

Decaf Compiler

Key Ideas

Flex

The first module of the compiler is a lexical analyser which we create using flex. In here we specify the regular expressions for various tokens i.e, the terminals symbols in the grammar. Flex generates a c output file which when given a program as input, parses the text looking for the text which matches the specified regular expression and hence identifies the token and passes it onto the parser.

Bison

This is the second module of the compiler. It is a parser which validates if the program is semantically correct or not. The input to the parser are the tokens from the lexical analyzer and the grammar for the programming language. Using the grammar the bison file checks if the program semantically confirms to it or not. If not, then it gives a syntax error.