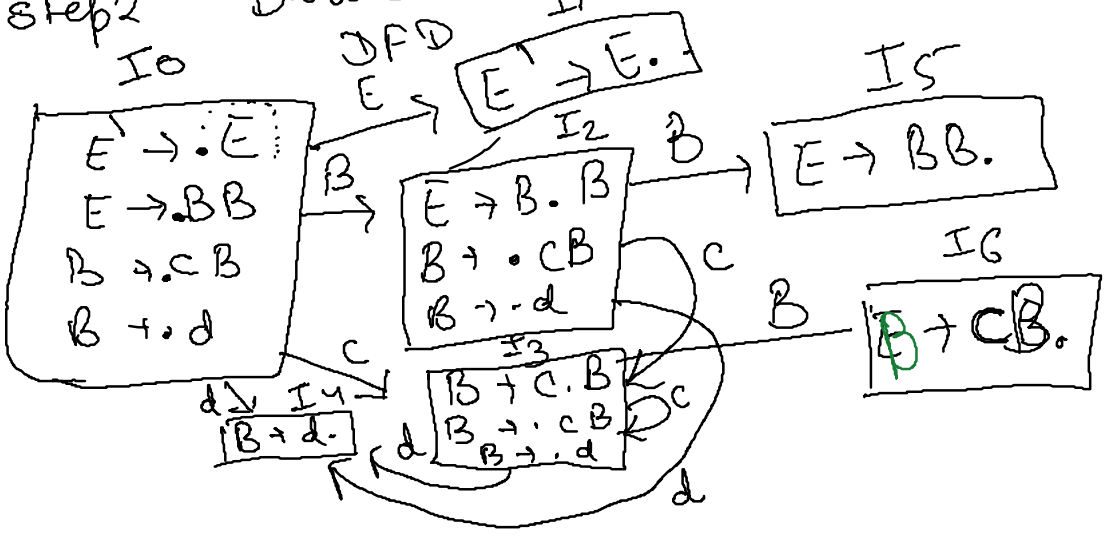
SLR(1)

12 September 2022 08:45

$E \to BB$
$B \to cB \mid d$ → LR(0)

Step 1 Augment the given grammer.
$E' \to E$ → augmented grammer.
$E \to BB$
$B \to cB$
$B \to d$

Step 2 Draw the Conical collection → in LR(0)



Step 3 → Numbering the production.

$E' \to E$
$E \to BB \to (1)$
$B \to cB \to (2)$
$B \to d \to (3)$

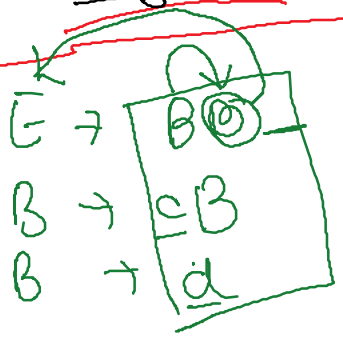
Step 4. Parsing table: LR(0)

States	Action			Goto	
	c	d	$	E	B
I0	S3	S4		1	2

I_0	S_3	S_4	1	2
I_1		Accept		
I_2	S_3	S_4		5
I_3	S_3	S_4		6
I_4	γ_3	γ_3 γ_3		
I_5	γ_1	γ_1 γ_1		
I_6	γ_2	γ_2 γ_2		

SLR(1) Parsing table.

State	Action			Goto	
	c	d	$	E	B
I_0	S_3	S_4		1	2
I_1			Accept		
I_2	S_3	S_4			5
I_3	S_3	S_4			6
I_4	γ_3	γ_3	γ_3		
I_5			γ_1		
I_6	γ_2	γ_2	γ_2		



$I_4 \rightarrow (B) \rightarrow d$

Follow(B) → ?

First(B)

{c, d, $}

First(B) → c, d

I_5 → E → BB follow(E) → {$}

I_6 → B → cB follow(B) → {c, d, $}

Conflict → reduce optimize by SLR(1)

RR

A → a. →(1)
B → b. →(2)
C → aB. →(3)

	a	b	$
I_1	r_1/r_2	r_1/r_2	r_1/r_2

SR

C → .Bd
B → d.

	a	d	$	Conflict	reduce
I_7	S_2/r_2	r_2	r_2		r_2

Grammer ve commet pass id with LR(1)

Grammer can be easily passed with SLR(1) → optimize technique

Q E → T + E | T
T → id

Design SLR(1) parsing table.