

Github: <https://github.com/pukoarmin/Formal-Languages-and-Compiler-Design.git>

Scanner:

A set of functions that serve the purpose of the scanner's functionalities

`isPartOfOperator(char): Boolean =>` Returns True if the char is part of an operator, False otherwise
`isEscapedQuote(line, index): Boolean =>` Returns True if the string on the line at index is an escaped quote or not
`getStringToken(line, index): String =>` Returns the string and the end index of the token starting from index on line
`getOperatorToken(line, index): String =>` Returns the string and the end index of the operator token starting from index on line
`tokenGenerator(line, separators): String =>` Returns the generated tokens from line in regards to the set separators
`isIdentifier(token): Boolean =>` Returns True if the token is an identifier, False otherwise
`isConstant(token): Boolean =>` Returns True if the token is a constant, False otherwise
`isSystemToken(previous_token, token, lineNo) =>` Returns True if the token is a separators, operator or reserved keyword, throws exception if it is a reserved keyword used as identifier and False otherwise

ProgramInternalForm:

A class that contains the pif content and the methods required to operate
- content: List => Stores the PIF's content

+ add(token, Integer): void => Adds the token with the corresponding id to the content list

In main, we use these methods and class as follows:

1. We read line by line
2. For every identified token on that line we check if it is a system token, an identifier or a constant

Note that the PIF table stores the operators and separators with the id -1. If it so happens that the Hash Table inside the Symbol Table had conflicts and multiple nodes are stored on the same index, the pif contains as the token's id a list of the hashed index and the index of the element inside the node chain

- 2.1 If it is, then it is added into the symbol table then into the pif
 - 2.2 If it is not, then an Unidentified token exception is raised
3. We print the two tables