DOCUMENTATION

Technologies and Data Structures used:

I choose to use Java for implementing the Scanner.

Regarding the data structures used in the application I had to use a lexicographically binary search tree for my ST (Symbol Table) representation, and each element is a Pair (variable-string, unique\_code-int).I have 2 symbol tables, one is for identifiers and one is for constants.

The Program Internal Form (PIF) is represented as a list of Pairs (code, id) . The id is either -1 for separators/operators/reserved words or the unique\_code from Symbol Table for identifier/constant. The code represents the key from the codification table.

The special symbols as separators, operators and reserved words are represented in a list. The codification table is a list in which the value is either a separator/operator/reserved word or an identifier/constant. The index represents the code for each value.

Description:

After I read the instructions from the file, line by line, I split the lines into tokens using the function Generator from the Scanner class, which returns a list of tokens. If the token is an operator or a separator or a reserved word I add it to the PIF with code -1. Otherwise, I check if our token is an identifier or a constant. In both cases, we add it in the specific Symbol Table and in the PIF we add the key value from the codification table, which is either 0 or 1.