

From an assignment like this, I learned the fundamental concepts of compiler design, specifically how to build a lexical analyzer. In this task, I am also taught on the implementation of regular expressions that help identify some aspects of the programming language such as keywords, identifiers, numbers, operators, and delimiters, which aids in understanding how programming languages are compiled. Also, I acquired skills on how to break down an input into tokens and append valuable information to each token thus its type, value and code location. This assignment also deepens my understanding of error handling in lexical analysis, where I learn how wrong characters or ill-formed input can be detected and how to deal with such situations. Lastly, this interfacing of the lexer with the parsing plus the intermediate code generation phases enables me to appreciate how various phases of a compiler come together in converting the high level human language into an executable form hence deepening my understanding of programming language theory and systems programming.