RAJAGIRI SCHOOL OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF COMPUTER SCIENCE

**CS 431 COMPILER DESIGN LAB**

**LAB CYCLE**

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| EXPERIMENTS | HOURS |
| 1. Design and implement a lexical analyzer for given language using C and the lexical analyzer should ignore redundant spaces, tabs and new lines. | 3 |
| 2.Write program to design of lexical analyzer using LEX   1. Write a program to check whether the given string is valid according to the regular definition 0 (10 | 01)\*. 2. Write a program to list the identifiers from a given C program. | 3 |
| 3. Write program to design parser for arithmetic expressions using YACC   1. Write a program to check the syntax of switch statement in C.   ii) Program to recognize a valid arithmetic expression that uses operator +, – , \* and /.  iii) Program to recognize a valid variable which starts with a letter followed by any number of letters or digits   1. Write a program to implement arithmetic calculator. | 3 |
| 4. Write program to design recursive descent parser |  |
| 5.Write a program to simulate FIRST and FOLLOW of any given grammar. |  |
| 6.Write program to implement LL (1) parser |  |
| 7.Write program to implementation of Operator precedence parsing | 3 |
| 8.Write a program to perform constant propagation. | 3 |
| 9. Write program to generate Intermediate Code for arithmetic expressions | 3 |
| 10. Write program to design a code generator for arithmetic expressions. | 3 |
| 11. Write program to find ε – closure of all states of any given NFA with ε transition. | 3 |

Lab In-charges

1.Ms Jincy J Fernandez(S7 CS A)

2.Ms Meera M(S7 CS B)

3.Mr Hareesh M J(S7 CS C)