INDEX

Sl. No.	PROGRAM	PAGE
	ARRAY AND POINTERS	
1.	Write a C program to design a 5D array, store integer values in it and print them.	1
	SINGLY LINKED LIST	
2.	Write a C program to design a Singly Linked List and perform Insertion at end, Insertion at Beginning, Deletion at Begin, Deletion at End, Insertion at Index, Deletion at Index, Deletion of entire List and Display Linked List operation on it. You may create a header file of your own to perform the task.	2
3.	Write a program in C to reverse a singly linked list. You may create a header file of your own to perform the task.	10
	DOUBLY LINKED LIST	
4.	Write a C program to design a Doubly Linked List and perform Insertion at end, Insertion at Beginning, Deletion at Begin, Deletion at End, Insertion at Index, Deletion at Index, Deletion of entire List, Reverse operation, and Display Linked List operation on it. You may create a header file of your own to perform the task.	12
	CIRCULAR LINKED LIST	
5.	Write a C program to design a Circular Linked List and perform Insertion at end, Insertion at Beginning, Deletion at Begin, Deletion at End, Insertion at Index, Deletion at Index, Deletion of entire List, and Display Circular Linked List operation. You may create a header file of your own to perform the task.	21
	DOUBLY CIRCULAR LINKED LIST	
6.	Write a C program to design a Circular Doubly Linked List and perform Insertion at end, Insertion at Beginning, Deletion at Begin, Deletion at End, Insertion at Index, Deletion at Index, Deletion of entire List, and Display Circular Doubly Linked List operation. You may create a header file of your own to perform the task.	29
	STACK	
7.	Write a C program to implement Last in First out (LIFO) data structure and perform Push, Pop, Peek operations on it. Use array to implement the same.	38
8.	Write a C program to implement Push, Pop, Peek operations of Stack using Linked List.	41
9.	Write a C program to reverse an array using stack. You need to implement the stack first then use that for reversal. You may create a header file of your own to perform the task.	44
10.	Write a C program to convert an equation to Postfix and Prefix with the help of a Stack. Implement the Stack using Linked List.	46

Sl. No.	PROGRAM	PAGE
	QUEUE	
11.	Write a C program to perform First in First out Data Structure. You need to perform Enqueue and Dequeue operation on this data structure. You may create a header file of your own to perform the task.	52
12.	Write a C program to implement circular queue using array. You need to perform Enqueue and Dequeue operation on this data structure. You may create a header file of your own to perform the task.	55
13.	Write a C program to implement circular queue using linked list. You need to perform Enqueue and Dequeue operation on this data structure. You may create a header file of your own to perform the task.	59
14.	Write a C program to implement Deque using array. Perform the operations add to front, add to rear, delete from front, delete from rear, and display. You may create a header file of your own to perform the task.	63
15.	Write a C program to implement Deque using linked list. Perform the operations add to front, add to rear, delete from front, delete from rear, and display. You may create a header file of your own to perform the task.	67
	TREE	
16.	Write a C program to implement a Binary Tree and perform Add Node, Delete Node, and Breadth First Traversal operation on it. You may create a header file of your own to perform the task.	73
17.	Write a C program to implement a Binary Search Tree and perform Add Node, Delete Node. Also perform the Inorder, Preorder, and Postorder traversal on it. You may create a header file of your own to perform the task.	79
	SORTING	
18.	Write a C program to implement Bubble Sort.	83
19.	Write a C program to implement Selection Sort.	84
20.	Write a C program to implement Insertion Sort.	85
21.	Write a C program to implement Shell Sort.	86