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CS323 Programming Assignments

Fill out all entries 1 - 7. If not, there will be deductions!

1. Names [1. Andrew Lee] Section [21737]

2. Assignment Number [2]

3. Due Date [11/10/2024]

4. Submission Date [11/10/2024]

5. Executable File name [main.exe]
(A file that can be executed without compilation by the instructor, such as .exe, .jar, etc - **NOT** a source file such as .cpp)

6. Names of the testcase files - input test file output test file
test 1. [test.txt] [result.txt]

7. Operating System [Window]
(Window – preferred)

To be filled out by the Instructor:

Comments and Grade:

Problem: Create a bottom up parser to analyze Rat2F code syntax.

Execution

The script is executed with main.exe, but may have dependencies on the std c++6 library.

This will analyze a *test.txt* file by default, producing output file *result.txt.* The output file contains the ordered tokens with their corresponding lexemes and syntactical rules used.

Design

LR Parser is the parser chosen in order to sort through each significant lexeme and the syntactical rules given.

Left-Recursion Removal was used in order to address certain syntax rules, such as:

R25. <Expression> ::= <Expression> + <Term> | <Expression> - <Term> | <Term>

which was turned into:

R25a. <Expression> ::= <Term> <ExpressionPrime> | <Term>

R25b. <ExpressionPrime> ::= + <Term> <ExpressionPrime> | - <Term> <ExpressionPrime> | epsilon

Limitations

None

Shortcomings

None