

---

**Names : Arvind Sai K (15CO207) , Derik Clive (15CO213)**

# Lexical Scanner

4<sup>th</sup> January 2018

## OVERVIEW

The objective of this project is to build a simple lexical analyser for the C Language using the Lex programming language.

## SPECIFICATIONS

- The scanner will identify the tokens such as
  - Keywords (eg: int, while),
  - Identifiers (eg: sum, total),
  - Constants (eg: 10, 20),
  - Strings (eg: "total", "hello"),
  - Special symbols (eg: {}, []),
  - Operators (eg: +, -),
- This scanner will support int and char data types and its corresponding sub-types like short , long , signed, unsigned.
- Symbol and Constant table will be maintained using hashing techniques.
- It will support finding the looping constructs while and nested while.
- It will support identification of user defined functions with one argument with return types int, char, void.
- Error detection for multiline comments.
- Error detection for strings that haven't been terminated.

## OUTPUT

1. Nature of various tokens identified.
2. Error messages for errors handled.
3. Symbol table and constant table.