COURSE CONTENT - DATA STRUCTURES & ALGORITHMS

Introduction + Installation Process + Flowcharts & Pseudocodes

- **Learn from the very basics “the background” of Analysis of Algorithms**

Variables & Datatypes + Operators

- **Learn how to use various Variables and Operators like Assignment Operator and Relational Operator**

Conditional Statements + Loops

- **Acquire Knowledge of Ternary Operators and statements like if, if else,**
- **how to run a loop in the code.**
- **Make a billing statement using code.**
- **Acquire knowledge about flow control**

Patterns + Functions & Methods

- **Gain understanding some basic patterns asked in FAANG , MAANG companies**
- **Acquire Knowledge about Parameters and Arguments , Functions Overloading and much more**

Arrays

- **Master Arrays from its Introduction and Operations to solving problems like Stock Buy and Sell, Trapping Rain Water, etc**

Time & Space Complexity + Sorting

- **Sort out your sorting concepts and learn about the important sorting techniques like Insertion sort, Quick sort and Merge Sort and their complexities**

COURSE CONTENT - DATA STRUCTURES & ALGORITHMS

2D arrays

- **Escape your Matrix struggle by learning the foundation concepts like Multidimensional Array, Pass Matrix as Argument, Transpose, etc**
- **Solve problems like Spiral Matrix traversal and much more**

Strings + Bit Manipulation

- **Learn Strings form its Introduction and Methods to popular problem tutorials on Rabin Karp Algorithm, KMP algorithm, etc**
- **Learn about Binary AND , OR, XOR operations and much more.**

Recursion

- **Learn basics of recursion and solve classical problems like Tilling problem , Friends Pairing Problem and their stack analysis**

Backtracking

- **Learn about backtracking on arrays**
- **Solve popular problems like Sudoku Solver, N Queens ,**
- **Find Permutations and much more**

ArrayList

- **Gain understanding operations on ArrayList**
- **Solve classical problems like Container with most water, Pair – Sum 1 and much more**

COURSE CONTENT - DATA STRUCTURES & ALGORITHMS

LinkedList

- **Learn about Singly, Doubly and Circular Linked List from Introduction to implementation**
- **Gain knowledge of important concept like Merge Sort on LL, ZigZag Linked list**

Stacks

- **Gain understanding of Stack from Introduction, application to implementation Learn from problems like Balanced Parenthesis, Stock Span Problems, Infix, Prefix and Postfix expressions etc**

Queue

- **Aquire Knowledge of Queue with important example tutorials on Reversing a Queue, Generate numbers with given digits and much more**

Greedy Algorithms

- **Get foundational understanding of Greedy Approach**
- **Solve popular problems like Activity Selection , Fractional knapsack, Chocola Problems and much more**

Binary Trees

- **Introduction and Implementation of various tree traversal (Inorder, Preorder and Postorder)**
- **Video tutorials starting from basic problems like Height of Binary tree, Level order traversal to more advanced problems like Subtree of another tree, Top view of a tree and much more**

COURSE CONTENT - DATA STRUCTURES & ALGORITHMS

Heap

- **Learn concepts related to Min Heap, Max Heap, Priority Queue and solve related problems**

Hashing

- **Acquire concepts of HashMap, HashSet, TreeMap and much more**
- **Solve problems like Majority Element, Valid Anagram and much more**

Trie

- **Learn about Trie concepts like representation, search, insert and delete with related problems**

Graphs

- **Gain understanding of foundational concepts like Graph Representation, BFS, DFS, etc**
- **Learn about the popular Prim's, Dijkstra, Kosaraju algorithms and much more with tutorials and problems.**

Dynamic Programming

- **Build a strong foundation of DP memoization and tabulation techniques**
- **Master DP with problems like LCS, Coin Change, Climbing Stairs, 0- 1 knapsack and much more.**

COURSE CONTENT - DATA STRUCTURES & ALGORITHMS

Segment Trees

- **Get aquainted with Segment tree concepts with example problems**

Learn How to build your projects

- **Minor project**
- **Major project**

CONTACT US-

Phone no.- 8860810135 ,8700058666
Email-trippleonesolutions@gmail.com
Website- www.trippleonesolutions.com