



GS04: Tools and Environments

Lab Session 2: Context Free Grammars

The following words are correct input for a calculator that uses “Polish Notation”.

+ 4 5 .
+ (* 4 6) (- 10 1) .
* 2 (* 2 (/ 6 3)) .

Context Free Grammar

Write a context free grammar for the language

Parse Trees

For the three examples given above, give their parse trees.

Abstract Syntax Trees

Devise a representation for abstract syntax trees for the language and derive the abstract syntax trees for the words given above.

Parsing

Use CUP (see <http://www2.cs.tum.edu/projects/cup/>) to generate a parser for the language