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Lab Session	Objectives	CLO's mapping	Bloom's Level	PLO mapping
01(intro)	Construct and Implement C++ classes and templates using Code::Blocks IDE.	CLO1, CLO2	C3 Application C4 Analysis	PLO3, PLO4
02 (One-Dimensional Array)	Develop programs to perform insertion, deletion, and traversal operations on a one-dimensional array.	CLO1	C3 Application	PLO3
03 (Multi-Dimensional Array)	Apply multi-dimensional arrays to construct and test matrix operations.	CLO1	C3 Application	PLO3
04(String processing)	Implement and test different string operations such as concatenation, substring, comparison, and reversal.	CLO1	C3 Application	PLO3
05(Singly Linked List)	Develop a singly linked list to perform insertion, deletion, and traversal operations.	CLO1	C3 Application	PLO3
06(Doubly Linked List)	Implement a doubly linked list and analyze its efficiency compared to singly linked list.	CLO1, CLO2	C3 Application C4 Analysis	PLO3, PLO4
07(Stack)	Implement stack operations and apply stack in expression evaluation (infix → postfix).	CLO1	C3 Application	PLO3
08(Queue)	Develop queue, circular queue, and deque; analyze their applications in scheduling.	CLO1, CLO2	C3 Application C4 Analysis	PLO3, PLO4
09(Linear Searching)	Implement linear search algorithm and analyze its performance for different cases.	CLO2	C4 Analysis	PLO4
10(Binary Searching)	Apply binary search algorithm and evaluate its efficiency compared to linear search.	CLO2	C4 Analysis	PLO4
11(Sorting)	Implement Selection, Bubble, and Insertion sort; analyze their time complexities.	CLO2	C4 Analysis	PLO4
12(Sorting)	Develop Merge Sort and Quick Sort; evaluate performance on large datasets.	CLO2	C4 Analysis	PLO4
13(Tree)	Construct and implement a Binary Search Tree (BST) with insertion, search, and deletion operations.	CLO1, CLO2	C3 Application C4 Analysis	PLO3, PLO4
14(Graph)	Implement BFS and DFS traversals; apply graph algorithms to search vertices in a graph.	CLO1, CLO2	C3 Application C4 Analysis	PLO3, PLO4