

Documentation of Project Implementation for IPP 2021/2022

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### **Interpret.py**

The script contains additional libraries for XML processing *argparse* and *xml.etree.ElementTree*. First we add arguments with *.add\_argument*, then with the help of the function *check\_args()* we check the arguments and files and print help if necessary. Next come the functions for working with the frame. To process the code, we then use the functions for instructions. *Instruction\_set* is used for the arguments of instructions. then we use functions *escape\_sequense()* and *modify\_value()* that help us modify the value of the variable depending on type. In *main()* function we checks program arguments and input files for XML parsing, then check the specified XML file, its formatting, its syntactic and lexical correctness. And after that we call functions depending on the name of the instruction.

### **Bonus extension**

#### **STACK**

Stack functions are implemented for CLEARS instruction, for arithmetic instructions ADDS/SUBS/MULS/IDIVS that select two values from the data stack and then save the result of operation at the top of the data stack. There are also Boolean stack instruction ANDS/ORS/NOTS that select one or two values from the data stack and apply logical operation to them.