Compiler term project

Implementation of lexical analyzer

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# Abstract

We implemented a syntax analyzer by implementing a DFA class which acts based on the definition introduced on compiler lecture.

And we generated instances of it and defined its behavior based on DFA detail we generated.

# Language specification

## Regular expression definition

First we made regular expressions of given tokens so we can make DFAs with it.

* (positive\_digit): (1|2|3|4|5|6|7|8|9)
* (digit): (0|1|2|3|4|5|6|7|8|9)
* (alphabet): (a|b|c|…|z|A|B|…|Z)

1. Variable type: int|char|bool|float
2. Signed integer: ((-|ε)(positive\_digit)(digit\*)|0)
3. Literal string : “(alphabet| |digit)”
4. Boolean string : true|false
5. Floating-point number: (-|ε)(positive\_digit)(digit\*).(digit\*)