

LR(1) table:

$$N \cup \Sigma + \$ \quad \Sigma + \$ \rightarrow$$

↓

$$\delta(\text{term}, \text{term}) = \text{pop}$$

• we take every prod.:

$$\left. \begin{array}{l} (1) S \rightarrow A \\ F(A) = \alpha \end{array} \right\} \Rightarrow (S, \alpha) = 1$$

$$\left. \begin{array}{l} (2) A \rightarrow E \\ F(E) = \beta \\ \text{Follow}(A) = \gamma \end{array} \right\} \Rightarrow (A, \gamma) = (\epsilon, 2)$$

$$(w \$, S \$, \epsilon) \vdash \dots (\$, \$, \alpha)$$

LR(0) table

$$\text{action}(r) =$$

1) shift, if the prod. from r do NOT have the dot at the end

2) reduce i , if the prod. i from r has the dot at the end

3) acc., if $[S' \rightarrow S.] \in r$

$$\text{goto}(r, S) = r' \rightarrow \text{the cell}$$

(r and S)

states	action	goto
↓	↓	↓
		$N \cup \Sigma$
		↓

RDP: input stack: $\overset{\text{head}}{a b c \dots}$

$$(q, i, \epsilon, \overset{\downarrow}{S}) \vdash \dots \vdash (q, m+1, \alpha, \epsilon)$$

work stack: $a b c \dots$ head

I expand: when head of input nonterm

II advance: $\text{head}(i) = \text{term} = \text{curr}(w)$

$$(q, i, \alpha, a_i \beta) \vdash (q, i+1, \alpha a_i, \beta)$$

III M.I.: $\text{head}(i) = \text{term} \neq \text{curr}(w)$

IV back: $\text{head}(w) = \text{term}$.

$$(q, i, \alpha a, \beta) \vdash (q, i-1, \alpha, a \beta)$$

V an. try: $\text{head}(w) = \text{nonterm}$.

$$(q, i, \alpha S_i, \beta_i \dots) \vdash (q, i, \alpha S_{i+1}, \beta_{i+1} \dots)$$

$$S_i \rightarrow \beta_i$$

$$S_{i+1} \rightarrow \beta_{i+1}$$