

1/10 (2/7) 2/1/8 강 FA, RG & CFG & Rewriting Systems regular grammars.

Regular grammar (type 3 grammar in Chomsky's Hierarchy)

$$A \rightarrow xB \in P \text{ or } A \rightarrow x \in P. \quad A, B \in N, x \in T^*$$

Rewriting system $R = (V^*, \rightarrow)$

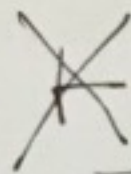
$V \dots$ a set of (Rewritings)

Configurations (Instantaneous Description)

$$\rightarrow \subseteq V^* \times V^*$$

$$(w_1, w_2) \in \rightarrow : w_1 \rightarrow w_2$$

$$\alpha w_1 \beta \Rightarrow \alpha w_2 \beta$$



Chap 6 PDA
 $\vdash_P \in (Q \times T^* \times P^*)^2$

$$(q, xy, \alpha\gamma) \vdash (p, y, \beta\gamma)$$

if $(p, \beta) \in \delta(q, x, \alpha)$

FA
 $(p, \beta) \in \delta(q, x, \alpha)$

X

FA: $Q \times \Sigma^* \xrightarrow{\text{(read only)}} Q \times \Sigma^*$
 input string

PDA: $Q \times \Sigma^* \times P^* \rightarrow Q \times \Sigma^* \times P^*$
 stack string
 (push/pop)

Tree - cf g
 - hierarchical structure
 List - rg
 - linear structure

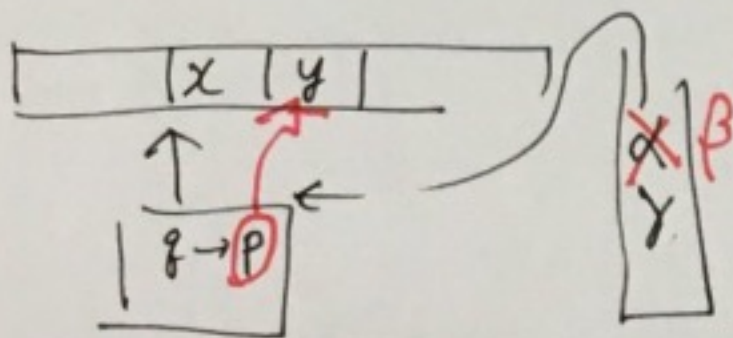
FA
 $p \in \delta(q, x)$
 $(p, \epsilon) \leftarrow (q, x)$

$$(q, x, \alpha) \rightarrow (p, \epsilon, \beta) \in \rightarrow_{\text{PDA}}$$

$$(q, xy, \alpha\gamma) \rightarrow (p, y, \beta\gamma) \in \rightarrow_{\text{Extended PDA}}$$

y : lookahead string $\in T^*$

γ : look back " $\in P^*$



Left/Right Parser 의 증명부분은 잊으라!