

Task 1.3

Write a program in a programming language of your choice that reads the text of an extended PAM program (cf. Task 1.2, equivalence and implication operations can be excluded) from a file 'program.txt' and creates and prints its abstract syntax tree.

The nodes of the abstract syntax tree has to correspond to the concepts similar to the abstract language IMP (extended with read and write operations). For printing the abstract syntax tree either JSON or XML formats, or any other textual format that allows clear perception of the tree structure can be used.

Note. The program can rely on a parser generator (e.g. ANTLR, as in Task 1.2, or some other), or it can be written without a parser generator support.

Note. The result of the program shall be used further on in writing an interpreter of PAM (within the PL Semantics study in the course, HW 2).

Submission:

- 1) Source code and executable of the solution (if the language is not interpreted)
- 2) Textual files with the output of your program (the abstract syntax trees) on the examples of:
 - a. `x := 5; y :=7; if 2=3 and 3=4 or 5=5 then write x else write y fi , and`
 - b. `x:=14; y:=35; while x <> y do if x=<y then y:=y-x else x:=x-y fi end`

Grading: Max 40 points