

$$S \rightarrow AaAb \mid BbBa$$

$$A \rightarrow \epsilon$$

$$B \rightarrow \epsilon$$

$$G': S' \rightarrow S \quad (0)$$

$$S \rightarrow AaAb \mid BbBa \quad (1) \quad (2)$$

$$A \rightarrow \epsilon \quad (3)$$

$$B \rightarrow \epsilon \quad (4)$$

$$\text{first}(S)$$

$$= \text{first}(A)$$

$$= \text{first}(B)$$

$$= \{\epsilon\}$$

$$I_0 = \text{cl}(S' \rightarrow \cdot S, \$) = \{(S' \rightarrow \cdot S, \$), (S \rightarrow \cdot AaAb, \$), (S \rightarrow \cdot BbBa, \$), (A \rightarrow \cdot, a), (B \rightarrow \cdot, b)\}$$

$$\text{goto}(I_0, S) = (S' \rightarrow S \cdot, \$) = I_1$$

$$\text{goto}(I_0, A) = \text{cl}(S \rightarrow A \cdot aAb, \$) = I_2$$

$$\text{goto}(I_0, B) = \text{cl}(S \rightarrow B \cdot bBa, \$) = I_3$$

$$\text{goto}(I_2, a) = \text{cl}(S \rightarrow Aa \cdot Ab, \$) = \{(S \rightarrow Aa \cdot Ab, \$), (A \rightarrow \cdot, b)\}$$

$$\text{goto}(I_3, b) = \text{cl}(S \rightarrow Bb \cdot Ba, \$) = \{(S \rightarrow Bb \cdot Ba, \$), (B \rightarrow \cdot, a)\}$$

$$\text{goto}(I_3, a) = \text{cl}(S \rightarrow Bb \cdot Ba, \$) = \{(S \rightarrow Bb \cdot Ba, \$), (B \rightarrow \cdot, a)\}$$

$$\text{goto}(I_4, A) = (S \rightarrow AaA \cdot b, \$)$$

$$\text{goto}(I_5, B) = (S \rightarrow BbB \cdot a, \$)$$

$$\text{goto}(I_6, b) = (S \rightarrow AaAb \cdot, \$)$$

$$\text{goto}(I_7, a) = (S \rightarrow BbBa \cdot, \$)$$

CLR eg 2

	A	B	\$		
0	r3	r4		1	2
1			acc		
2	S4				
3		S5			
4	<del>r3</del>	<del>r4</del> r3			6
5	r4	<del>r3</del>			
6		S8			
7	S9				
8			r1		
9			r2		