Assignment 2

Automata & Theory of Computation

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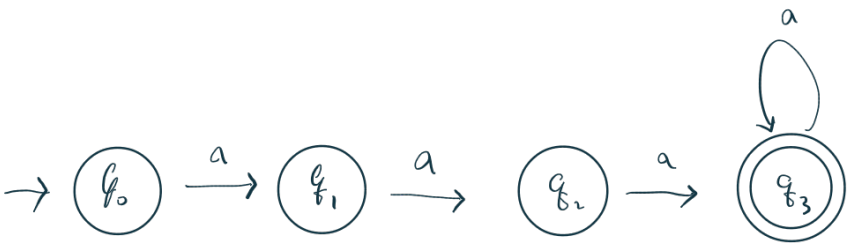
1. Show that the language

$$L = \{a^n : n \geq 3\}$$

is regular.

만일 L이 regular하다면, L을 만족하는 DFA M이 존재한다.



$M = \{\{q_0, q_1, q_2, q_3\}, \{a\}, \delta, q_0, \{q_3\}\}$

$\delta(q_0, a) = q_1$

$\delta(q_1, a) = q_2$

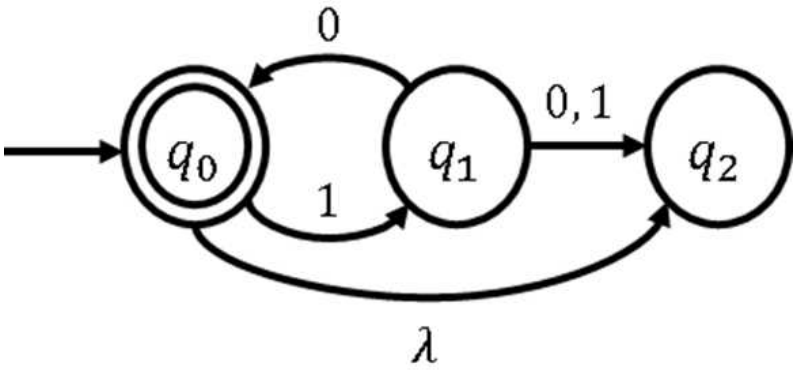
$\delta(q_2, a) = q_3$

$\delta(q_3, a) = q_3$

에 대하여, L은 M을 만족한다.

$\therefore$ L is regular.

2. From the following nfa, find $\delta^*(q_0, 1011)$ and $\delta^*(q_1, 01)$.



(1) $\delta^*(q_0, 1011)$ = { q_2 }

(2) $\delta^*(q_1, 01)$ = { q_1, q_2 }