

$$\textcircled{1} S \rightarrow \epsilon Bc$$

$$\textcircled{2} B \rightarrow b$$

$$\textcircled{3} B \rightarrow bc$$

$$S \rightarrow \epsilon \underline{B} c$$

$$B \rightarrow b \underline{R}$$

$$\left(\begin{array}{c|c} R \rightarrow c & \epsilon \\ \hline A & \alpha \quad \beta \end{array} \right)$$

$$A \rightarrow \alpha \quad A \rightarrow \beta$$

... $c \neq$

$$\text{FOLLOW}(R) \cap \text{FIRST}(c) = c$$

S

~~LL(1)~~

	<u>ϵ</u>	<u>b</u>	<u>c</u>	<u>$\\$</u>
S	$S \rightarrow \epsilon Bc$			
B		$B \rightarrow bR$		
R				

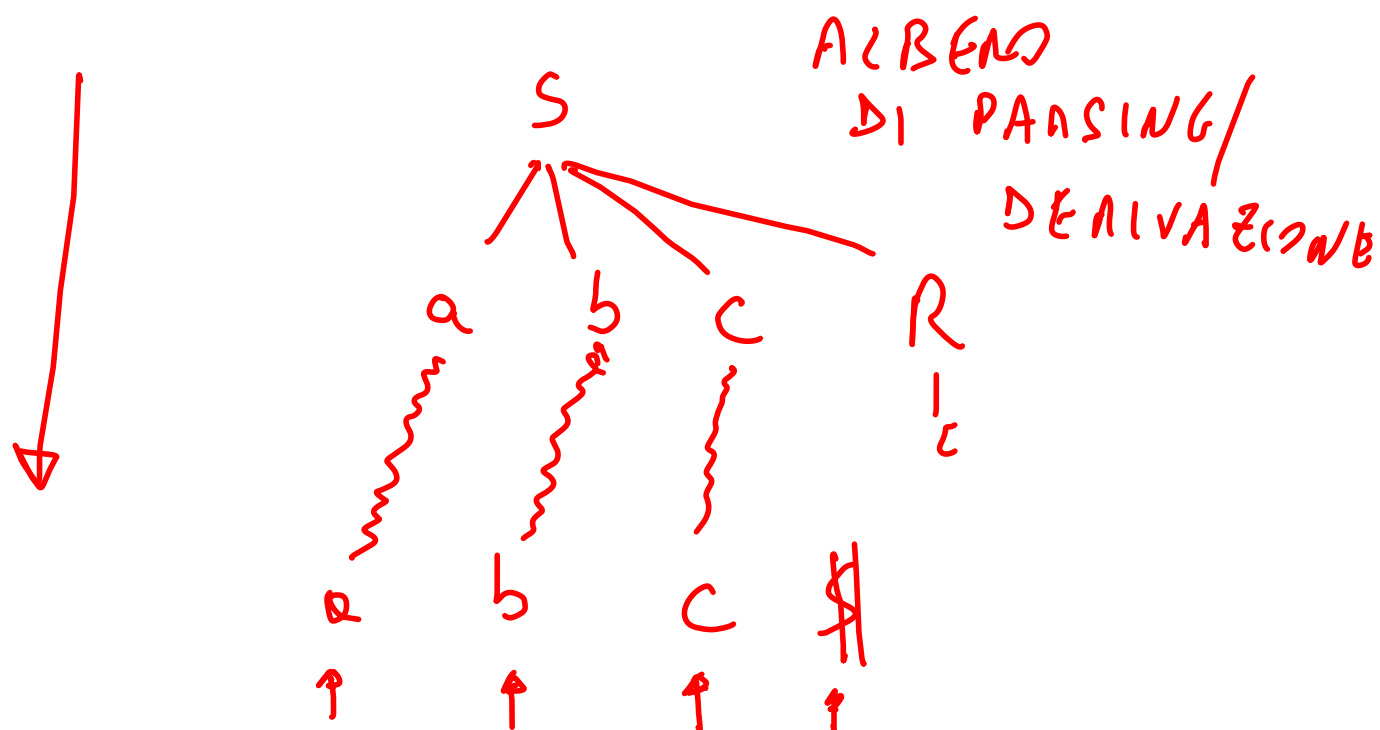
$$\begin{array}{l} R \rightarrow c \\ R \rightarrow \epsilon \end{array}$$

$$\begin{aligned} \textcircled{1} S &\Rightarrow \epsilon Bc \\ \textcircled{2} &\Rightarrow \epsilon bc \\ &\Rightarrow \epsilon bcc \\ \textcircled{3} \end{aligned}$$

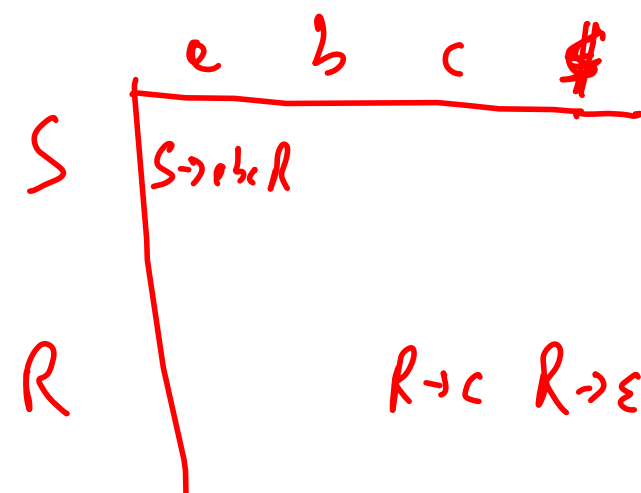
$$\begin{array}{l} S \rightarrow \epsilon bc \\ S \rightarrow \epsilon bcc \end{array}$$

$$\begin{array}{l} S \rightarrow \epsilon bc \underline{R} \\ R \rightarrow \underline{c} \mid \epsilon \end{array}$$

LL(1)

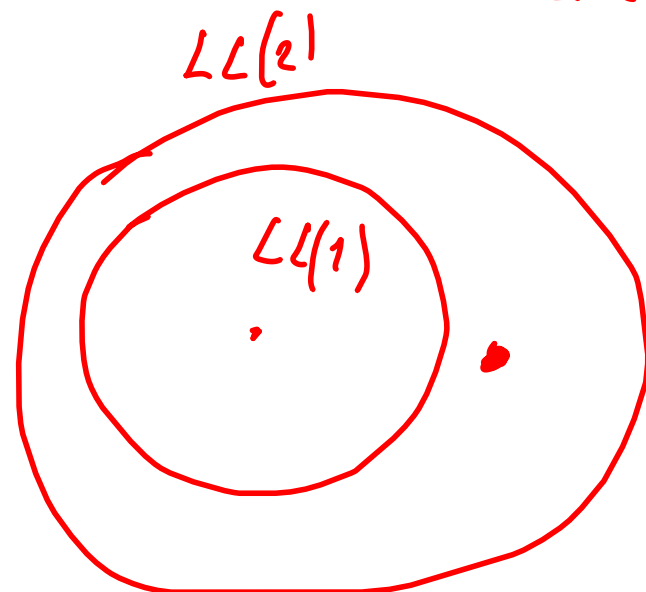


$S \rightarrow ebcR$
 $R \rightarrow c \mid \epsilon$



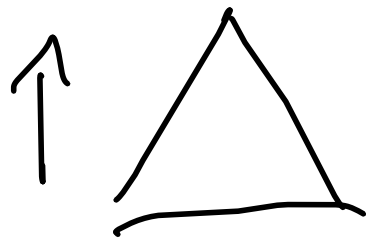
PARSING TOP DOWN

$LL(1)$



→ PREDITTIVO CON 1 TERMINALE
 → LEFTMOST DERIVATIONE

PARSING BOTTOM UP



- 1 $S \rightarrow \underline{a} B c$
- 2 $B \rightarrow b c$
- 3 $\underline{B} \rightarrow b$

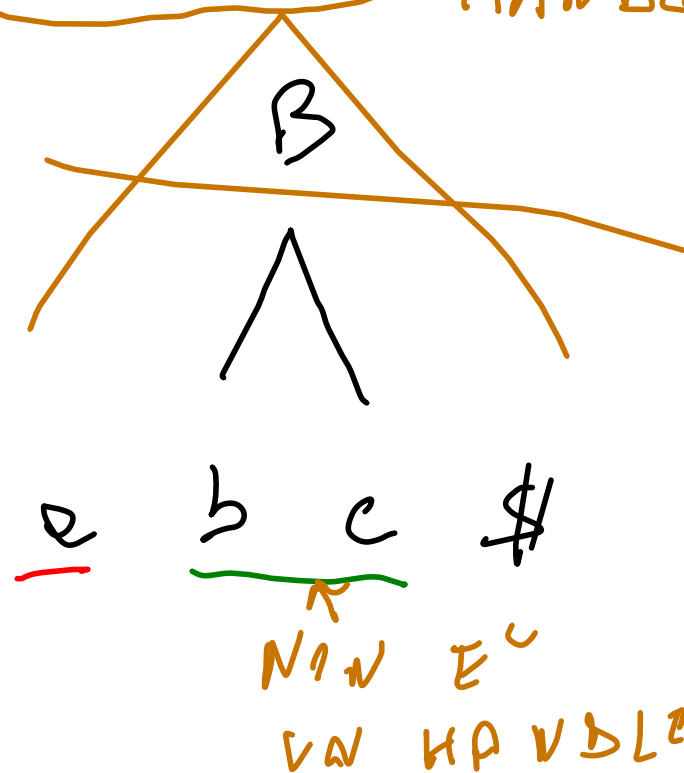
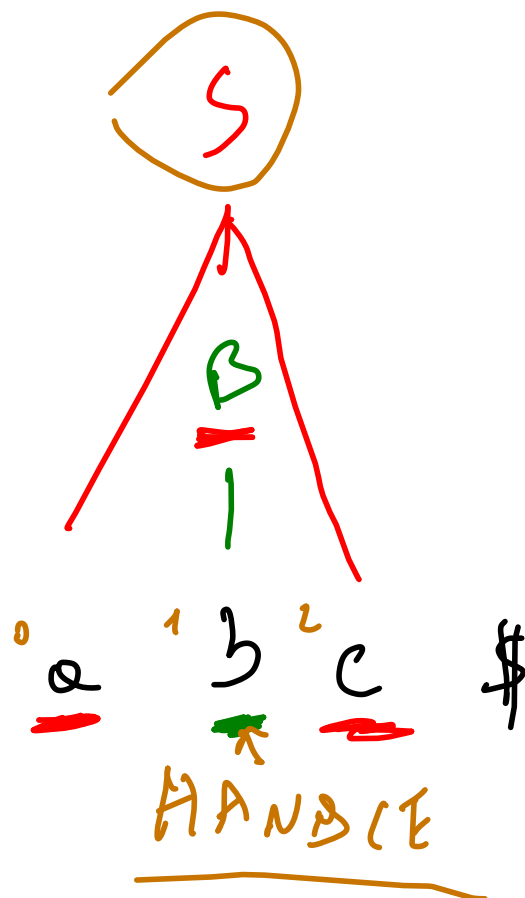
REDUCTIONS

RIGHT DERIVATION

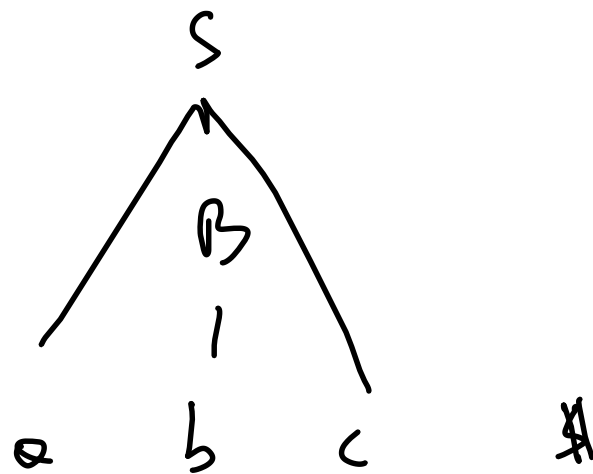
$S \Rightarrow \underline{a} \underline{B} c \Rightarrow a \underline{b} c$

HANDLES

$\left(\begin{matrix} b \\ 1 \\ 3(B \rightarrow b) \end{matrix} \right)$



- $$3 \quad B \rightarrow b$$



INPUT

Q b c \$

P A 1 4

STACK

~~1~~ ~~0~~ ~~1~~ ~~0~~

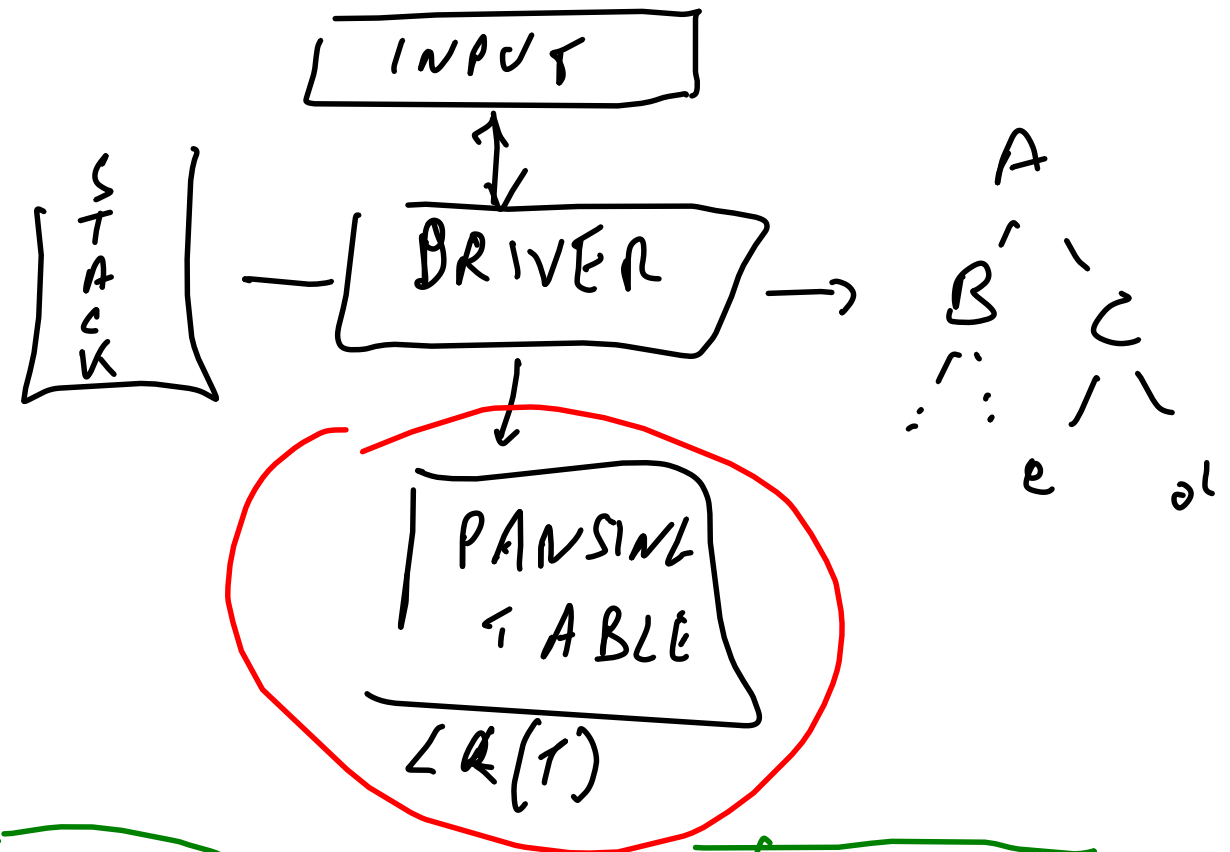
~~1~~

3

5

AZINE

SHIFT 0
SHIFT 6
REDUCE 3
SHIFT C
REDUCE 1
ACCEPT

$$\begin{array}{c} \angle R(1) \\ \hline \uparrow \\ \angle \angle (2)' \\ \uparrow \quad \uparrow \end{array}$$


- (0) $S' \rightarrow S$
- (1) $S \rightarrow a A$
- (2) $A \rightarrow B b$
- (3) $B \rightarrow c$

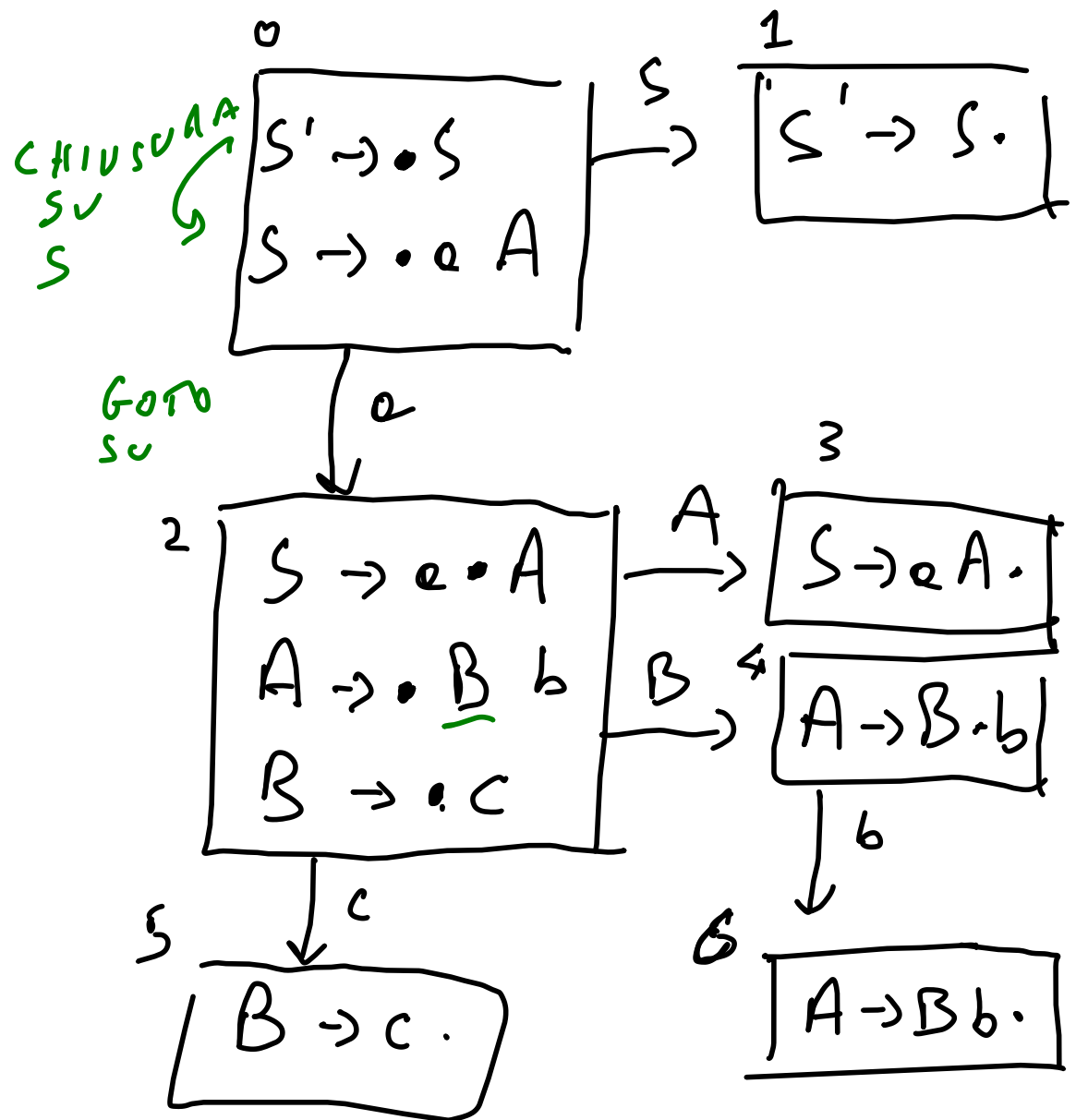
CLOSURE
GOTO
ITEM

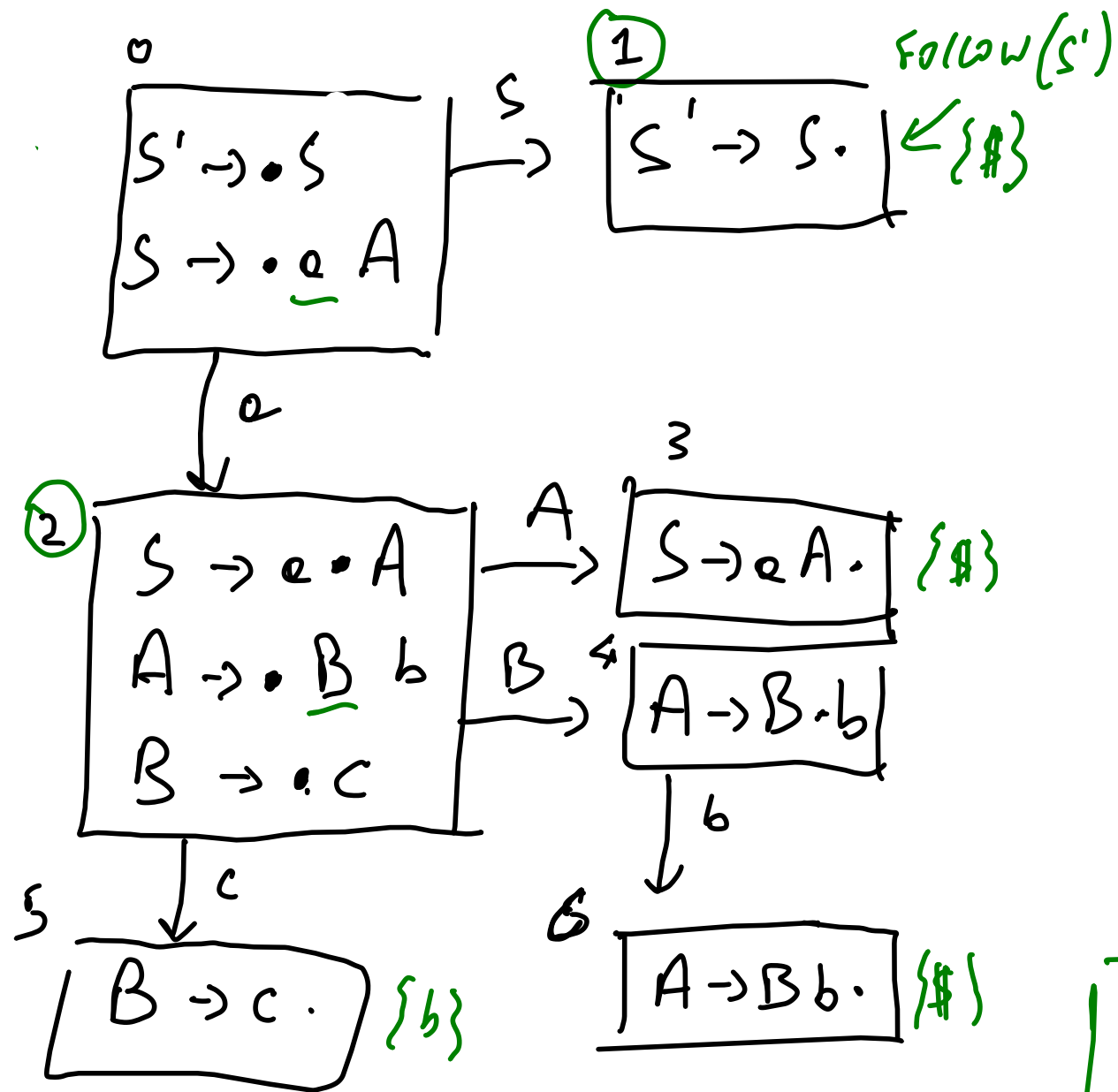
$A \rightarrow \cdot B b$

$A \rightarrow B \cdot b$

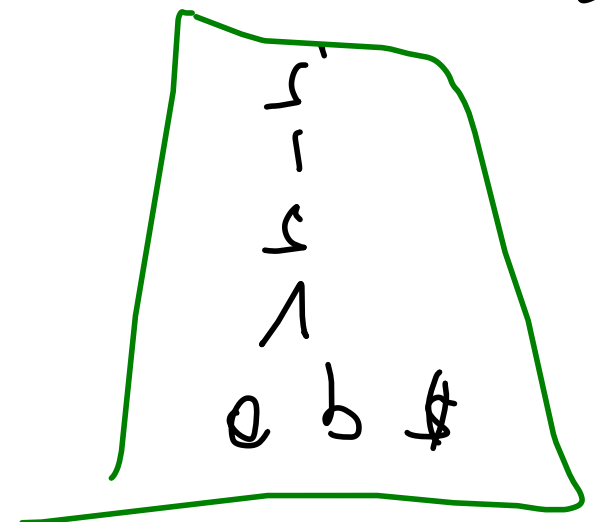
$A \rightarrow B b \cdot$

ITEM COMPLETE





	a	b	c	#	S'	S	A	B
0	S2				1			
1				Accept				
2			SS				3	4
3				r1				
4		SG						
5		r3						
6			r2					
	ACTION				GOTO			



- (0) $S' \rightarrow S$
- (1) $S \rightarrow aA$
- (2) $A \rightarrow Bb$
- (3) $B \rightarrow c$

	a	b	c	\$	S'	S	A	B
0	S2					①		
1				Accept				
2			SS				3	4
3				r1				
4		SG						
5		<u>r3</u>						
6			r2					

- (0) $S' \rightarrow S$
 (1) $S \rightarrow e A$ ←
 (2) $A \rightarrow B b$ ←
 (3) $B \rightarrow c$ ←

a c b

STACK	INPUT	AZIONE
0	a c b \$	SHIFT 2
1	↑ c b \$	SHIFT 5
0 2 2	↑ b \$	REDUCE 3
0 2 2 c 5	↑ b \$	(GOTO 4)
0 a 2 B .	↑ b \$	SHIFT c
0 a 2 B 4	↑ b \$	REDUCE 2
0 2 B 4 b 6	↑ \$	(GOTO 3)
0 2 A	↑ \$	REDUCE 1
0 e 2 A 3	↑ \$	(GOTO 1)
0 S	↑ \$	ACCEPT
0 S 1	↑ \$	

SLR(1) FOLLOW PER REDUCE