

Chapter 3

3.6

a

	Nullable	FIRST	FOLLOW
S	No	u	
B	No	w	x, y, z, v
D	Yes	x, y	z
E	Yes	y	x, z
F	Yes	x	z

b

	x	y	z	u	v	w
S				$S \rightarrow uBDz$		
B						$B \rightarrow B \vee B \rightarrow w$
D	$D \rightarrow EF$	$D \rightarrow EF$	$D \rightarrow EF$			
E	$E \rightarrow$	$E \rightarrow y$	$E \rightarrow$			
F	$F \rightarrow x$		$F \rightarrow$			

c.

Not LL(1).

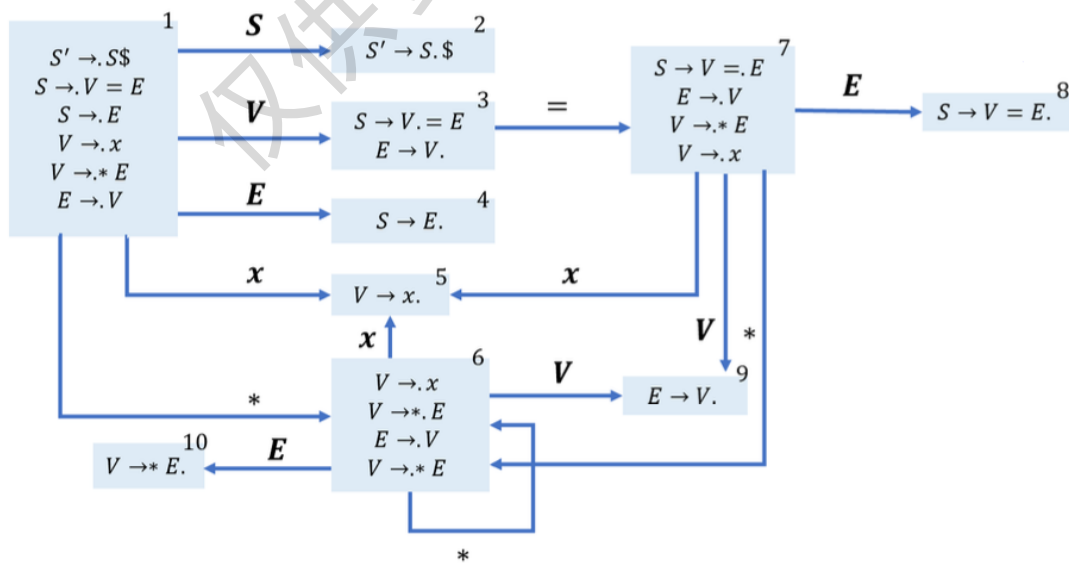
d.

$B \rightarrow B \vee B \rightarrow wB'$

$B \rightarrow w B' \rightarrow \vee B'$

$B' \rightarrow$

3.9



SLR table

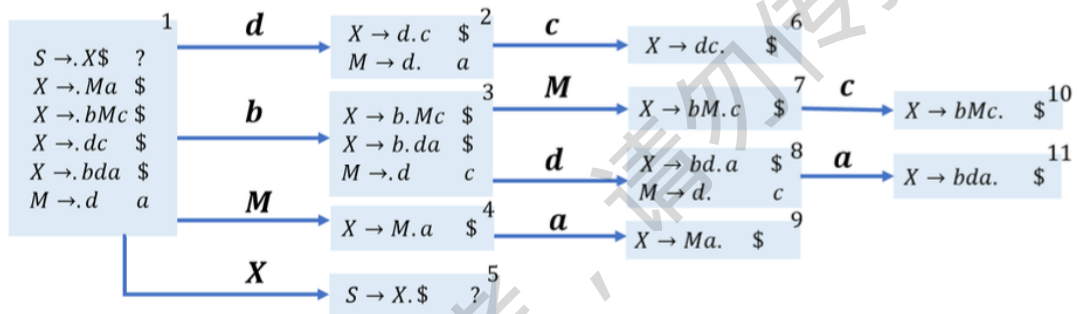
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	x	*	=	\$	S	V	E
1	s 5	s 6			g 2	g 3	g 4
2				a			
3			r 3, s 7	r 3			
4				r 2			
5			r 4	r 4			
6	s 5	s 6				g 9	g 10
7	s 5	s 6				g 9	g 8
8				r 1			
9			r 3	r 3			
10			r 5	r 5			

conflict.

3.13

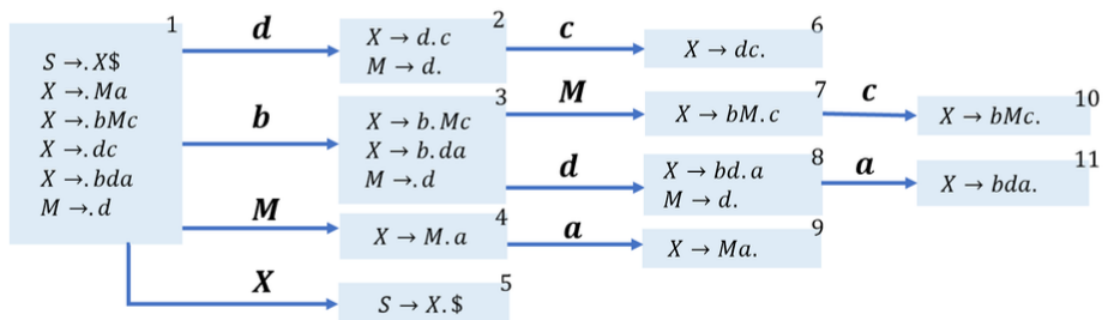
LR(1) states diagram



LALR(1) parsing table

	d	b	a	c	\$	M	X
1	s 2	s 3				g 4	g 5
2			r 5	s 6			
3	s 8					g 7	
4			s 9				
5					a		
6					r 3		
7				s 10			
8			s 11	r 5			
9					r 1		
10					r 2		
11					r 4		

LR(0) state diagram



SLR parsing table

	d	b	a	c	\$	M	X
1	s 2	s 3				g 4	g 5
2			r 5	r 5, s 6			
3	s 8					g 7	
4			s 9				
5					a		
6					r 3		
7				s 10			
8			r 5, s 11	r 5			
9					r 1		
10					r 2		
11					r 4		

not SLR

3.14

LL1 table

	()]
S	S → (X	S → F)	S → E]
X		X → E)	X → F]
E		E → A	E → A
F	F → A	F → A	
A		A →	A →

LALR

	()	\$	S	E	F
1	s 6			g 2	g 3	g 4
2			a			
3		s 7				
4			s 8			
5		r 6, r 7	r 6, r 7			
6		r 8	r 8		g 10	g 11
7			r 2			
8			r 3			
9			r 1			
10			s 12			

11		s 13					
12				r 4			
13				r 5			

仅供参考，请勿传播