SYMBIOSIS INTERNATIONAL (DEEMED UNIVERSITY)

(Established under section 3 of the UGC Act, 1956)

Re-accredited by NAAC with 'A++' Grade | Awarded Category – I by UGC

Founder: Prof. Dr. S. B. Mujumdar, M. Sc., Ph. D. (Awarded Padma Bhushan and Padma Shri by President of India)

Course Name: Compiler Construction Lab

Course Code: T7478

Faculty: Engineering

Course Credit: 1

Course Level: 4

Sub-Committee (Specialization): Computer Science

Learning Objectives:

The students will be able to:

Outline details of LEX and YACC.

Analyze the role of lexical analyzer in identification of comments, keywords, identifiers, words, lines and spaces from the given source code.

Illustrate postfix expression evaluation using YACC.

Model desk calculator using YACC.

Examine parser for 'FOR' loop using YACC.

Model intermediate code (IC) generator for arithmetic expression using YACC.

Books Recommended:

Book	Author	Publisher
A COMPACT GUIDE TO LEX & YACC	Tom Niemann	epaperpress.com.
A Compiler Optimization Technique	Computer Journal	NA
A Syntax-Oriented Translator	Academic Press, New York	NA
Compiling Techniques	American Elsevier Publishing Company	NA
LEX and YACC 2nd Edition	Doug Brown, John Levine, Tony Mason	O'Reilly Media.

Course Outline:

Sr. No.	Topic	Actual Teaching Hours	Contact Hours Equivalence
1	**Theory assignment for writing details about LEX and YACC compilation.**	**2**	**2**
2	**Count the number of comments, keywords, identifiers, words, lines and spaces from input file.**	**2**	**2**
3	**Count number of words starting with 'A'.**	**2**	**2**
4	**Conversion of lowercase to uppercase and vice versa.**	**2**	**2**
5	**Conversion of decimal to hexadecimal number in a file.**	**4**	**4**
6	**Test lines ending with "com".**	**2**	**2**
7	**Postfix Expression Evaluation.**	**4**	**4**
8	**Desk calculator with error recovery.**	**4**	**4**
9	**Parser for "FOR" loop statements.**	**4**	**4**
10	**Intermediate code (IC) generator for arithmetic expression.**	**4**	**4**
	Total	**30**	**30**

Pre Requisites:

None

Evaluation:

Quiz

Viva

Pedagogy:

Lab Assignments using software like
FLEX (Fast Lexical Analyzer)
BISON (For Yet Another Compiler Compiler)
Oral examination