

# Implementační dokumentace k 1. úloze do IPP 2021/2022

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## 1. Introduction

Assignment was to implement parse.php script in PHP 8.1, which is supposed to analyse script in IPPcode2022 syntactically and lexically.

## 2. Implementation

Script parse.php reads line by line IPPcode2022 source code from standart input. It generates XML representation of program on a standart output. Errors are printed on standart error output.

Solving this assignment required several steps, including verification of arguments, header, taking care of # comments, syntacticall and lexicall check on already processed tokens and finally correct generation of XML.

Base of my solution is formed by while loop, which reads line by line from input file, processes it, and sends it into switch, which determines what instruction is currently being processed. Switch cases are ordered by amount and type of their attributes/arguments, that are further checked for syntax by arg\_check(), var\_check(), constant\_check() or label\_check(), which are regular expressions, depending on instruction type. With each new instruction new XML object is being generated with possible arguments. Instructions are being ordered as well as their arguments/attributes.