

Lab 5 Radu Ceaca and Andrei Candet

Assignment for a team of 2 students!

Statement: Implement a parser algorithm

One of the following parsing methods will be chosen (assigned by teaching staff):

1.a. recursive descent

1.b. LL(1)

1.c. LR(0)

The representation of the parsing tree (output) will be (decided by the team):

2.a. productions string (max grade = 8.5)

2.b. derivations string (max grade = 9)

2.c. table (using father and sibling relation) (max grade = 10)

### PART 1: Deliverables

1. Class grammar (required operations: read a grammar from file, print set of nonterminals, set of terminals, set of productions, production for a given nonterminal)
2. Input file: g1.txt (grammar from seminar); g2.txt (grammar of the minilanguage; syntax rules from Lab1)
3. Functions corresponding to parsing strategy (see table below)

**IMPORTANT remark: conflicts need to be solved, so apply functions for g2.txt**

Parser
+nonTerminals [] +terminals [] +startingSymbol: String +productions {}
+readFile(fileName: String) +validateStartingSymbol() +validateProductions() +productionsOfNonTerminals(nonTerminal: String)