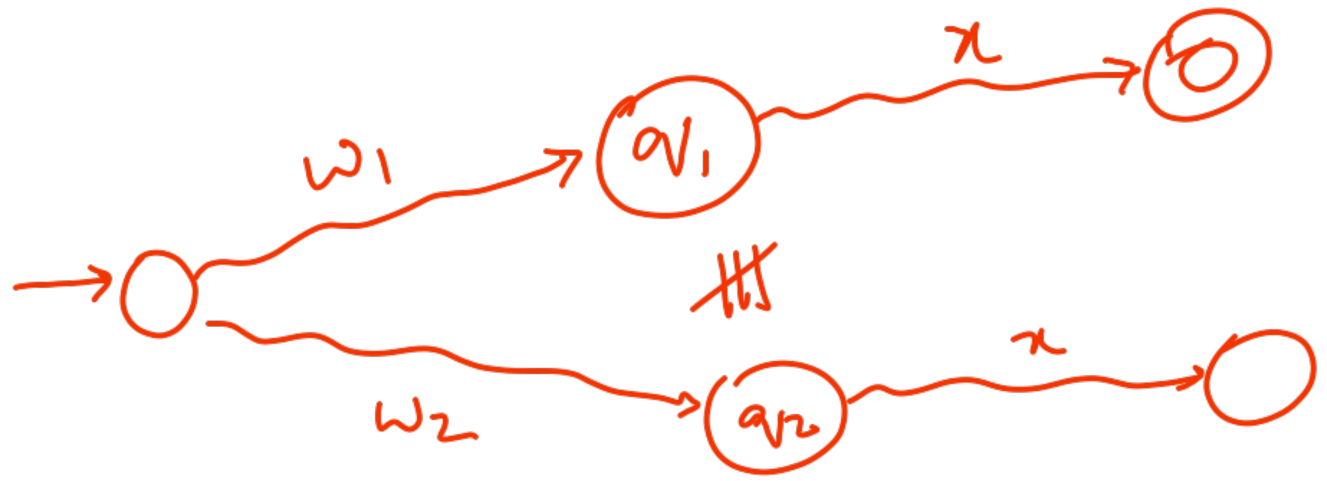
$q_i \equiv q_i$

$w_1 \sim_L w_2$

$|\sim_L| \leq 20$

$|\equiv| = 20$



$w_1 \in i^{th}$ eq. class of $\sim_L$ $\quad i \neq j$

$w_2 \in j^{th}$ " " "

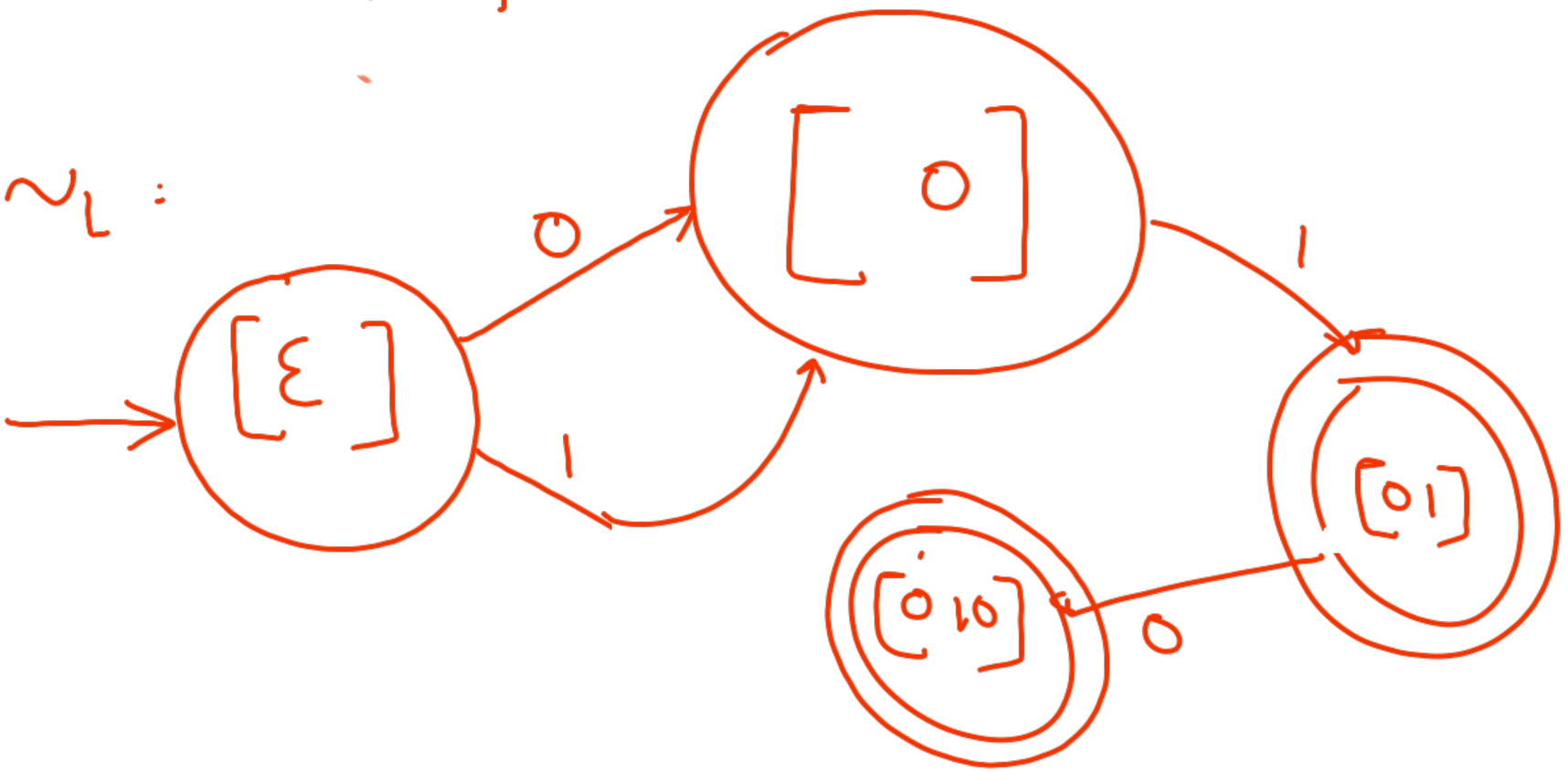
$\exists x \in \Sigma^*, \quad w_1 \cdot x \in L, \quad w_2 \cdot x \notin L$

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

$|\sim_L| \leq |\equiv|$

$\sim_L \subseteq \Sigma^* \times \Sigma^*$

$\sim_L$:



L : any language $\subseteq \Sigma^*$

$\sim_L$: Myhill-Nerode Thm

$|\sim_L|$ is finite $\iff$ L is regular $\implies$ PL holds

$\{ 0^n 1^n \mid n \geq 0 \}$

$(\cdot^n)^n$

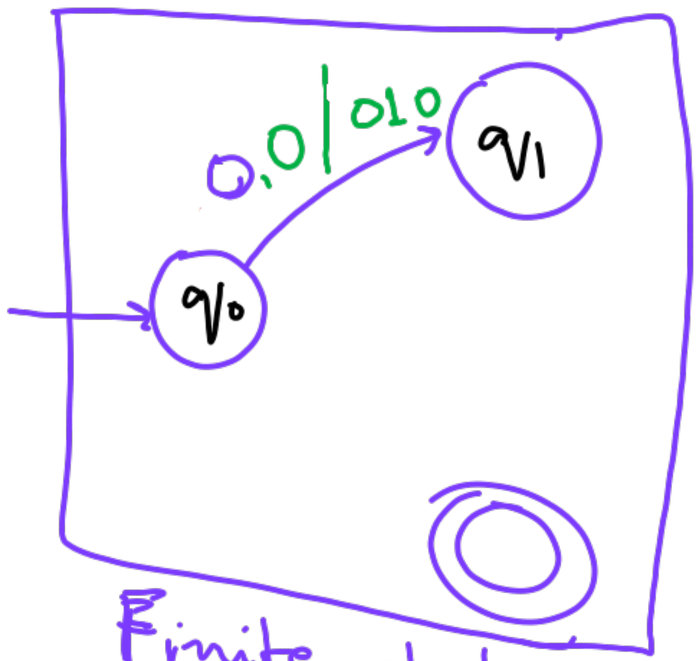
( ) ( ) (( ) ( ))

L : balanced parentheses

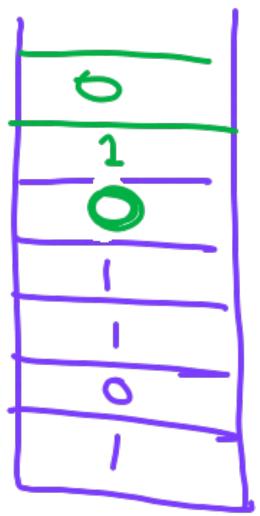
$L \cap (\cdot^*)^*$

δ: $q_0, 0, 0 \longrightarrow q_1, 01 0$

$(Q, \Sigma, \Gamma, q_0, \delta, F)$



Finite state aut.



Stack.

$\delta: Q \times \Sigma \times \Gamma \longrightarrow Q \times \Gamma^*$

$L = \{0^n 1^n \mid n \geq 0\}$

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

$\Gamma = \{a, b\}$