

Data Structures Using C++

Prerequisites:-

- ➢ Basic concept of C++
- ➢ Function in C++
- ➢ Array in C++
- Structure & Union in C++
- ➢ String in C++
- Pointers in C++

#Arrays:-

- > Introduction to arrays.
- > Types of Arrays.
 - Linear Arrays
 - Multidimensional Arrays
- > Insertion and Deletion.
- Advantages of Arrays.
- Limitations of Arrays.

#Linked List:-

- Introduction to Linked List.
- ➢ Implementation of Linked List in C++.

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- ➢ Types of Linked List.
 - □ Singly Linked List
 - Doubly Linked List
 - □ Circular Linked List
- Advantages and Disadvantages of Linked List.
- Linked Lists VS Arrays.

#Stack:-

- ➢ Introduction to Stack.
- ➤ Implementation of Stack in C++.
- > Operations of Stack.
- > Applications of Stack.

#Queue:-

- Introduction to Queue.
- ➢ Implementation of Queue in C++.
- Operations of Queue.
- ➤ Types of Queue.
 - □ Priority Queue
 - Double Ended Queue
 - □ Circular Queue
- Applications of Queue.

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#Trees:-

- Introduction to Trees.
- > Types of Trees.
 - □ General Tree
 - □ Binary Tree
 - □ Binary Search Tree
- Tree Traversal Techniques.
 - □ InOrder Traversal
 - □ PreOrder Traversal
 - PostOrder Traversal

#Graphs:-

- ➤ Introduction to Graphs.
- ➤ Implementation of Graphs in C++.
- > Types of Graphs.
 - □ Directed Graph
 - □ Undirected Graph

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