

## 1. Options

If help option is used script will display basic description of the script's options and will end with exit code zero. Script also includes STATP extension. If any option from STATP is used it is necessary to use option stats. Stats option sets file where result(s) of other STATP extension options is/are written. Option loc writes number of useful lines of code. Option labels count number of defined labels in code. Option comments similarly count number of comments used in code. In the end option jumps counts number of jump instruction in code including instructions CALL and RETURN. All results from STATP options are written to settled file in a given order.

## 2. Check functions

All names of check functions are written in a format "check\_type". Each of them, except functions `check_string` and `check_args`, take one argument and apply `preg_match` function with regular expression, which describes data type of IPPcode19, then the function returns Boolean. Function `check_string` at first replace all valid escape sequences with empty string and after that applies `preg_match`. `Check_string` also returns bool value. Function `check_args` controls whether option called by script `parse.php` are valid. Options are called in for cycle and switch sequence. If error occurs, script ends with exit code 10. If function is executed successfully, it returns name of file from stats option.

## 3. Other functions

Function `clear_input` reads input from standart input and replaces all comments and blank lines with empty string. It returns modified string with `ippcode19`. Function `write_output_of_a_line` uses array of arguments. Function uses xml writer to log given information to xml object. Function `write_output_of_argument` handles logging arguments to xml object. Last used function is `STATP_output` which writes results of options in given order to given file.

## 4. Main

At script the script argument is controlled, and all counters are settled to zero. After that, the input is cleared in function `clear_input`. Then script iterates through the useful lines of given code in `IPPcode19`. In first iteration script controls syntax of header and if header is correct, script creates new instance of xml object and writes header in the instance of xml in the correct format. Then, the script iterates through all the useful lines of input code in switch sequence. If instruction matches with any case of number of arguments and arguments types they are controlled with `check_type` functions and afterwards the function `write_output_of_a_line` is called. In the end xml is written on standart output and stats are written into given file.