

Example 1:

$S \rightarrow AA$

$A \rightarrow aA/b$

Step 1: Augmented Grammar

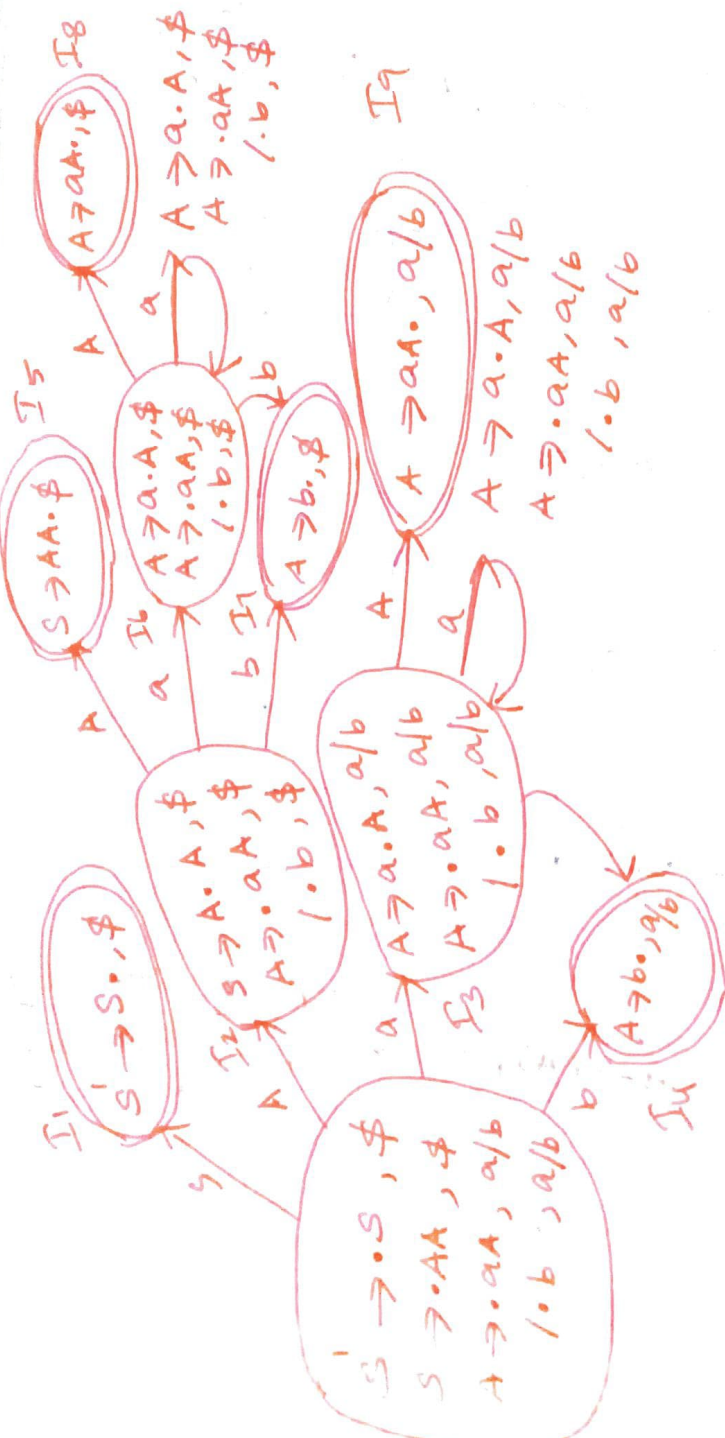
$S' \rightarrow S$

$S \rightarrow AA$

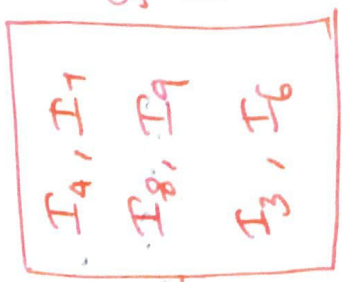
$A \rightarrow aA/b$

Step 2: Canonical Collection of LR(0) items:

1.  $S \rightarrow AA$
2.  $A \rightarrow aA$
3.  $A \rightarrow b$



Same LR(0) items  
Same LR(0) items  
Nonkeyhead alone  
different.



- $I_{47}$
- $I_{89}$
- $I_{36}$

LR  
merge these  
items

Step 3:  
CLR Parse Table

	ACTION			GOTO	
	a	b	\$	A	S
I <sub>0</sub>	S <sub>3</sub>	S <sub>4</sub>		2	1
I <sub>1</sub>			Accept		
I <sub>2</sub>	S <sub>6</sub>	S <sub>7</sub>		5	
I <sub>3</sub>	S <sub>3</sub>	S <sub>4</sub>		9	
I <sub>4</sub>	r <sub>3</sub>	r <sub>3</sub>			
I <sub>5</sub>			r <sub>1</sub>		
I <sub>6</sub>	S <sub>6</sub>	S <sub>7</sub>		8	
I <sub>7</sub>			r <sub>3</sub>		
I <sub>8</sub>			r <sub>2</sub>		
I <sub>9</sub>	r <sub>2</sub>	r <sub>2</sub>			

CLR (No. of states are more)  $\Leftrightarrow$  LALR / LR(0) / SLR

LALR parse Table.

Items	ACTION			GOTO	
	a	b	\$	A	S
I <sub>0</sub>	S <sub>36</sub>	S <sub>47</sub>		2	1
I <sub>1</sub>			Accept		
I <sub>2</sub>	S <sub>36</sub>	S <sub>47</sub>		5	
I <sub>36</sub>	S <sub>36</sub>	S <sub>47</sub>		89	
I <sub>47</sub>	r <sub>3</sub>	r <sub>3</sub>	r <sub>3</sub>		
I <sub>5</sub>			r <sub>1</sub>		
I <sub>89</sub>	r <sub>2</sub>	r <sub>2</sub>	r <sub>2</sub>		