Documentation of Project Implementation for IPP 2022/2023

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Parse.php:

Whole script I decided writing in a single *parse.php* file and make it as compact as possible. Script is divided into sections, that are marked with multiple '#' symbols and prompting names. At the beginning *parse.php* creates XML header and *program* container, then it reads line by line file in IPPcode23 language, every read line is cleaned up of whitespaces at its beginning and the end and removed everything since '#' symbol, symbol itself included, so we don't have to deal with it afterwards, then it checks if file we read contains correct header for IPPcode23 language and then it jumps to *switch case*, where by first read word on the line (*keyword*) controls syntaxial and lexical correctness. If line recognized as correct, it calls *instr_build()* function, where it builds *instruction* container and *arg1, arg2, arg3* containers if it is needed. If a *keyword* has arguments *instr_build()* calls *arg_scanner()* function, where it identifies *type* of read argument. After all of that it reads second line of file and so on until it bangs against the *end of file,* and finally parse.php prints out all the content to STDOUT.

The most problematic thing in this project was to write correct regular expression for strings, especially for '\' character.