JavaCompiler

Prerequisites

- [Java](#)
- [JFlex](#)
- [CUP](#)
- [VSCode](#)
- VSCode's [Java Extension Pack](#)

Structure

File Structure

```
.
├── README.md                       <- you are here
├── cup
│   └── Parser.cup                  cup parser specification
├── flex
│   └── Scanner.flex                flex scanner specification
└── src
    ├── lexer
    │   └── Lexer.java              lexer implementation (auto-generated by jflex)
    ├── parser
    │   ├── BooleanExpression.java  boolean expression tree
    │   ├── Expression.java         mathematical expression tree
    │   ├── MyObject.java           language object type
    │   ├── Parser.java             parser implementation (auto-generated by cup)
    │   ├── Program.java            list of statements
    │   ├── Scope.java              scope for storing variables and parent scope
    │   ├── Statement.java          statement tree
    │   ├── Subprogram.java         function argument list and body
    │   ├── Symbols.java            symbol table (auto-generated by cup)
    └── Main.java:                  main class for running parser/lexer
```

Keywords

`if else while for func return`

Operators

`= == != < > <= >=`
`&& ||`
`+ - * / % ++ --`

Usage

```
Usage: <main class> [-dp] [--help] FILE...
Lexer for the java language
      FILE...   Files whose contents to display
 -d, --debug   Print debugging information
      --help   display this help and exit
 -p, --parse   Parse the file instead of lexing it
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```

Credit

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