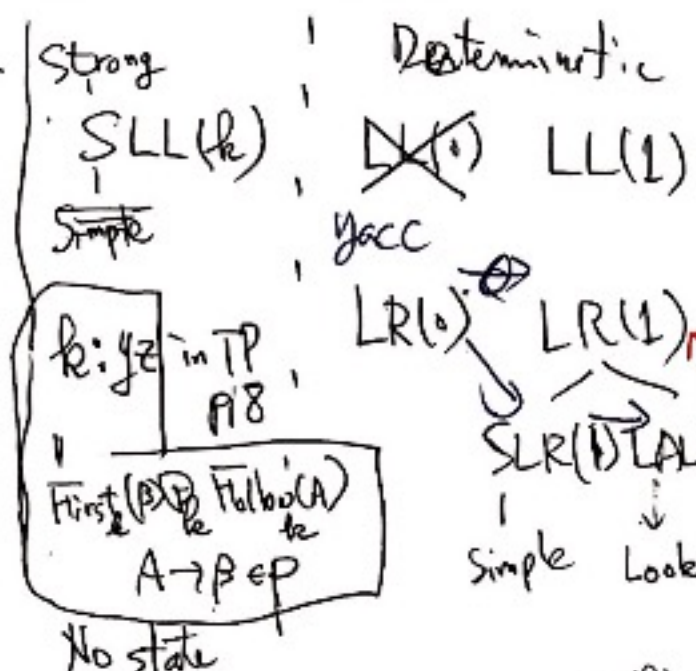
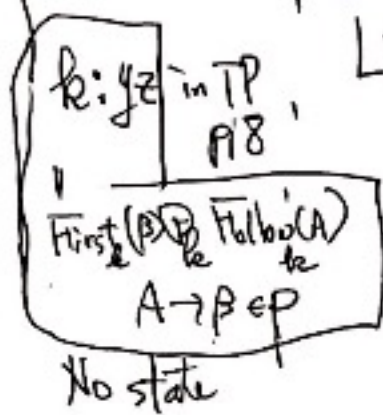


Non-deterministic
 Left Parser (Top-Down)
 Right Parser (Bottom-Up)



Left-to-Right Scan with Leftmost derivation using lookahead symbols

Left-to-Right Scan with Rightmost derivation in reversal order using lookahead symbols



5.3 SLL(k) Parser

P23 (p9) $A|y \rightarrow w^R|y \in P$

$$y \in \text{First}_k(w \text{ Follow}_k(A) \$^k)$$

$$= \text{First}_k(w) \oplus_k \text{Follow}_k(A) \oplus_k \k$

$\Sigma^{\leq k}$

$(\Sigma \cup \{ \$ \})^k X$

$\Sigma^{\leq k} \cdot \k

where $\oplus_k: \Sigma^* \times \Sigma^* \rightarrow \Sigma^k$

Let $x, y \in \Sigma^*$. Then $x \oplus_k y \triangleq k: xy (= \text{First}_k(xy))$

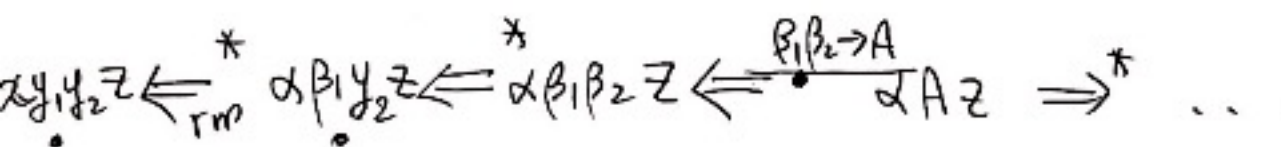
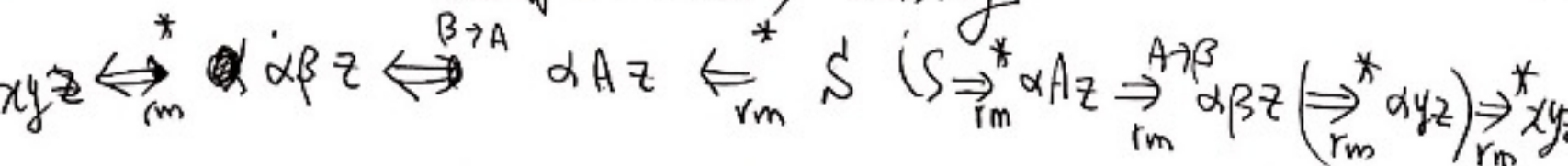
Restriction of Left Parser

5.4 SLL(k) Grammar

5.x Simple Precedence Parsing

Restriction of Right Parser
 skip in this lecture

Chap 6. LR(0) Parsing



$\gamma X = \alpha \beta_1$

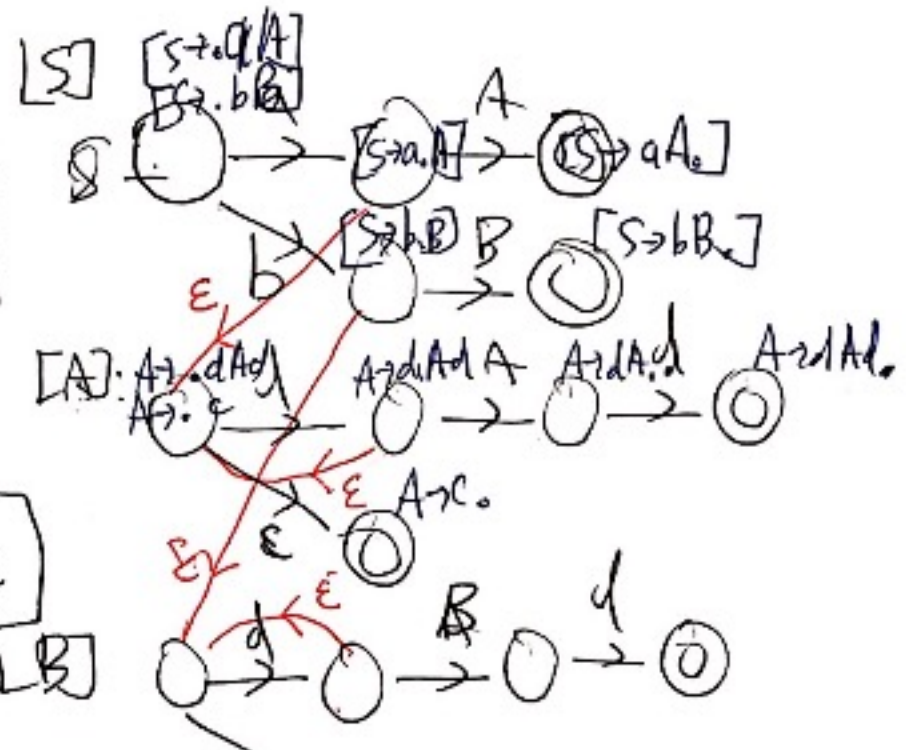
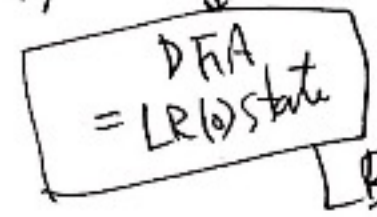
intext

6.2 Viable Prefix
 ex) $S \rightarrow aA | bB$

$A \rightarrow dAd | c$
 $B \rightarrow dBd | c$



ϵ -NFA



LR(0) item

$[A \rightarrow \alpha \cdot \beta]$ if $A \rightarrow \alpha \beta \in P$