National University of Sciences and Technology (NUST)
School of Electrical Engineering and Computer Science

Department of Computing

CS 354: Compiler Construction

Class: BSCS-5AB

Lab [04]: Starting Flex for Lexical Analysis

Date:4th Oct, 2018

Time: [09:00 – 11:55hrs & 14:00 – 16:55hrs]

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Introduction

The lexical analyzer is the part of the compiler that reads the source text, it may also perform certain secondary tasks at the user interface. One such task is stripping out comments and white space in the form of blanks, tabs and new line characters, from the source program. Another is correlating error messages from the compiler with the source program i.e. keeping a correspondence between errors and source line numbers.

Objectives

1. Successful understanding/implementation of basic Lexical Analysis using flex

Tools/Software Requirement

1. flex on Linux or Windows platform

Description

Lexical analysis is the process of converting a sequence of characters into a sequence of tokens. A program or function which performs lexical analysis is called a lexical analyzer, lexer or scanner. A lexer often exists as a single function which is called by a parser or another function.

- **Flex in a Nutshell (tutorial):** Go through the flex handout provided on LMS and understand the logic behind flex.

Lab 04 Task_1: Overcome the deficiency of not recognizing the operators for the code given in “Help to Start Lab on flex” (available at LMS).

Lab 04 Task_2: Propose any improvement of your own choice and demonstrate it in Word/pdf file.

Note: More crucial task is running Flex. test.l is available on LMS to flex.