

Lab Assignment 6

LR(1) Parsing

We consider the following grammar for this assignment.

1. $S' \rightarrow S$
2. $S \rightarrow L=R \mid R$
3. $L \rightarrow *R \mid id$
4. $R \rightarrow L$

Q1. Construct the LR(1) DFA for the above grammar. Clearly mention what are the items in each state. Based on the LR(1) DFA, provide the LR(1) parse table for the grammar. Briefly describe the process followed to build the automaton and the parse table. Why is the grammar LR(1)?

Submit a document describing your solutions to Q1.

Q2. Program that generates the **LR(1)** automata and the parse table for any grammar given as input.