

LALR parsing

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- We have to only merge the states having all the codes same :-

I_4 and $I_7 \Rightarrow I_{47}$
 I_3 and $I_6 \Rightarrow I_{36}$
 I_8 and $I_9 \Rightarrow I_{89}$

lookahead will be: $\{a|b|\$ \}$

Now.

| | a | b | \$ | S | A |
|----|-----------------|-----------------|----------------|---|----|
| 0 | S ₃₆ | S ₄₇ | — | 1 | 2 |
| 1 | — | — | accept | — | — |
| 2 | S ₃₆ | S ₄₇ | — | — | 5 |
| 36 | S ₃₆ | S ₄₇ | — | — | 89 |
| 47 | R ₃ | R ₃ | R ₃ | — | — |
| 5 | — | — | R ₁ | — | — |
| 89 | R ₂ | R ₂ | R ₂ | — | — |

Ans

- No. of states in LALR = No. of states in SLR but parse table may be different.

- Behavior on a^*b of CLR and LALR:-

(i) CLR:- On a^*b , when "b" comes it will go to 4th state and when "\$" comes finally, it will be an Error.

(ii) LALR:- On a^*b , when "b" comes, it will go to 47 state and when "\$" comes, it will start reducing and will give error finally when only "A" remains on stack.