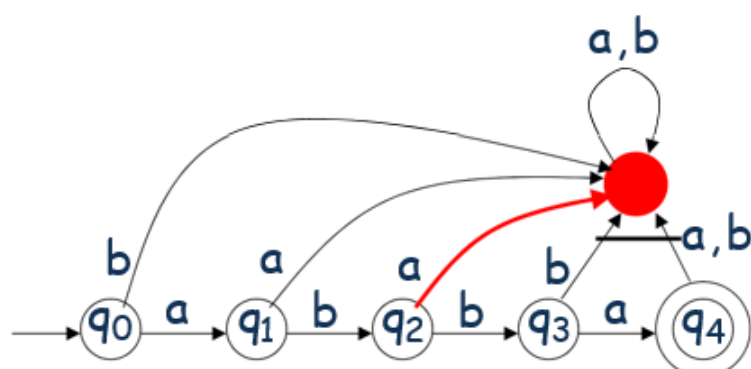
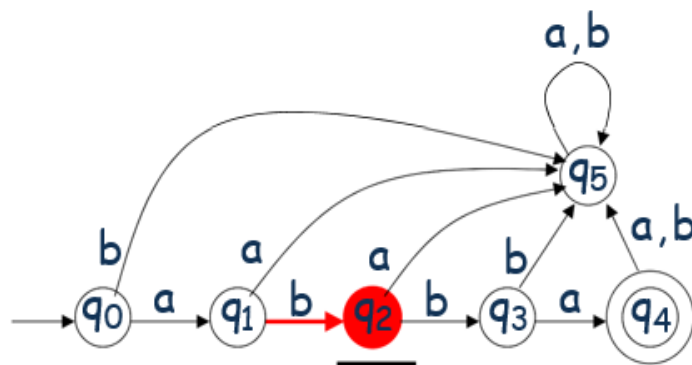
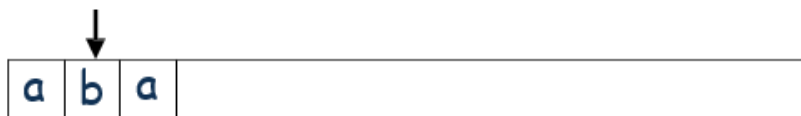
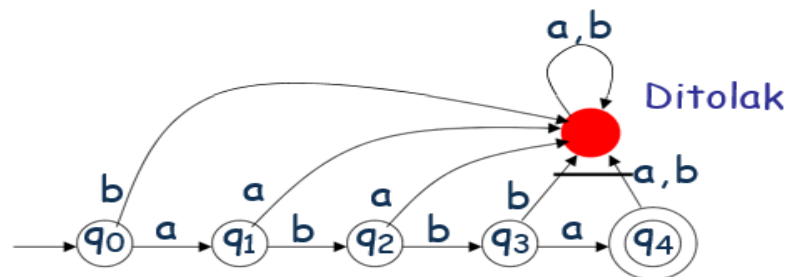
Input selesai



F. Inputan ditolak

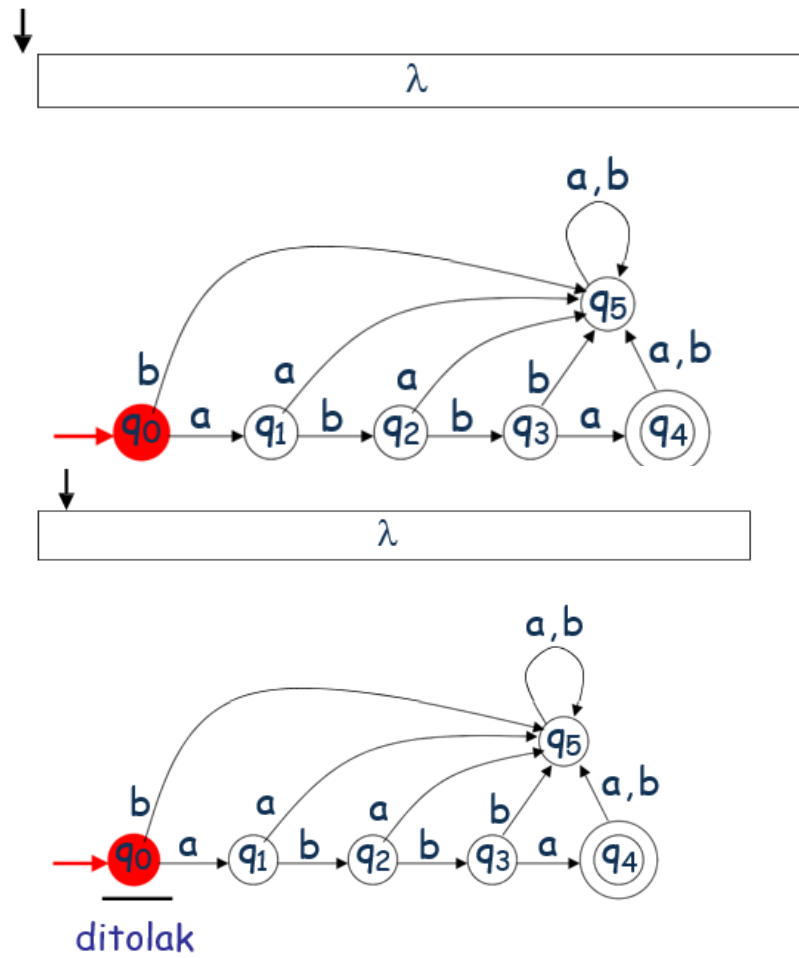


Input Selesai

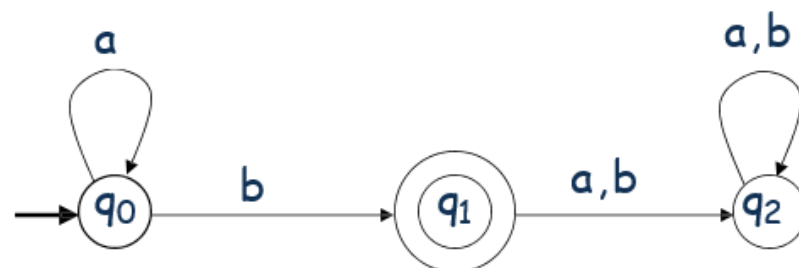


G. Diterima atau Ditolak? Jika Inputannya λ .

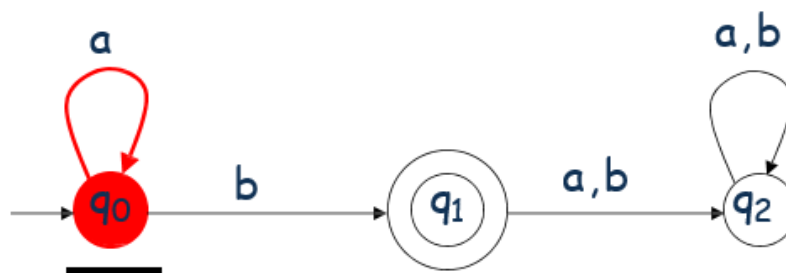
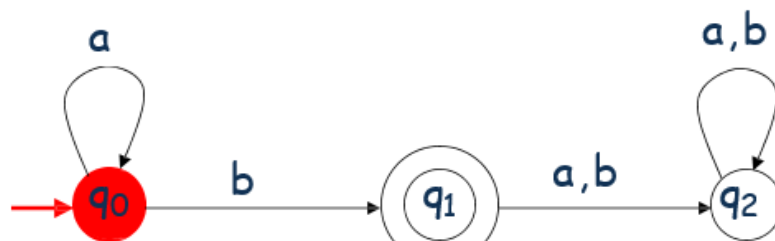
State awal



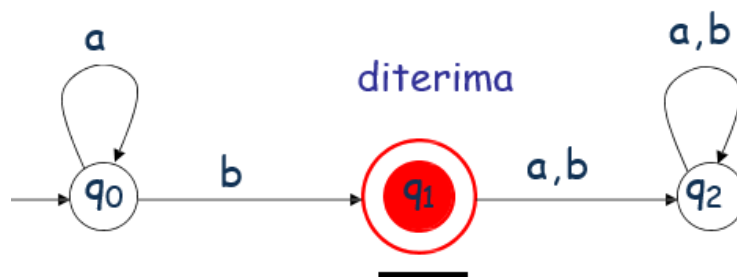
H. Bahasa yang digunakan ?



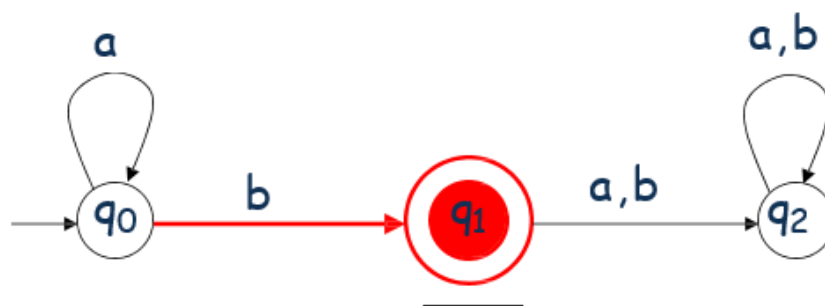
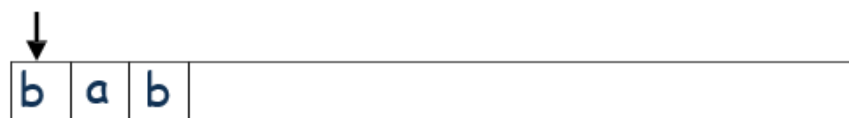
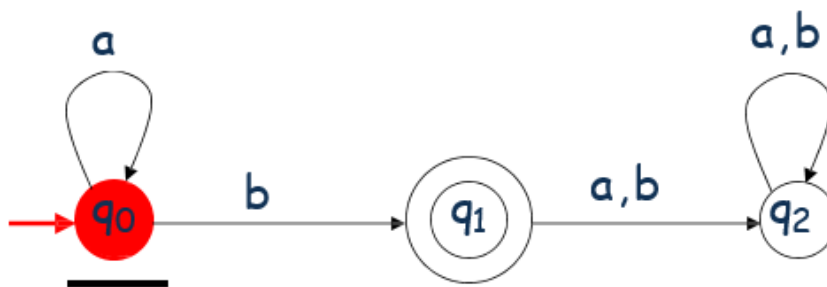
Contoh diterima:

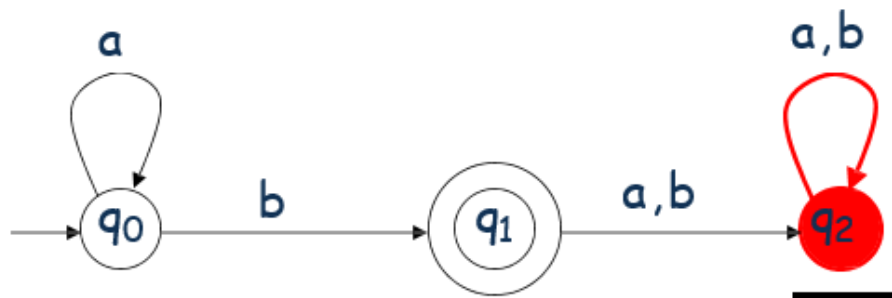
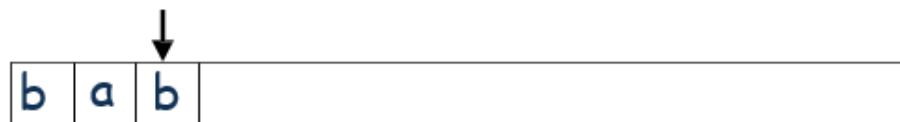
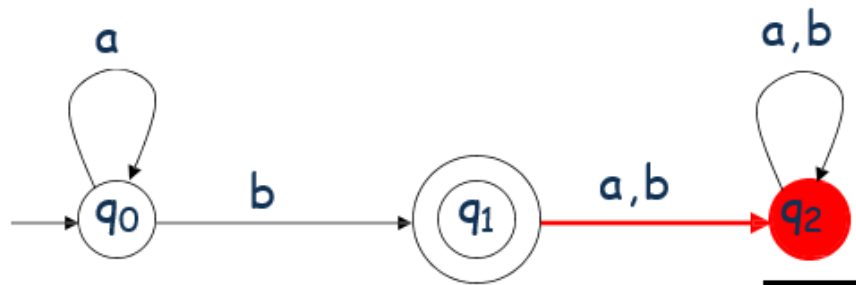


Input selesai

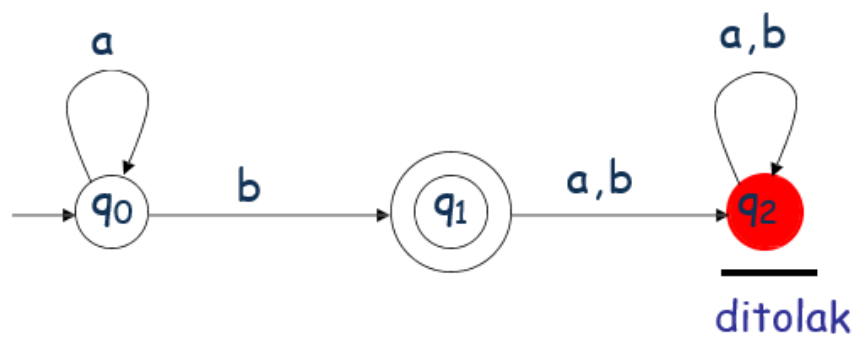


Contoh ditolak :

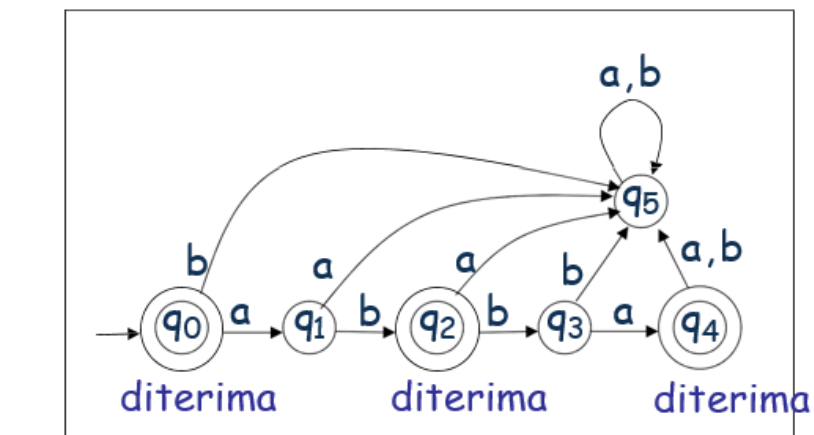
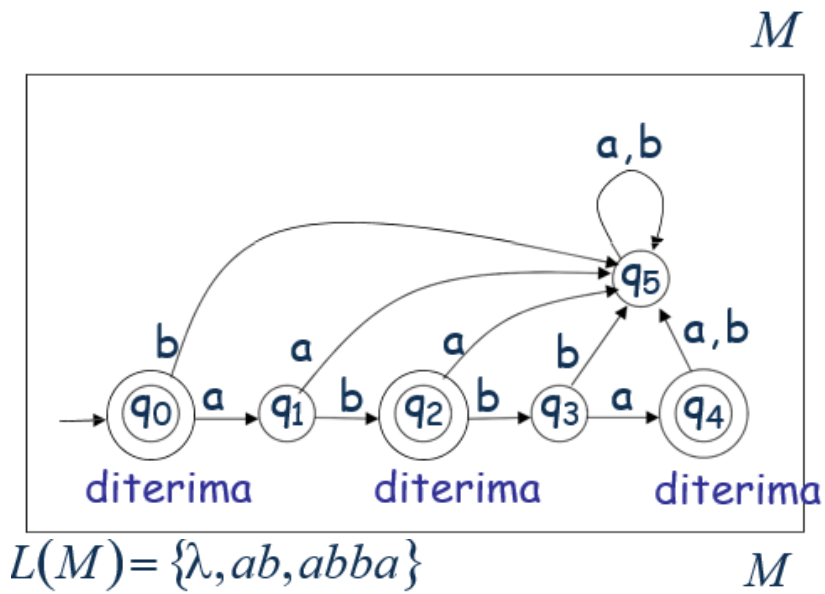




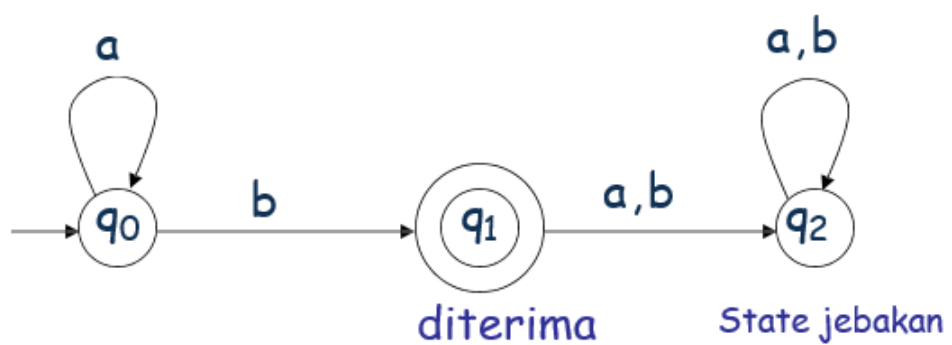
Input selesai



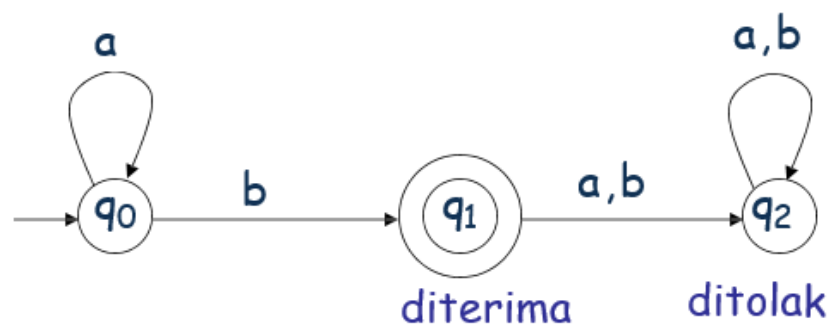
Contoh 1 $L(M) = ?$



Contoh 2 $L(M) = ?$



Contoh 3 $L(M) = \{a^n b : n \geq 0\}$



CERMATILAH :

Pengamatan : jika berjalan dari q ke q' , diberi nama W . maka :

$$\delta^*(q, w) = q'$$



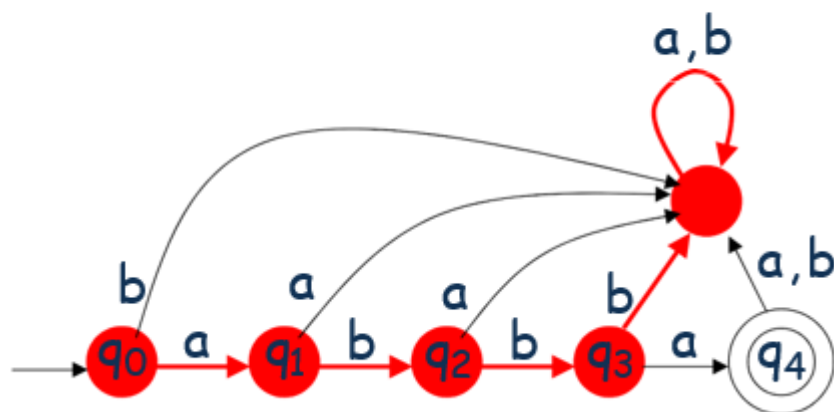
$$w = \sigma_1 \sigma_2 \cdots \sigma_k$$



Contoh : jika berjalan dari q_0 ke q_5 , maka diberi nama $abbbbaa$

$$\delta^*(q_0, abbbbaa) = q_5$$

$$\delta^*(q_0, abbbbaa) = q_5$$



I. Definisi Rekursif

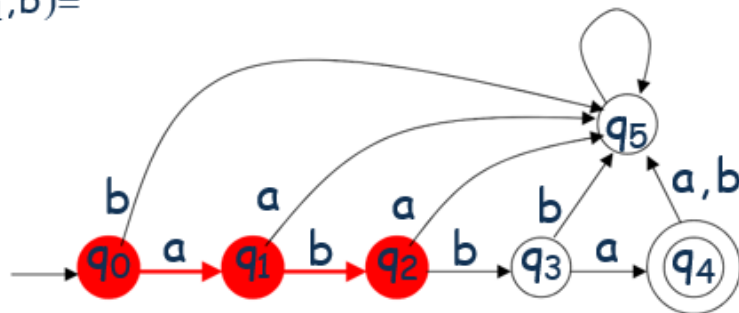
$$\delta^*(q, \lambda) = q$$

$$\delta^*(q, w\sigma) = \delta(\delta^*(q, w), \sigma)$$



$$\left. \begin{array}{l} \delta^*(q, w\sigma) = q' \\ \delta(q_1, \sigma) = q' \end{array} \right\} \Rightarrow \delta^*(q, w\sigma) = \delta(q_1, \sigma) \left\{ \begin{array}{l} \delta^*(q, w) = q_1 \end{array} \right\} \Rightarrow \delta^*(q, w\sigma) = \delta(\delta^*(q, w), \sigma)$$

$$\begin{aligned} \delta^*(q_0, ab) &= \\ \delta(\delta^*(q_0, a), b) &= \\ \delta(\delta(\delta^*(q_0, \lambda)a), b) &= \\ \delta(\delta(q_0, a), b) &= \\ \delta(q_1, b) &= \\ q_2 \end{aligned}$$



Bahasa yang bisa diterima oleh FA

Untuk sebuah FA $M = (Q, \Sigma, \delta, q_0, F)$

Bahasa yang diterima : M

$$L(M) = \{w \in \Sigma^* : \delta^*(q_0, w) \in F\}$$



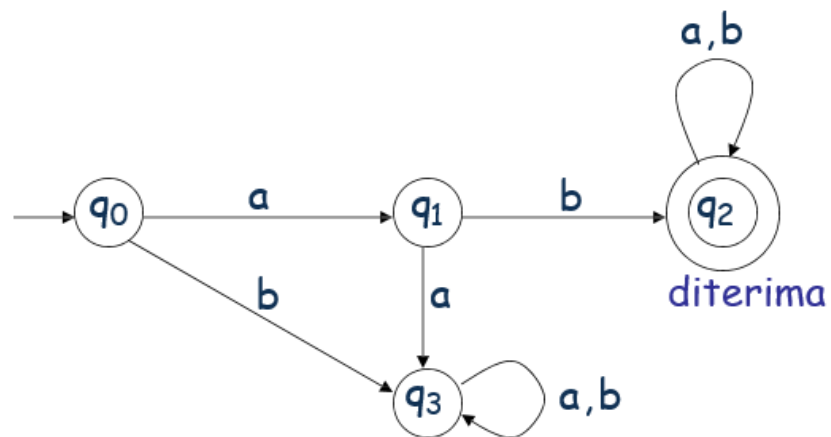
Bahasa yang ditolak oleh M adalah :

$$\overline{L(M)} = \{w \in \Sigma^* : \delta^*(q_0, w) \notin F\}$$

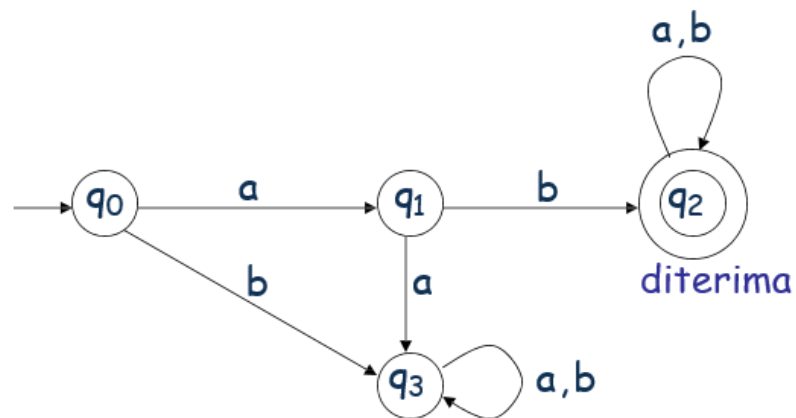


$L(M) ?$

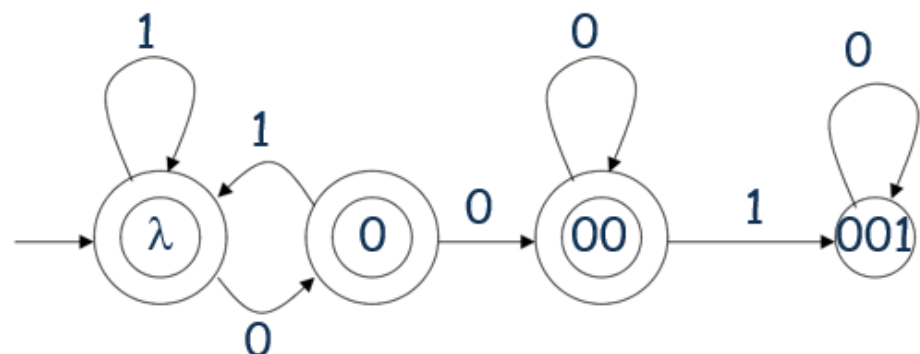
a b



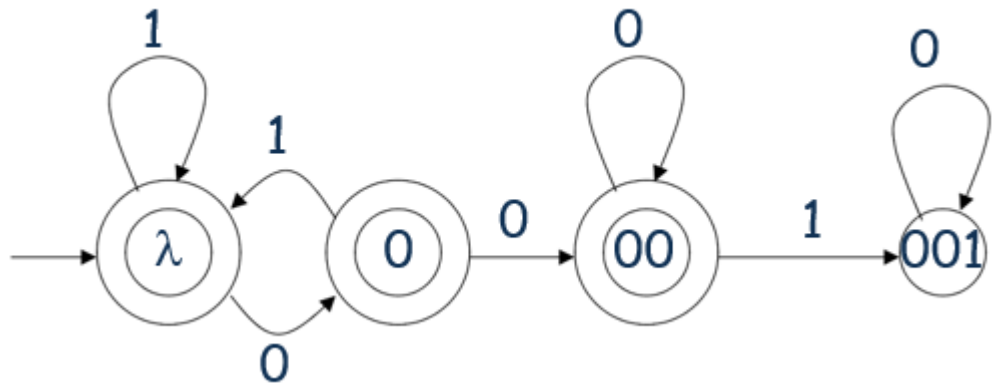
Contoh : $L(M) = \{ \text{seluruh strings dengan prefik ab} \}$



$L(M) = ?$



Contoh $L(M) = \{ \text{seluruh string tanpa Substring } 001 \}$



Contoh $L(M) = \{ a w a : w \in \{a,b\}^* \}$

