

Syllabus		
Expt. No.	Contents	Mapped CO
1	Design a Lexical analyzer for the given language. 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.	CO1,CO2,CO3,CO4,CO5
2	(a) Implement the lexical analyzer using LEX program for the regular expression RE's: $a(a+b)^*$ (b) Implement the LEX program to implement RE's: $(a+b)^*abb(a+b)^*$	CO1,CO2,CO3,CO4,CO5
3	(a) Implement the lexical analyzer using JLEX, FLEX or LEX or other lexical analyzer generating tools. (b) Implement the lexical analyzer Program to count no of +ve and -ve integers using LEX	CO1,CO2,CO3,CO4,CO5
4	(a) Implement the lexical analyzer Program to count the number of vowels and consonants in a given string. (b) Implement the lexical analyzer Program to count the number of characters, words, spaces, end of lines in a given input file.	CO1,CO2,CO3,CO4,CO5
5	Implement a „C“ program to calculate First and Follow sets of given grammar	CO1,CO2,CO3,CO4,CO5
6	Design Predictive parser for the given language.	CO1,CO2,CO3,CO4,CO5
7	Implementation of Shift Reduce Parsing Algorithm.	CO1,CO2,CO3,CO4,CO5
8	Design LALR bottom up parser for the given language. (Implementation of calculator using YACC)	CO1,CO2,CO3,CO4,CO5
9	Convert the BNF rules into YACC form and write code to generate abstract syntax tree.	CO1,CO2,CO3,CO4,CO5
10	Generation of Code for a given Intermediate Code.	CO1,CO2,CO3,CO4,CO5

Learning Resources
Text Books
<ol style="list-style-type: none"> 1. Compilers: Principles, Techniques and Tools, Alfred V. Aho, Monica S. Lam, Ravi Sethi, Jeffrey D. Ulman, Second Edition, Pearson Education. 2. Modern Compiler Implementation in C- Andrew N. Appel, Cambridge University Press.

References

1. lex&yacc – John R. Levine, Tony Mason, Doug Brown, O'reilly
2. Modern Compiler Design- Dick Grune, Henry E. Bal, Cariel T. H. Jacobs, Wileydreamtech.
3. Engineering a Compiler-Cooper & Linda, Elsevier.
4. Compiler Construction, Loudon, Thomson.
5. Principles of compiler design, V. Raghavan, Second edition, TMH, 2011.

e-Resources and other Digital Material

1. <http://www.nptel.iitm.ac.in/downloads/106108052/>