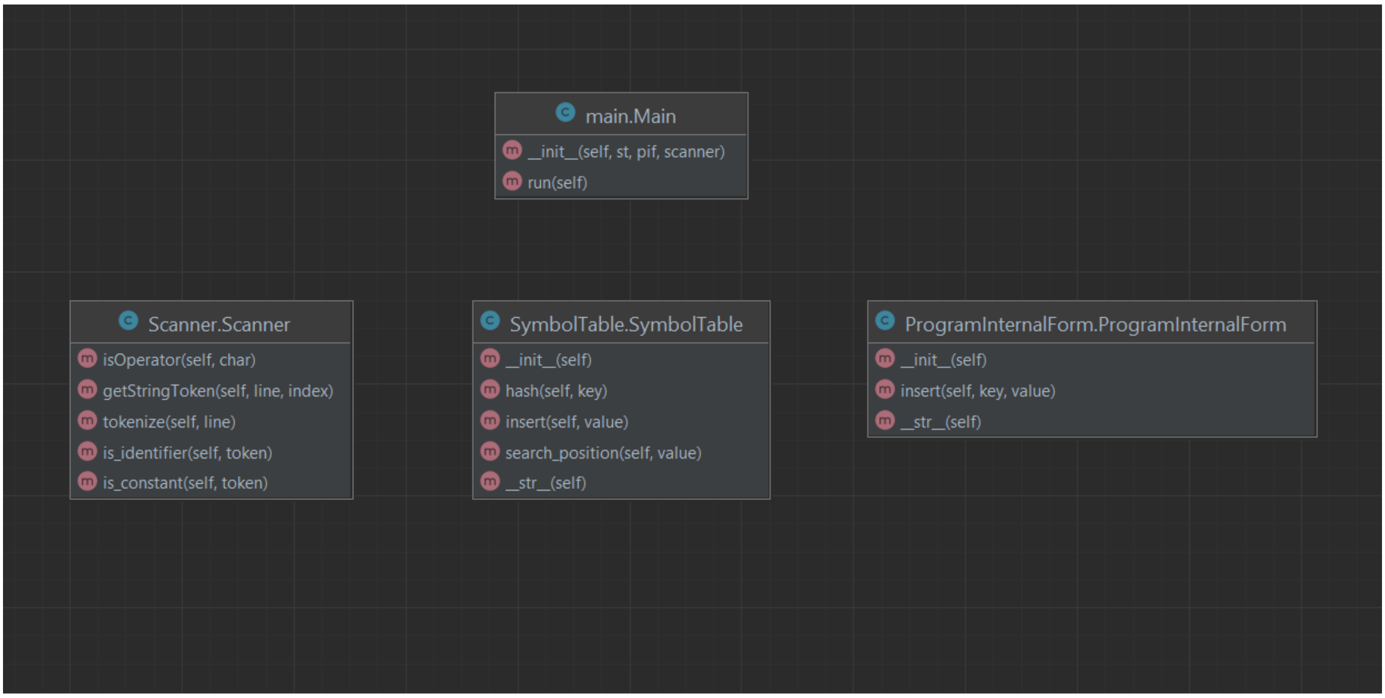
GitHub: https://github.com/AlexandruStinga/FLCD

Class Diagram:



Documentation:

- Symbol Table:

I have chosen to implement a hash table for my symbol table. hash(key) function is hashing the given parameter based on the length of the hash table insert(value) function is inserting the given value in the hash table if the value doesn't exist, otherwise if the value exists, it will return the position of the value in the hash table search_position(value) function is returning the position of the searched value in the hash table if it exists, otherwise it will return -1.

- PIF:

The PIF is stored as a list of tuples, (key, value), where the key is the token and the value is it’s position in the symbol table. If it’s not a constant or an identifier, the value will be -1, as it will not be in the symbol table.

- Identifier regex: ^[_a-zA-Z][_a-zA-Z0-9]*$

This regex matches any word starting with underscore “_” or a uppercase/lowercase letter. The word cannot have a number as its first character, but it can have numbers on any other position in the word.

- Constant regex: ^-?(([1-9][0-9]*)|(0))(?:\.[0-9]+)?$

The regex will match a number that may start with a - or nothing at all, with any number of digits or 0, followed by a decimal and any number of numbers. The decimal part is not mandatory for the regex to match.