Implementační dokumentace k projektu do IPP 2017/2018

Jméno a příjmení: Jozef Dráb

Login: xdrabj00

Aim of the project:

The role of this program was to perform a lexical and syntax analyzation. After this lexical and syntax check program created the xml file to write midst-code. Duty of this program was to exit with specific return value, after it found mistake in input.

The scheme of the project:

The scheme for implementation was firstly planned on the paper. There was choosed, what's the best way to optimalizate program, to be easy for modification. The result is shown in the next page like finite-state automata.

Process of implementation:

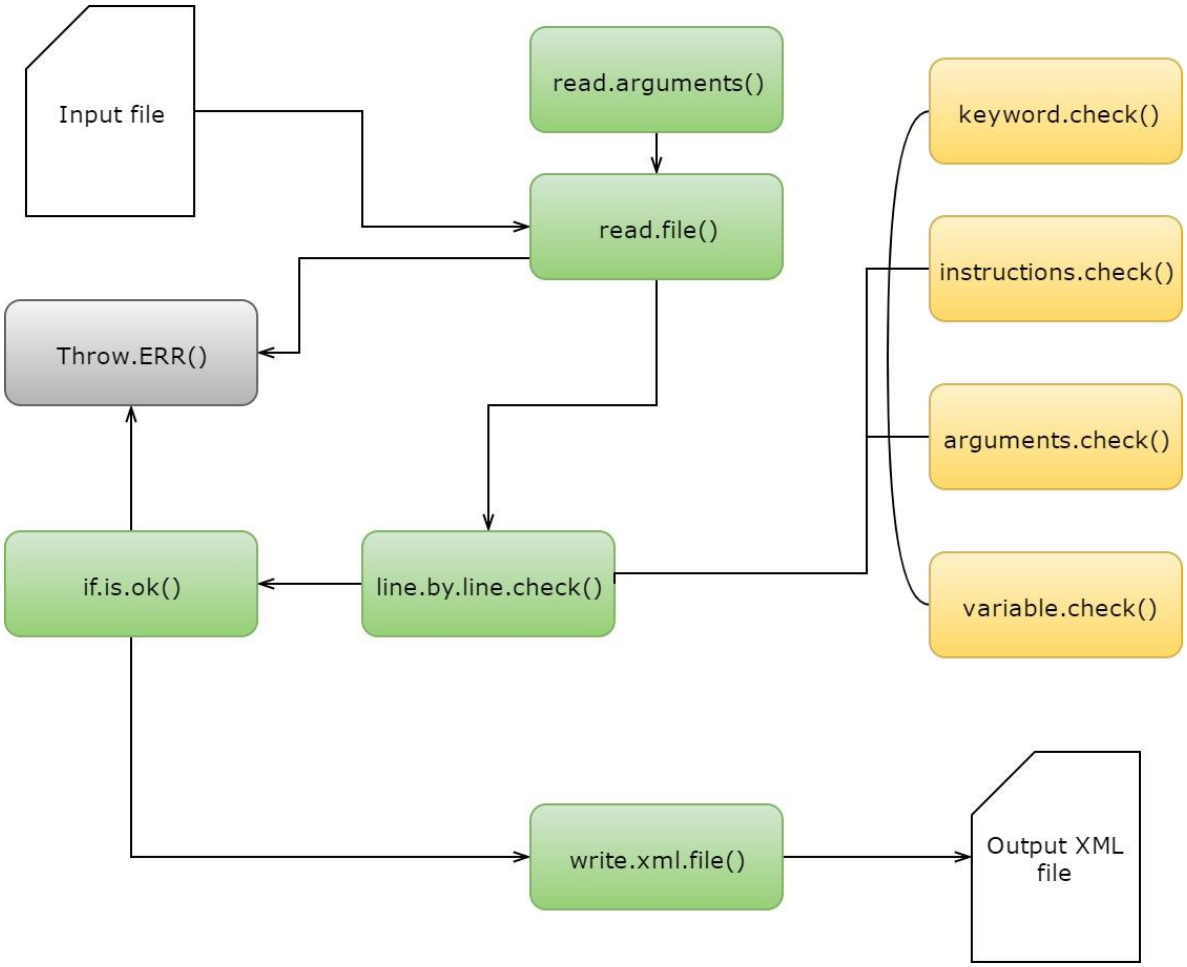
At the beginning program loads an arguments from the command line, evaluates them and open the input source file. It reads line by line and sends data to specific function to make lexical and syntax check. Program during that creates xml file ready to write into that. After every line check script writes to xml file. Every line should contains one keyword and the beginning. If there's keyword at the other place script evaluates it just like mistake. The next word are sends to the next function to sort them by main instruction.

Every instruction has got, how many argument can contains. That's solved by the switch, which is sort them. When argument is variable with range, it's automatically written into the global array. Script contains three global arrays for variables sorted by their range. That's used before the same variable is at the another line to check, if exists.

Result of the project:

Final result of program is to create xml file. That provides data loaded from the input file checked by functions realizing lexical and syntax analyzation. Function of the xml file is to be input file for interpreting program.

Power of xml file is in a hierarchically structure containing elements and argument. Every instruction, arguments and their values are organized into the elements and argument to be easily read by interpret.


Input file
read.arguments()
read.file()
Throw.ERR()
keyword.check()
instructions.check()
arguments.check()
variable.check()
if.is.ok()
line.by.line.check()
write.xml.file()
Output XML file