

Documentation of IPP 2018/2019, 2 task Interpret

- Author: Nikolaj Vorobiev, xvorob00@stud.fit.vutbr.cz
- Login: xvorob00
- Version: 1.0
- License: GNU GPL3

Usage

```
python3 interpret.py --help
python3 interpret.py --input=<input_file> --source=<source_file>
```

How does it works?

Interprete XML file from Parser.

1. Check parameters.
2. Get instructions from XML-file and append them to instruction stack.
3. Create a dictionary of labels.
4. Run instructions from instruction stack one by one.

My solution and modifications

- All frames are in Frames class.
- All instruction methods are in Machine class.
- All errors are in Error class.
- Run loop: Machine.run(order).
- In Run loop get instruction's name and call equal Machine method.
- If Exception: transfer to Error in Run loop.
- If Error: write Order, Instruction, *args, type of error; exit with error code.
- Never return 31 error(Parser controls).
- CALL label: create new Run loop -> continue previous Run loop.
- CALL without RETURN also returns(at the end of the block).
- JUMPs label: return previous Run loop and create a new Run loop.
- RETURN without CALL is equal to EXIT int@0.

Types of instructions

- Output
- Frames
- Stack
- Operations
- Type
- String
- Control
- Debug