

Lesson Plan

Name of the Faculty : MR. SAHARSH GERA (THEORY + PRACTICAL)
 Discipline : Computer Science and Engineering
 Semester : 6th
 Subject : **Compiler Design** (PCC-CSE-302G)
 Lesson Plan Duration : 15 Weeks (from MAY, 2021 to AUG, 2021)

**** Work Load (Lecture/ Practical) per week (in hours):** Lecture-03, Practical-01

Week	Theory		Practical	
	Lecture day	Topic(Including assignment/test)	Practical Day	Topic
1 st	1 st	Introduction to Compilers	1 st	Write a Program for Token separation with a given expression.
	2 nd	Language Processors		
	3 rd	The Structure of compiler: its different phases		
2 nd	1 st	Compiler Construction Tools, Applications of Compiler Technology	2 nd	Write a Program for Token separation with a given file.
	2 nd	Lexical Analysis: Role of lexical analyzer		
	3 rd	Input Buffering, Specification and recognition of tokens		
3 rd	1 st	design of lexical analyzer	3 rd	Write a Program for Lexical analysis using LEX tools.
	2 nd	regular expressions		
	3 rd	A language specifying lexical analyzer		
4 th	1 st	Finite automata , conversion from regular expression to finite automata	4 th	Write a Program to

	2 nd	and vice versa		identify whether a given line is a comment or not.
	3 rd	minimizing number of states of DFA		
5 th	1 st	Implementation of lexical analyzer , ASSIGNMENT - 01	5 th	Write a Program to check whether a given identifier is valid or not.
	2 nd	Syntax Analysis: Role of parsers		
	3 rd	context free grammars		
6 th	1 st	Parsing Technique: Shift-reduce parsing , Operator precedence parsing	6 th	Write a Program to recognize strings under 'a', 'a*b+', 'abb'.
	2 nd	Top down parsing,		
	3 rd	Predictive parsing, ASSIGNMENT -2		
7 th	1 st	LR parsers	7 th	Write a Program to simulate lexical analyser for validating operators.
	2 nd	SLR		
	3 rd	LALR, Canonical LR parser		
8 th	1 st	Syntax Directed Translations:	8 th	Write a Program for implementation of Operator Precedence Parser.
	2 nd	Syntax directed definitions		
	3 rd	construction of syntax trees, syntax directed translation scheme		
9 th	1 st	implementation of syntax directed translation	9 th	Study of LEX and YACC tools: i). Write a Program for implementation of calculator using YACC tool.
	2 nd	Intermediate-Code Generation		
	3 rd	three address code		
10 th	1 st	quadruples , triples	10 th	ii). Write a Program for implementation of Recursive Descent Parser using LEX tool.
	2 nd	ASSIGNMENT - 3		
	3 rd	Symbol Table & Error Detection and Recovery, Symbol tables		

11 th	1 st	its contents and data structure for symbol tables	11 th	Write a Program for implementation of LL (1) Parser.
	2 nd	trees		
	3 rd	Arrays, linked lists		
12 th	1 st	hash tables	12 th	Write a Program for implementation of LALR Parse.
	2 nd	Errors		
	3 rd	lexical phase error, syntactic phase error		
13 th	1 st	Semantic error	13 th	Program to count blank space and count the no. of Lines
	2 nd	Code Optimization & Code Generation		
	3 rd	Code generation, forms of objects code		
14 th	1 st	machine dependent code, optimization	14 th	
	2 nd	register allocation for temporary, user defined variables,		
	3 rd	ASSIGNMENT – 4, Revision of unit-01		
15 th	1 st	Revision of unit-02	15 th	
	2 nd	Revision of unit-03		
	3 rd	Revision of unit-04		