

Homework 6: Abstract Syntax Tree

(20 points)

Study the definition of the abstract syntax tree for the Mini-Pascal language in the file `ast_symtab.h` attached to this exercise sheet.

Ignore for the moment the variable declarations (i.e., *identListType* definitions, covered in the next homework about the symbol table).

1. Extend the YACC-based LALR(1) parser with an attribute grammar for creating the abstract syntax tree representation of the input program; **(15 points)**
2. Verify the correctness of the abstract syntax tree by traversing it in preorder and generating a new source program semantically equivalent with the original source code. **(5 points)**