**Computer Engineering Department, SCET.**

**Final Practical List**

**B.E Semester VII**

**Subject : Compiler Design(2170701)**

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| 1. | Design a lexical analyzer for given language and the lexical analyzer should ignore redundant spaces, tabs and new lines. It should also ignore comments. Although the syntax specification states that identifiers can be arbitrarily long, you may restrict the length to some reasonable value. Simulate the same in C language. |  |  |
| 2. | Write a C/C++ program to identify whether a given line is comment or not. |  |  |
| 3. | Write a C/C++ program to test whether a given identifier is valid or not. |  |  |
| 4. | Write a C/C++ program to simulate lexical analyzer for validating operators |  |  |
| 5. | To Study about Lexical Analyzer Generator(LEX) and Flex(Fast Lexical Analyzer) |  |  |
| 6. | Write a LEX program to check whether input symbol is number or character. |  |  |
| 7. | Write a LEX program to check whether input is multidigit number or string. |  |  |
| 8. | Write a LEX program to check whether inputted character is vowel or not. |  |  |
| 9. | Write a LEX program to count only those words that start with vowels. |  |  |
| 10. | Write a LEX program to count number of vowels from all inputted symbols. |  |  |
| 11. | Write a LEX program to copy content from input file to output file. |  |  |
| 12. | Write a LEX program that reads input file and copies only words starting with vowels to output file. |  |  |
| 13. | Write a LEX program that reads program from input file and counts number of letters, words, lines from it. Resulting count should be written to output file. |  |  |
| 14. | Write a LEX program to count total printf and scanf statements from input file. Count should be written in output file. |  |  |
| 15. | Write a LEX program that reads input from input file and write backs same content by replacing printf by write and scanf by read keyword in output file. |  |  |
| 16. | Write a LEX program that reads a c program from input file and eliminates single line as well as multi-line comments from it and copies updates program to output file. |  |  |
| 17. | Write a LEX program that reads c program from input file and writes same program to output file appending line number to every line other than comment. |  |  |
| 18. | Write a LEX program that reads input file and writes valid tokens to output file. |  |  |
| 19. | Write a Lex program to printout all HTML tags in file. |  |  |
| 20. | Write a LEX program to collect tokens (numbers) and sort. |  |  |
| 21. | Write a LEX program to remove all the whitespaces. |  |  |
| 22. | Write a LEX program to check for valid E-mail id. |  |  |
| 23. | Write a LEX program to check the syntax of for loop. |  |  |
| 24. | Write a LEX program to check a Date of format (DD/MM/YYYY). |  |  |
| 25. | Write a LEX program that reads input file and performs following tasks.  - generate valid tokens in output1 file  - generate invalid token errors in Error file (along with line number)  - generate symbol table file that contains only identifiers. |  |  |
| 26. | Write a C program for constructing of LL (1) parsing |  |  |
| 27. | Write a C program for constructing recursive descent parsing |  |  |
| 28. | To Study about Yet Another Compiler-Compiler(YACC). |  |  |
| 29. | Create Yacc and Lex specification files to recognizes arithmetic expressions involving+,-,\* and / . |  |  |