CS251: Introduction to Language Processing

Assignment-1

Due date: January 31, 2024 11:59 PM

Instructions

- Implement your solution using the lexical analyzer tool, for example flex.

- Prepare your submission in a zip file and name it as <ROLL_NO1_ROLL_NO2>.zip. If the team size is other than two, name your submission accordingly.

- Your submission should include a README file containing the instructions to execute your program(s). README file carries 5 Marks.

- Write appropriate comments in your program. 5 Marks will be deducted if you don't write any comments.

- Upload your assignment in the canvas portal.

- If your program does not compile, you will get 0 marks.

- Note that weightage of each assignment will be different.

- It is sufficient if one member of the team submits the file.

- Any form of plagiarism is strictly prohibited; all the text must be your own, and all the references must be cited.

1 Lexical Analyzer

Implement a lexical analyzer that prints the list of tokens for the **programming language you have chosen**.

Programming constructs:

The following programming constructs are expected. If the the programming language you chose does not support some of these tokens, you can omit them.

1. Identifiers

2. Data types
   - Primitive data types, such as int, float/real, characters, etc.
   - Derived data types or composite data types, such as strcutures, union, objects, etc.

3. Constants: Integer, float, string, and character literals.

4. Operators: All the operators.

5. Statements:

   - Simple statements

   - Control flow: if-else, if-else if, switch, while, for, do-while depending the language it supports.

6. Programmer defined functions/procedures: Definition and invocation

7. Comments

[**Points 100**]