




DATA STRUCTURE & ALGORITHM – C++

CURRICULUM

DAYS	TOPICS
DAY 1	INTRODUCTION <ul style="list-style-type: none">Data Structure & Algorithm
	<ul style="list-style-type: none">What is Time ComplexityIntroduction to Asymptotic Notations [Big O ,Big Omega , Big Theta]
DAY 2	<ul style="list-style-type: none">Remaining part of Asymptotic NotationsBest, Worst and Avg case Analysis of an Algorithm
	<ul style="list-style-type: none">Calculate time complexity of Algorithm <p>QUIZ-1</p>
DAY 3	<ul style="list-style-type: none">What is ArrayAbstract Data Type in Data Structure
	<ul style="list-style-type: none">Array as an Abstract Data type in Data StructureImplementation of Array as an Abstract Data Type

DAY 4	<ul style="list-style-type: none"> • Array Operations • Insertion Operation in Array • Deletion in Array
	<ul style="list-style-type: none"> • Linear & Binary Search <p>QUIZ-2</p>
DAY 5	LINKED LIST <ul style="list-style-type: none"> • Concept • Creation & traversal
	<ul style="list-style-type: none"> • Insertion of Node • Insertion in a linked list
DAY 6	<ul style="list-style-type: none"> • Deletion in Linked List • Deletion of Node from a Linked List
	<ul style="list-style-type: none"> • Intro to Circular Linked List • Operations in Circular Linked List <p>QUIZ-3</p>
DAY 7	<ul style="list-style-type: none"> • Intro to Doubly Linked List • Intro to Stack in Data Structure
	<ul style="list-style-type: none"> • Stack Implementation • Operations of Stack [Push,Pop,isEmpty,isFull]

DAY 8	<ul style="list-style-type: none">• Peek Operations in Stack using Array• Other Stack Operations [stackTop,stackBottom]
	<ul style="list-style-type: none">• Stack using Linked List Quiz-4
DAY 9	<ul style="list-style-type: none">• Implementation of Stack Operations using Linked List
	Queue <ul style="list-style-type: none">• Implementation• Implementation using Array
DAY 10	Operations of Queue
	Circular Queue Introduction
DAY 11	Other Queue Operations [enqueue,dequeue]
	Quiz-5
	Queue using Linked List and Implementation

DAY 12	<ul style="list-style-type: none">• Double Ended Queue
	<ul style="list-style-type: none">• Intro to Sorting Algorithm• Criteria for analysis of sorting algorithm
DAY 13	Bubble Sort <ul style="list-style-type: none">• Intro to Bubble sort• Implementaion
	Insertion Sort <ul style="list-style-type: none">• Intro• Implementation
DAY 14	Selection Sort <ul style="list-style-type: none">• Intro• Implementation
	Merge Sort <ul style="list-style-type: none">• Intro• Implementation
DAY 15	Count Sort <ul style="list-style-type: none">• Intro• Implementation
	Trees <ul style="list-style-type: none">• Intro• Types of Tree

