LAB SCHEDULE PLAN

SWARNANDHRA
COLLEGE OF ENGINEERING & TECHNOLOGY
(AUTONOMOUS)

Accredited by National Board of Accreditation, AICTE, New Delhi, Accredited by NAAC with "A" Grade – 3.32 CGPA, Recognized under 2(f) & 12(B) of UGC Act 1956
Approved by AICTE, New Delhi, Permanent Affiliation to JNTUK, Kakinada
Seetharampuram, W.G.DT., Narsapur-534280, (Andhra Pradesh)

DEPARTMENT OF INFORMATION TECHNOLOGY
TEACHING PLAN

Course Code	Course Title	Semester	Branch	Contact Periods /Week	Academic Year	Date of commencement of Semester
20CS3L01	Data Structures Lab	III	IT	3 Periods	2023-24	07-08-2023

COURSE OUTCOMES	
1	Implement stack and queue using arrays and linked lists.
2	Demonstrate applications of stack.
3	Demonstrate the implementation of linked lists.
4	Demonstrate the implementation of binary search trees.
5	Implement different searching and sorting algorithms.

Experiment Number	Experiment	Contact Hours
1	Implement a menu driven program in C for the following operations on stack of integers using arrays. i) PUSH() ii) POP() iii) PEEK() iv) Display of stack elements	3
2	Implement C program to demonstrate how stack can be used to check whether the given string is palindrome or not.	1
3	Implement a C Program for converting an infix expression to postfix expression.	2
4	Implement a C Program to evaluate postfix expression.	1
5	Implement a menu driven program in C for the following operations on queue of integers using arrays. i) Insertion ii) Deletion iii) Queue overflow and underflow conditions iv) Display of queue elements	2
6	Implement a C program for the queue operations by using stacks.	3
7	Implement a C program for the following (i) Create a singly linked list. (ii) Insert an element into a singly linked list. (iii)Delete an element from a singly linked list.	3
8	Implement a C program for stack operations using Linked list.	1
9	Implement a C program for queue operations using linked list.	1

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10	Implement a C program to reverse elements of a single linked list.	1
11	Implement a C program for the following (i) Create a circular linked list. (ii) Insert an element into a circular linked list. (iii) Delete an element from a circular linked list.	2
12	Implement a C program for the following (i) Create a Doubly linked list. (ii) Insert an element into a doubly linked list. (iii) Delete an element from a doubly linked list.	1
13	Implement a C program to create a Binary Search Tree of integers, insert, delete and search integers into (from) Binary search tree.	2
14	Implement a C program by using recursive functions to traverse a binary search tree in preorder, in-order and post-order.	1
15	Implement C programs for recursive and iterative functions to perform Linear search for a Key value in the given list.	1
16	Implement C programs for recursive and iterative functions to perform Binary search for a Key value in the given list.	2
17	Implement following techniques to sort a given list of integers in ascending order. (i) Insertion sort (ii) Bubble sort (iii) Selection sort	3
18	Implement a C program that read any string and sort in alphabetical order using Bubble sort.	1
19	Implement following techniques to sort a given list of integers in ascending order. (i) Quick sort (ii) Merge sort	2
	CUMULATIVE PROPOSED PERIODS	33

		Name	Signature with date
i.	Faculty	Mr. Ch R K Raju	7/8/23
ii.	Module Coordinator	Mr. Ch R K Raju	7/8/23
iii.	Programme Coordinator	Dr. RVVSV Prasad	7/8/23

Principal