

1. $A \rightarrow B-C \mid C$
 $B \rightarrow C \mid dAe$
 $C \rightarrow fg \mid C+A$

a. Go To

- 0 $A' \rightarrow A$
- 1 $A \rightarrow .B-C$
- 3 $A \rightarrow .C$
- 4 $B \rightarrow .C$
- 5 $B \rightarrow .dAe$
- 6 $C \rightarrow .fg$
- 7 $C \rightarrow .C+A$

b. Follow

Follow A

i.	$B \rightarrow dAe$	=	$\text{First}(e)$	=	$\{\$, e\}$
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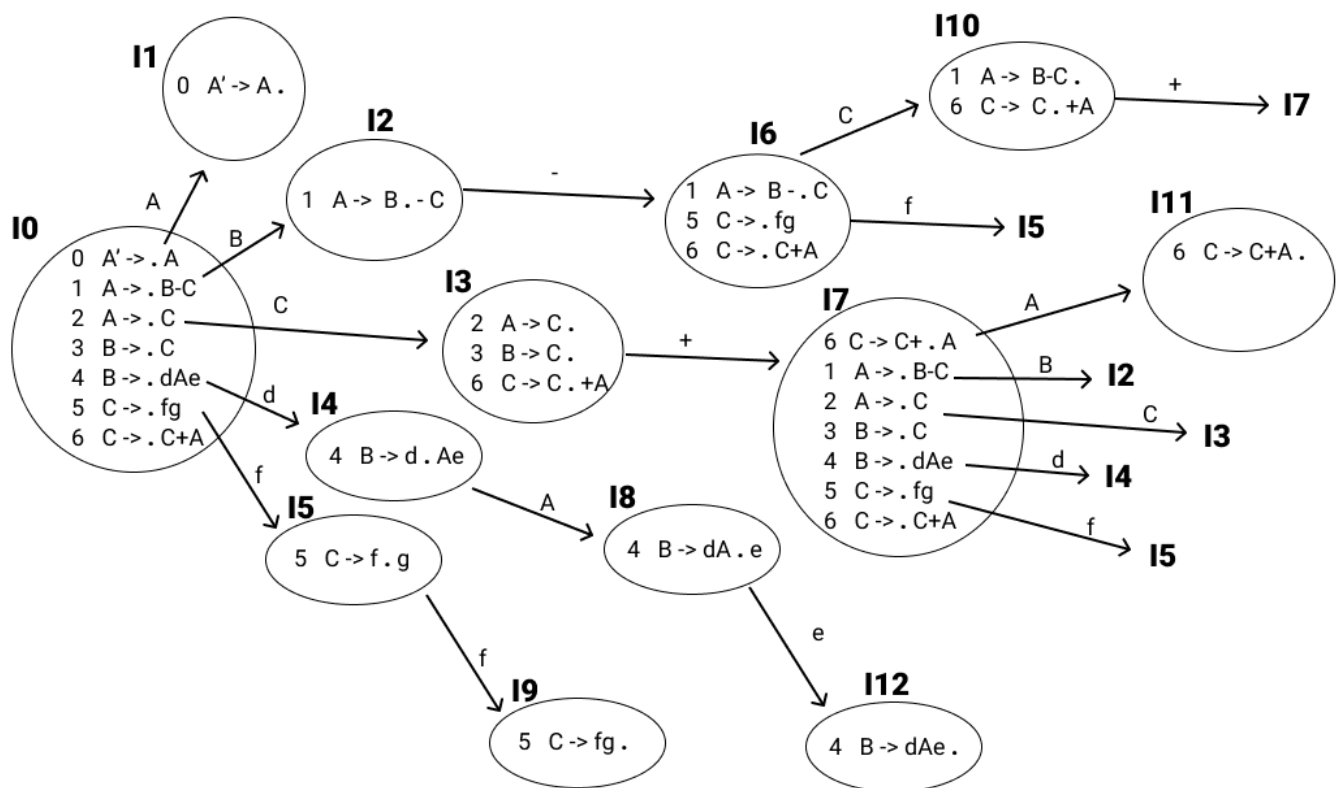
Follow B

i.	$A \rightarrow .B-C$	=	$\text{First}(-)$	=	$\{-\}$
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Follow C

i.	$A \rightarrow .B-C$	=	$\text{Follow}(A)$	=	$\{\$, e\}$
ii.	$A \rightarrow .C$	=	$\text{Follow}(A)$	=	$\{\$, e\}$
iii.	$B \rightarrow .C$	=	$\text{Follow}(B)$	=	$\{-\}$
iv.	$C \rightarrow .C+A$	=	$\text{First}(+)$	=	$\{+\}$
v.	Total	=		=	$\{e, -, +\}$

c. SLR Scheme Diagram & Table



	-	d	e	f	g	+	\$	A	B	C
0		S4		S5				1	2	3
1							accepted			
2	S6									
3	R3		R2			S7				
4								8		
5				S9						
6				S5						10
7		S4		S5				11	2	3
8			S12							
9	R5		R5			R5				
10			R1			S7				
11	R6		R6			R6				
12	R4									

d. Input = df-fe

STACK	INPUT	ACTION
0 \$	df-fe	S4, push (d), push(4)
4d0 \$	f-fe	REJECTED

2. $X \rightarrow Yb \mid X-Y \mid Z$
 $Y \rightarrow Za \mid X+Z$
 $Z \rightarrow a$

a. GoTo

$X' \rightarrow . X$
 1 $X \rightarrow . Yb$
 2 $X \rightarrow . X-Y$
 3 $X \rightarrow . Z$
 4 $Y \rightarrow . Za$
 5 $Y \rightarrow . X+Z$
 6 $Z \rightarrow . a$

b. Follow

Follow X

i.	Start	=	First(-)	=	{\$}
ii.	$X \rightarrow X-Y$	=	First(-)	=	{-}
iii.	$Y \rightarrow X+Z$	=	First(+)	=	{+}
iv.	Total	=		=	{\$, -, +}

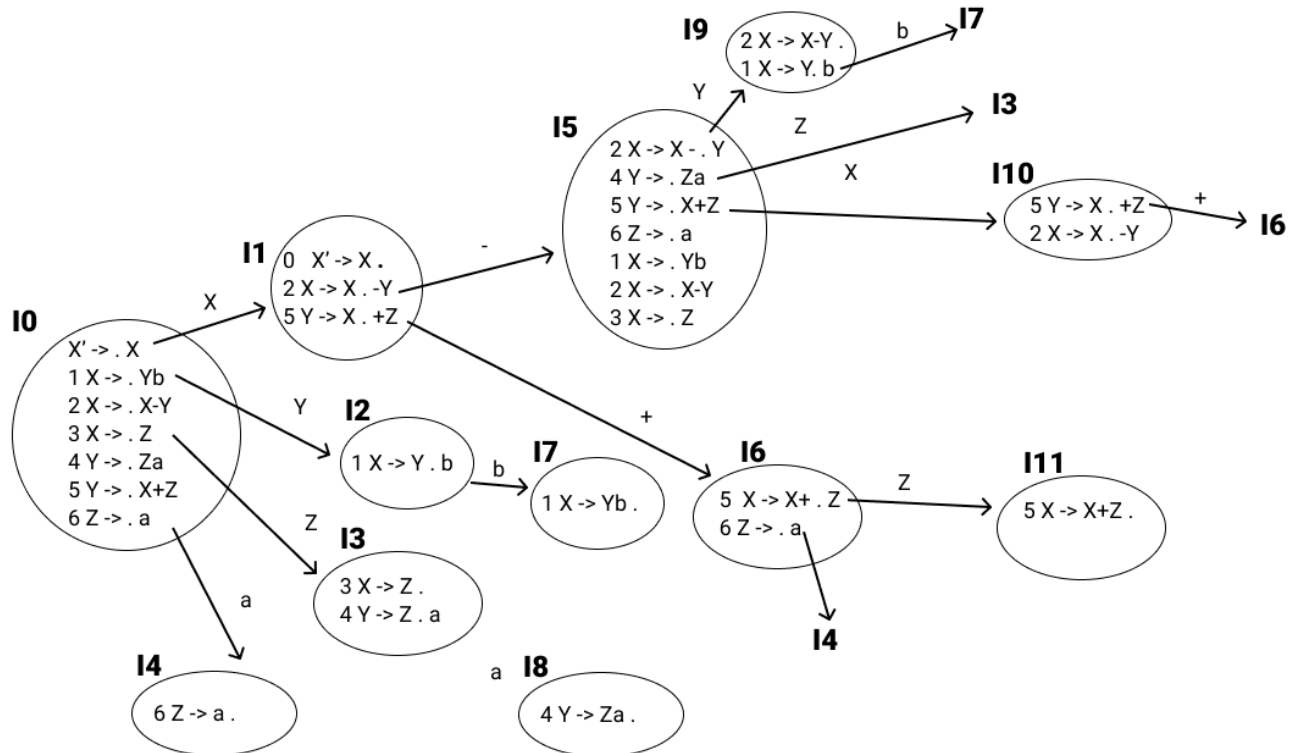
Follow Y

i.	$X \rightarrow X-Y$	=	Follow (X)	=	{\$, -, +}
ii.	$X \rightarrow . Yb$	=	First (b)	=	{b}
iii.	Total	=		=	{\$, -, +, b}

Follow Z

i.	$X \rightarrow Z$	=	Follow (X)	=	{\$, -, +}
ii.	$Y \rightarrow X+Z$	=	Follow (Y)	=	{\$, -, +, b}
iii.	$Y \rightarrow . Za$	=	First (a)	=	{a}
iv.	Total	=		=	{\$, -, +, b, a}

c. SLR Scheme Diagram & Table



	a	b	+	-	\$	X	Y	Z
0	S4					1	2	3
1			S6	S5	Accepted			
2		S7						
3	S8		R3	R3	R3			
4	R6	R6	R6	R6	R6			
5	S4					10	9	3
6	S4							11
7			R1	R1	R1			
8		R4	R4	R4	R4			
9		S7	R2	R2	R2			
10			S6			5		
11			R5	R5	R5			

input = aab+a

STACK	INPUT	ACTION
0 \$	a ab+a \$	S4, push (a), push(4)
4a 0 \$	a b+a \$	R6, Z -> a
Z 0 \$	ab+a \$	
3 Z0 %	a b+a \$	S8, push (a), push(8)
8a 3Z0 %	b +a \$	R4, Y -> Za
Y 0 %	b+a \$	
2 Y0 \$	b +a \$	S7, push(b), push(7)
7b 2Y0 \$	+ a \$	R1, X -> Yb
X 0 \$	+a \$	
1 X0 \$	+ a \$	S6, push(+), push(6)
6+1 X0 \$	a \$	S4, push (a), push(4)
4a 6+1X0 \$	\$	R6, Z -> a
Z 6+1X0 \$	\$	
11 Z6+1X0 \$	\$	R5, Y->X+Z
Y 0 \$	\$	
2 Y0 \$	\$	REJECTED