



R Y College of Engineering, Bengaluru-59  
(Autonomous Institution affiliated to VTU, Belegavi )

Department of Computer Science and Engineering

**Compiler Design(18CS63)**  
**Lab Programs (CIE and SEE)**

1. a) Write a LEX program to count number of words, lines, characters and whitespaces in a given paragraph  
b) Write a YACC program to recognize strings of the form  $a^n b^{n+m} c^m$ ,  $n, m \geq 0$ .
2. a) Write a LEX program to count number of Positive and Negative integers and Positive & Negative fractions.  
b) Write a YACC program to validate and evaluate a simple expression involving operators +, -, \*, and /.
3. a) Write a LEX program to count the number of comment lines in a C Program. Also eliminate them and copy that program into a separate file.  
b) Write a YACC program to recognize a nested (minimum 3 levels) FOR loop statement for C language
4. a) Write a LEX program to recognize and count the number of identifiers, operators and keywords in a given input file.  
b) Write a YACC program to recognize nested IF control statements (C language) and display the number of levels of nesting.
5. Write a C program to implement a Shift Reduce parser for a given grammar and generate the parsing table by parsing the given string.
6. YACC program that reads the C statements for an input file and convert them in quadruple three address intermediate code.
7. Write a YACC program that identifies Function Definition of C language
8. Write a YACC program that generates Assembly language (Target) Code for valid Arithmetic Expression.