II Year II Semester L T P C
Code:20CS4109 0 0 3 1.5

COMPILER DESIGN LAB

Course Objectives:

The course objectives of Compiler Design Lab are to discuss and make student familiar with the

- 1. Knows and learn about various tools for Scanning and Parsing of the given language.
- 2. Knows and learn about various types of Top-Down parsing techniques.
- 3. Knows and learn about various types of Bottom-Up parsing techniques.

Course Outcomes:

By the end of the course, the student will:

- 1. Implement LEX,YACC tools
- 2. Implement Scanning Techniques
- 3. Implement Parsing Techniques

LAB EXPERIMENTS:

- 1. Write a C program to identify whether the given line is a comment or not?
- 2. Write a C program to design a lexical analyzer for given language, which should ignore the redundant spaces, tabs, new lines, find the tokens and also count the number of lines using C program.
- 3. Write a C program to design a lexical analyzer for given language, which should ignore the redundant spaces, tabs, new lines, find the tokens and also count the number of lines using *lex* tool.
- 4. Write a C program to recognize strings under 'a*|abb'
- 5. Write a C program to construct a recursive descent parser for an expression.
- 6. Write a C program to simulate FIRST of a given Context Free Grammar.
- 7. Write a C program to simulate FOLLOW of a given Context Free Grammar.
- 8. Write a C program to construct a LL(1) parser for an expression
- 9. Write a C program to implement a shift-reduce parser.
- 10. Write a C program to verify whether the given grammar is Operator precedence grammar or not?
- 11. Write a C program to implement a Operator precedence parser.
- 12. Write a C program to design a LALR bottom up parser for the given language.
- 13. Write a program to convert the BNF rules into YACC form and write code to generate abstract syntax tree.