C++ STL

- Algorithms
- Containers

HomeWork:
→ Pairs & Comparators

Containers

Sequence Containers
- Array
- Vector
- Deque
- List
- forward_list

Container Adaptors
- Stack
- Queue
- Priority Queue

Associative Containers
- Set
- Map
- MultiSet
- MultiMap

Unordered Associative
- Unordered Set
- Unordered Map
- Unordered MultiSet
- Unordered MultiMap

Algorithms
- binary search
- Lower/Upper bound
- min/max
- reverse/rotate
- sort / swap etc

Phase 1 (Scratch)

Basics of C++
- Flowcharts — PsuedoCode
- SetUp Installation
- Variables & DataTypes
- Conditionals

Loops And Functions
- while loop
- For Loop
- Patterns
- Functions

Arrays
- Intro To arrays
- Searching & Sorting
- Problem Solving (Sliding window, 2 Ptr, Subarray etc)

String & 2D Arrays
- char array
- String
- 2D arrays

Maths for DSA
- Bitwise Operators, Prime No., HCF/LCM, SOE & lot more.

Phase 2
(Concept + Problem Solving)

- Problem Solving techniques
  - Recursion
  - BackTracking
- Time & Space complexity
- OOPS
  - Basics of OOPS
  - Advance of OOPS
- Linear Data Structures
  - Pointers & Dynamic Allocation
  - Linked Lists
  - Stacks
  - Queues
- D&C, BITMASKING
- Tree
  - Generic Trees
  - Binary Tree
  - BST
- Advanced Data Structures
  - heaps
  - Maps
  - Graphs
  - Tries
- Greedy Algorithms
- Dynamic Programming
  - Intro to DP
  - Application of DP
    - 1D DP
    - 2D DP