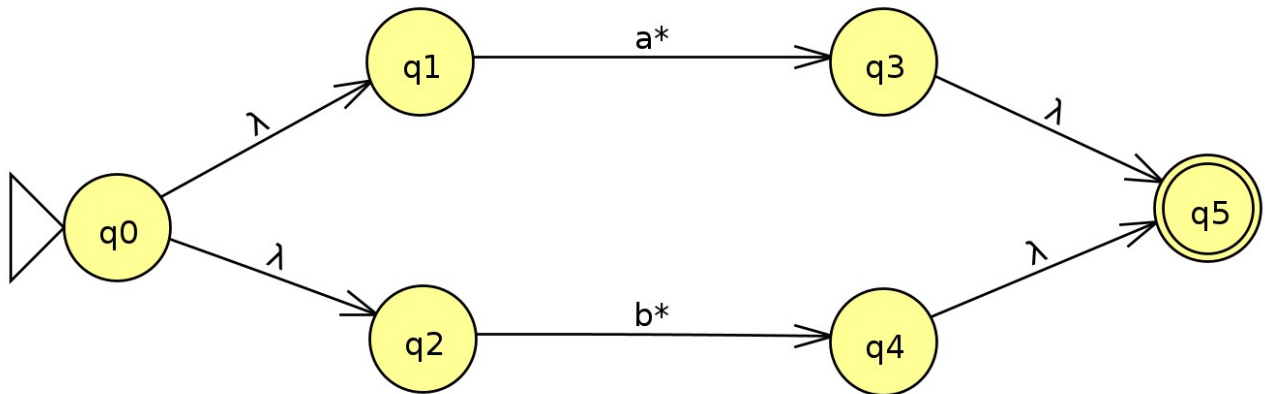
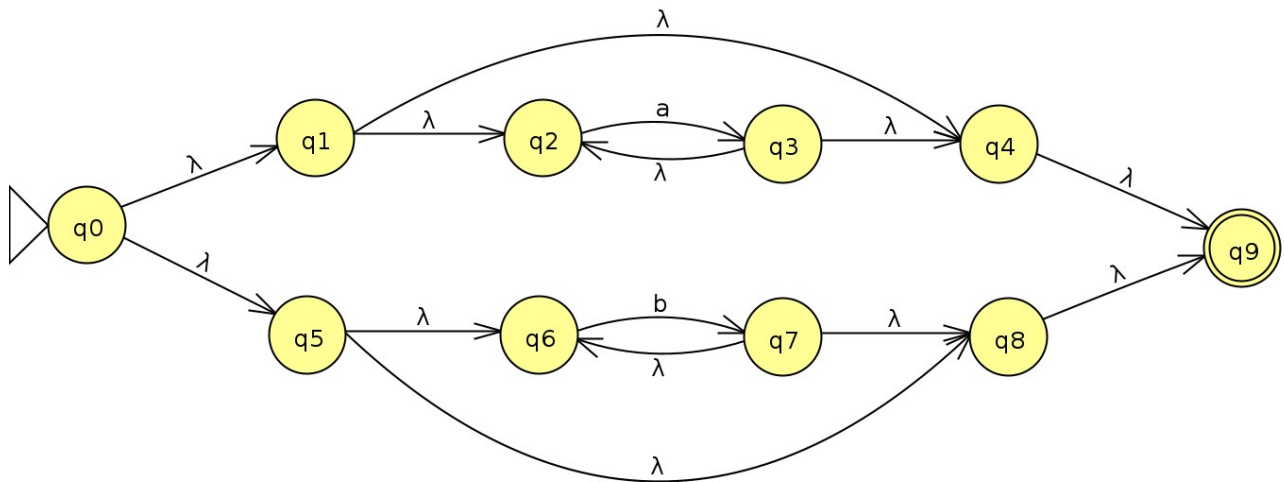


## Q2

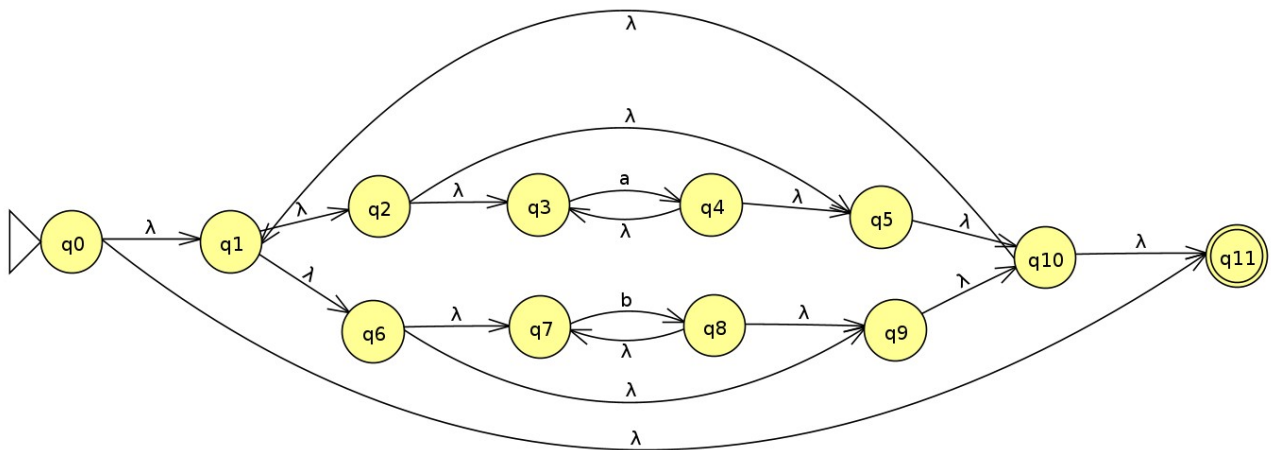
a)  $a^*|b^*$



$(a^*|b^*)$



$(a^*|b^*)^*$



$$\text{fecho-}\epsilon(0) = \{0, 1, 2, 3, 5, 6, 7, 9, 10, 11\} = q_0$$

$$D_{\text{states}} = \{ \text{red } q_0 \}$$

$$q_0 = \{0, 1, 2, 3, 5, 6, 7, 9, 10, 11\}$$

$$\text{fecho-}\epsilon(\text{move}(q_0, a)) = \text{fecho-}\epsilon(\{4\}) = \{1, 2, 3, 4, 5, 6, 7, 9, 10, 11\} = q_1$$

$$\text{fecho-}\epsilon(\text{move}(q_0, b)) = \text{fecho-}\epsilon(\{8\}) = \{1, 2, 3, 5, 6, 7, 8, 9, 10, 11\} = q_2$$

$D_{states} = \{ \text{q0}, \text{q1}, \text{q2} \}$        $q0 = \{ 0, 1, 2, 3, 5, 6, 7, 9, 10, 11 \}$      $q1 = \{ 1, 2, 3, 4, 5, 6, 7, 9, 10, 11 \}$        $q2 = \{ 1, 2, 3, 5, 6, 7, 8, 9, 10, 11 \}$

Estado	Símbolo	Próximo
q0	a	q1
q0	b	q2

$D_{states} = \{ \text{q0}, \text{q1}, \text{q2} \}$        $q0 = \{ 0, 1, 2, 3, 5, 6, 7, 9, 10, 11 \}$      $q1 = \{ 1, 2, 3, 4, 5, 6, 7, 9, 10, 11 \}$        $q2 = \{ 1, 2, 3, 5, 6, 7, 8, 9, 10, 11 \}$

$\text{fecho-}\epsilon(\text{move}(q1, a) = \text{fecho-}\epsilon(\{ 4 \}) = \{ 1, 2, 3, 4, 5, 6, 7, 9, 10, 11 \} = q1$   
 $\text{fecho-}\epsilon(\text{move}(q1, b) = \text{fecho-}\epsilon(\{ 8 \}) = \{ 1, 2, 3, 5, 6, 7, 8, 9, 10, 11 \} = q2$

Estado	Símbolo	Próximo
q0	a	q1
q0	b	q2
q1	a	q1
q1	b	q2

$D_{states} = \{ \text{q0}, \text{q1}, \text{q2} \}$        $q0 = \{ 0, 1, 2, 3, 5, 6, 7, 9, 10, 11 \}$      $q1 = \{ 1, 2, 3, 4, 5, 6, 7, 9, 10, 11 \}$        $q2 = \{ 1, 2, 3, 5, 6, 7, 8, 9, 10, 11 \}$

$\text{fecho-}\epsilon(\text{move}(q2, a) = \text{fecho-}\epsilon(\{ 4 \}) = \{ 1, 2, 3, 4, 5, 6, 7, 9, 10, 11 \} = q1$   
 $\text{fecho-}\epsilon(\text{move}(q2, b) = \text{fecho-}\epsilon(\{ 8 \}) = \{ 1, 2, 3, 5, 6, 7, 8, 9, 10, 11 \} = q2$

Estado	Símbolo	Próximo
q0	a	q1
q0	b	q2
q1	a	q1
q1	b	q2
q2	a	q1
q2	b	q2

