

RAJAGIRI SCHOOL OF ENGINEERING AND TECHNOLOGY (AUTONOMOUS)

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

101003/CS722S COMPILER LAB

LAB CYCLE-2024

1. Design and implement a lexical analyzer using C language to recognize all valid tokens in the input program. The lexical analyzer should ignore redundant spaces, tabs, and newlines. It should also ignore comments.
2. a) Write a lex program to display the number of lines, words, and characters in an input text.
b) Write a LEX Program to check valid email address.
c) Write a lex program to find out total number of vowels and consonants from the given input string.
3. a) Generate a YACC specification to recognize a valid arithmetic expression that uses operators +, -, *, / and parenthesis.
b) Generate a YACC specification to recognize a valid identifier which starts with a letter followed by any number of letters or digits.
4. Implementation of Calculator using LEX and YACC
5. Write a program to convert NFA to DFA.
6. Write a program to find First of any given grammar.
7. Design and implement a recursive descent parser for a given grammar.
8. Construct a Shift Reduce Parser for a given language.
9. Write a program to perform constant propagation.
10. Implement Intermediate code generation for simple expressions.
11. Implement the back end of the compiler which takes the three-address code and produces the 8086 assembly language instructions. The target assembly instructions can be simple move, add, sub, jump etc.

Lab In-charges

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Reviewed by

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