**Course Content**

[Introduction](https://practice.geeksforgeeks.org/courses/dsa-self-paced?gclid=Cj0KCQjwse-DBhC7ARIsAI8YcWKSL-ry-kB7rkmOnFFqJ_zQ0J2YrkHMeSk3MSTqXF1UBBSAQC8T2KcaAr3IEALw_wcB#topic1)

* **Analysis of Algorithm**
  + Background analysis through a Program and its functions.
* **Order of Growth**
  + A mathematical explanation of the growth analysis through limits and functions.
  + A direct way of calculating the order of growth
* **Asymptotic Notations**
  + Best, Average and Worst case explanation through a program.
* **Big O Notation**
  + Graphical and mathematical explanation.
  + Calculation
  + Applications at Linear Search
* **Omega Notation**
  + Graphical and mathematical explanation.
  + Calculation.
* **Theta Notation**
  + Graphical and mathematical explanation.
  + Calculation.
* **Analysis of common loops**
  + Single, multiple and nested loops
* **Analysis of Recursion**
  + Various calculations through Recursion Tree method
* **Space Complexity**
  + Basic Programs
  + Auxiliary Space
  + Space Analysis of Recursion
  + Space Analysis of Fibonacci number
* **Practice Problems**
  + This track contains many practice problems for the users which are considered important and must-do as far as Data Structure and Algorithm is concerned.

[Mathematics](https://practice.geeksforgeeks.org/courses/dsa-self-paced?gclid=Cj0KCQjwse-DBhC7ARIsAI8YcWKSL-ry-kB7rkmOnFFqJ_zQ0J2YrkHMeSk3MSTqXF1UBBSAQC8T2KcaAr3IEALw_wcB#topic2)

* **Mathematics**
  + Count Digits
  + Palindrome Numbers
  + Factorial of Numbers
  + GCD of Two Numbers
  + LCM of Two Numbers
  + Check for Prime
  + Prime Factors
  + Sieve of Eratosthenes
  + Computing Power
* **Practice Problems**
  + This track contains many practice problems for the users which are considered important and must-do as far as Data Structure and Algorithm is concerned.

[Bit Magic](https://practice.geeksforgeeks.org/courses/dsa-self-paced?gclid=Cj0KCQjwse-DBhC7ARIsAI8YcWKSL-ry-kB7rkmOnFFqJ_zQ0J2YrkHMeSk3MSTqXF1UBBSAQC8T2KcaAr3IEALw_wcB#topic3)

* **Bitwise Operators in C++**
  + Operation of AND, OR, XOR operators
  + Operation of Left Shift, Right Shift and Bitwise Not
* **Bitwise Operators in Java**
  + Operation of AND, OR
  + Operation of Bitwise Not, Left Shift
  + Operation of Right Shift and unsigned Right Shift
* **Problem(With Video Solutions): Check Kth bit is set or not**
  + Method 1: Using the left Shift.
  + Method 2: Using the right shift
* **Problem(With Video Solutions): Count Set Bits**
  + Method 1: Simple method
  + Method 2: Brian and Kerningham Algorithm
  + Method 3: Using Lookup Table
* **Problems(With Video Solutions):**
  + To check whether a number is a power of 2 or not
  + Odd occurrences in an array.
  + Two numbers having odd occurrences in an array.
  + Generate power set using bitwise operators.
* **Practice Problems**
  + This track contains many practice problems for the users which are considered important and must-do as far as Data Structure and Algorithm is concerned.

[Recursion](https://practice.geeksforgeeks.org/courses/dsa-self-paced?gclid=Cj0KCQjwse-DBhC7ARIsAI8YcWKSL-ry-kB7rkmOnFFqJ_zQ0J2YrkHMeSk3MSTqXF1UBBSAQC8T2KcaAr3IEALw_wcB#topic4)

* **Introduction to Recursion**
* **Applications of Recursion**
* **Writing base cases in Recursion**
  + Factorial
  + N-th Fibonacci number
* **Various problems on Recursion(With Video Solutions)**
  + Print n to 1
  + Print 1 to n
  + Tail Recursion
  + Checking Palindrome
  + Sum of digits
  + Rod cutting
  + Subsets of a set
  + Tower of Hanoi Problem
  + Josephus Problem
* **Practice Problems**
  + This track contains many practice problems for the users which are considered important and must-do as far as Data Structure and Algorithm is concerned.

[Arrays](https://practice.geeksforgeeks.org/courses/dsa-self-paced?gclid=Cj0KCQjwse-DBhC7ARIsAI8YcWKSL-ry-kB7rkmOnFFqJ_zQ0J2YrkHMeSk3MSTqXF1UBBSAQC8T2KcaAr3IEALw_wcB#topic5)

* **Introduction and Advantages**
* **Types of Arrays**
  + Fixed-sized array
  + Dynamic-sized array
* **Operations on Arrays**
  + Searching
  + Insertions
  + Deletion
  + Arrays vs other DS
  + Reversing - Explanation with complexity
* **Problems(With Video Solutions)**
  + Left Rotation of the array by 1
  + Check if Sorted
  + Left Rotation of the array by D places
  + Leaders in an Array
  + Maximum Difference Problem
  + Frequencies in Sorted Array
  + Stock Buy and Sell Problem
  + Trapping Rainwater Problem
  + Maximum Consecutive 1s
  + Maximum Subarray Sum
  + Longest Even-Odd Subarray
  + Maximum Circular sum subarray.
  + Majority Element
  + Minimum Consecutive Flips
  + Sliding Window Technique
  + Prefix Sum Technique
* **Practice Problems**
  + This track contains many practice problems for the users which are considered important and must-do as far as Data Structure and Algorithm is concerned.

[Searching](https://practice.geeksforgeeks.org/courses/dsa-self-paced?gclid=Cj0KCQjwse-DBhC7ARIsAI8YcWKSL-ry-kB7rkmOnFFqJ_zQ0J2YrkHMeSk3MSTqXF1UBBSAQC8T2KcaAr3IEALw_wcB#topic6)

* **Binary Search Iterative and Recursive**
* **Binary Search and various associated problems(With Video Solutions)**
  + Index of First Occurence in Sorted Array
  + Index of Last Occurence in Sorted Array
  + Count of occurrences of x in sorted element
  + Count of 1s in a binary sorted array
  + Find an element in sorted and rotated array
  + Peak element
  + Find an element in an infinite sized sorted array
  + The square root of an integer
* **Two Pointer Approach Problems(With Video Solutions)**
  + Find pair in an unsorted array which gives sum X
  + Find pair in a sorted array which gives sum X
  + Find triplet in an array which gives sum X
* **Problems(With Video Solutions)**
  + Median of two sorted arrays
  + Majority Element
* **Practice Problems**
  + This track contains many practice problems for the users which are considered important and must-do as far as Data Structure and Algorithm is concerned.

[Sorting](https://practice.geeksforgeeks.org/courses/dsa-self-paced?gclid=Cj0KCQjwse-DBhC7ARIsAI8YcWKSL-ry-kB7rkmOnFFqJ_zQ0J2YrkHMeSk3MSTqXF1UBBSAQC8T2KcaAr3IEALw_wcB#topic7)

* **Implementation of C++ STL sort() function in Arrays and Vectors**
  + Time Complexities
* **Sorting in Java**
* **Arrays.sort() in Java**
* **Collection.sort() in Java**
* **Stability in Sorting Algorithms**
  + Examples of Stable and Unstable Algos
* **Bubble Sort**
* **Selection Sort**
* **Insertion Sort**
* **Merge Sort**
* **Problems(With Video Solutions)**
  + Intersection of 2 sorted arrays
  + Union of 2 sorted arrays
  + Count Inversions in arrays
* **Partitions(With Video Solutions)**
  + Naive
  + Lomuto
  + Hoare
* **Quick Sort**
  + Using Lomuto and Hoare
  + Time and Space analysis
  + Choice of Pivot and Worst case
  + Tail call elimination
* **Problems(With Video Solutions)**
  + Kth Smallest element
  + Chocolate Distribution Problem
  + Sorting arrays with 2 and3 types of elements
  + Merge Overlapping Intervals
  + Meeting the Maximum Guests
* **Heap Sort**
* **Cycle Sort**
* **Counting Sort**
* **Radix Sort**
* **Bucket Sort**
* **Overview of Sorting Algorithms**
* **Practice Problems**
  + This track contains many practice problems for the users which are considered important and must-do as far as Data Structure and Algorithm is concerned.

[Matrix](https://practice.geeksforgeeks.org/courses/dsa-self-paced?gclid=Cj0KCQjwse-DBhC7ARIsAI8YcWKSL-ry-kB7rkmOnFFqJ_zQ0J2YrkHMeSk3MSTqXF1UBBSAQC8T2KcaAr3IEALw_wcB#topic8)

* **Introduction to Matrix in C++ and Java**
* **Multidimensional Matrix**
* **Pass Matrix as Argument**
* **Printing matrix in a snake pattern**
* **Transposing a matrix**
* **Rotating a Matrix**
* **Check if the element is present in a row and column-wise sorted matrix.**
* **Boundary Traversal**
* **Spiral Traversal**
* **Matrix Multiplication**
* **Search in row-wise and column-wise Sorted Matrix**
* **Practice Problems**
  + This track contains many practice problems for the users which are considered important and must-do as far as Data Structure and Algorithm is concerned.

[Hashing](https://practice.geeksforgeeks.org/courses/dsa-self-paced?gclid=Cj0KCQjwse-DBhC7ARIsAI8YcWKSL-ry-kB7rkmOnFFqJ_zQ0J2YrkHMeSk3MSTqXF1UBBSAQC8T2KcaAr3IEALw_wcB#topic9)

* **Introduction and Time complexity analysis**
* **Application of Hashing**
* **Discussion on Direct Address Table**
* **Working and examples on various Hash Functions**
* **Introduction and Various techniques on Collision Handling**
* **Chaining and its implementation**
* **Open Addressing and its Implementation**
* **Chaining V/S Open Addressing**
* **Double Hashing**
* **C++**
  + Unordered Set
  + Unordered Map
* **Java**
  + HashSet
  + HashMap
* **Problems(With Video Solutions):**
  + Count Distinct Elements
  + Count of the frequency of array elements
  + The intersection of two arrays
  + Union of two unsorted arrays
  + Pair with given sum in an unsorted array
  + Subarray with zero-sum
  + Subarray with given sum
  + Longest subarray with a given sum
  + Longest subarray with an equal number of 0’s and 1’s
  + Longest common span with the same sum in a binary array
  + Longest Consecutive Subsequence
  + Count Distinct elements in every window
  + More than n/k Occurences
  + Optimized More than n/k Solution
* **Practice Problems**
  + This track contains many practice problems for the users which are considered important and must-do as far as Data Structure and Algorithm is concerned.

[Strings](https://practice.geeksforgeeks.org/courses/dsa-self-paced?gclid=Cj0KCQjwse-DBhC7ARIsAI8YcWKSL-ry-kB7rkmOnFFqJ_zQ0J2YrkHMeSk3MSTqXF1UBBSAQC8T2KcaAr3IEALw_wcB#topic10)

* **Discussion of String DS**
* **Strings in CPP**
* **Strings in Java**
* **Problems(With Video Solutions):**
  + Given a string, check if they are an anagram of each other.
  + Given a string, find the leftmost character that repeats.
  + Given a string, find the leftmost character that does not repeat.
  + Given a string, find the lexicographic rank of it in O(n) time.
  + Implementation of the previously discussed lexicographic rank problem.
  + Given a text string and a pattern string, find if a permutation of the pattern exists in the text.
  + Given two strings, check if they are rotations of each other or not.
  + Various Pattern Searching Algorithms.
  + Palindrome Check
* **Rabin Karp Algorithm**
* **KMP Algorithm**
* **Practice Problems**
  + This track contains many practice problems for the users which are considered important and must-do as far as Data Structure and Algorithm is concerned.

[Linked List](https://practice.geeksforgeeks.org/courses/dsa-self-paced?gclid=Cj0KCQjwse-DBhC7ARIsAI8YcWKSL-ry-kB7rkmOnFFqJ_zQ0J2YrkHMeSk3MSTqXF1UBBSAQC8T2KcaAr3IEALw_wcB#topic11)

* **Introduction**
  + Implementation in CPP
  + Implementation in Java
  + Comparison with Array DS
* **Doubly Linked List**
* **Circular Linked List**
* **Loop Problems**
  + Detecting Loops
  + Detecting loops using Floyd cycle detection
  + Detecting and Removing Loops in Linked List
* **Problems(With Video Solutions):**
  + Middle of Linked List
  + Nth node from the end of linked list
  + Deleting a Node without accessing Head pointer of Linked List
  + An iterative method to Reverse a linked list
  + Recursive method to reverse a linked list
  + Reverse in group of size k
  + Recursive Traversal in a Singly Linked List
  + Segregating even-odd nodes of linked list
  + The intersection of two linked list
  + Pairwise swap nodes of linked list
  + Clone a linked list using a random pointer
  + LRU Cache Design
  + Merge two Sorted Linked Lists
  + Palindrome Linked List
  + Recursive Traversal in a Singly Linked List
  + Remove Duplicates from a Sorted Singly Linked List
  + Sorted Insert in a Singly Linked List
  + Reverse a Doubly Linked List
* **Practice Problems**
  + This track contains many practice problems for the users which are considered important and must-do as far as Data Structure and Algorithm is concerned.

[Stack](https://practice.geeksforgeeks.org/courses/dsa-self-paced?gclid=Cj0KCQjwse-DBhC7ARIsAI8YcWKSL-ry-kB7rkmOnFFqJ_zQ0J2YrkHMeSk3MSTqXF1UBBSAQC8T2KcaAr3IEALw_wcB#topic12)

* **Understanding the Stack data structure**
* **Applications of Stack**
* **Implementation of Stack in Array and Linked List**
  + In C++
  + In Java
* **Problems(With Video Solutions):**
  + Balanced Parenthesis
  + Two stacks in an array
  + K Stacks in an array
  + Stock span problem with variations
  + Previous Greater Element
  + Next Greater Element
  + Largest Rectangular Area in a Histogram
* **Understanding getMin() in Stack with O(1)**
* **Infix, Prefix and Postfix Introduction**
  + Infix to Postfix (Simple Solution)
  + Infix to Postfix (Efficient Solution)
  + Evaluation of Postfix
  + Infix to Prefix (Simple Solution)
  + Infix to Prefix (Efficient Solution)
  + Evaluation of Prefix
* **Practice Problems**
  + This track contains many practice problems for the users which are considered important and must-do as far as Data Structure and Algorithm is concerned.

[Queue](https://practice.geeksforgeeks.org/courses/dsa-self-paced?gclid=Cj0KCQjwse-DBhC7ARIsAI8YcWKSL-ry-kB7rkmOnFFqJ_zQ0J2YrkHMeSk3MSTqXF1UBBSAQC8T2KcaAr3IEALw_wcB#topic13)

* **Introduction and Application**
* **Implementation of the queue using array and LinkedList**
  + In C++ STL
  + In Java
  + Stack using queue
* **Problems(With Video Solutions)**
  + Reversing a Queue
  + Generate numbers with given digits
  + First Circular Tour
* **Practice Problems**
  + This track contains many practice problems for the users which are considered important and must-do as far as Data Structure and Algorithm is concerned.

[Deque](https://practice.geeksforgeeks.org/courses/dsa-self-paced?gclid=Cj0KCQjwse-DBhC7ARIsAI8YcWKSL-ry-kB7rkmOnFFqJ_zQ0J2YrkHMeSk3MSTqXF1UBBSAQC8T2KcaAr3IEALw_wcB#topic14)

* **Introduction and Application**
* **Implementation**
  + In C++ STL
  + In Java
* **Problems(With Video Solutions)**
  + Maximums of all subarrays of size k
  + ArrayDeque in Java
  + Design a DS with min max operations
* **Practice Problems**
  + This track contains many practice problems for the users which are considered important and must-do as far as Data Structure and Algorithm is concerned.

[Tree](https://practice.geeksforgeeks.org/courses/dsa-self-paced?gclid=Cj0KCQjwse-DBhC7ARIsAI8YcWKSL-ry-kB7rkmOnFFqJ_zQ0J2YrkHMeSk3MSTqXF1UBBSAQC8T2KcaAr3IEALw_wcB#topic15)

* **Introduction**
  + Tree
  + Application
  + Binary Tree
  + Tree Traversal
* **Implementation of:**
  + Inorder Traversal
  + Preorder Traversal
  + Postorder Traversal
  + Level Order Traversal (Line by Line)
  + Tree Traversal in Spiral Form
* **Problems(With Video Solutions):**
  + Size of Binary Tree
  + Maximum in Binary Tree
  + Height of Binary Tree
  + Print Nodes at K distance
  + Print Left View of Binary Tree
  + Children Sum Property
  + Check for Balanced Binary Tree
  + Maximum Width of Binary Tree
  + Convert Binary Tree to Doubly Linked List
  + Construct Binary Tree from Inorder and Preorder
  + Tree Traversal Spiral Form
  + The diameter of a Binary Tree
  + LCA problem with an efficient solution
  + Burn A Binary Tree from a Leaf
  + Count Nodes in a complete Binary Tree
  + Serialize and Deserialize a Binary tree
  + Iterative Inorder Traversal
  + Iterative Preorder Traversal (Simple)
  + Iterative Preorder Traversal (Space Optimized)
* **Practice Problems**
  + This track contains many practice problems for the users which are considered important and must-do as far as Data Structure and Algorithm is concerned.

[Binary Search Tree](https://practice.geeksforgeeks.org/courses/dsa-self-paced?gclid=Cj0KCQjwse-DBhC7ARIsAI8YcWKSL-ry-kB7rkmOnFFqJ_zQ0J2YrkHMeSk3MSTqXF1UBBSAQC8T2KcaAr3IEALw_wcB#topic16)

* **Background, Introduction and Application**
* **Implementation of Search in BST**
  + In CPP
  + In Java
* **Insertion in BST**
  + In CPP
  + In Java
* **Deletion in BST**
  + In CPP
  + In Java
* **Floor in BST**
  + In CPP
  + In Java
* **Self Balancing BST**
* **AVL Tree**
* **Red Black Tree**
* **Set in C++ STL**
* **Map in C++ STL**
* **BST Introduction**
* **TreeSet in java**
* **TreeMap in Java**
* **Problems(With Video Solutions):**
  + The ceiling of a key in BST
  + Ceiling on the left side in an array
  + Find Kth Smallest in BST
  + Check for BST
  + Fix BST with Two Nodes Swapped
  + Pair Sum with given BST
  + Vertical Sum in a Binary Tree
  + Vertical Traversal of Binary Tree
  + Top View of Binary Tree
  + Bottom View of Binary Tree
* **Practice Problems**
  + This track contains many practice problems for the users which are considered important and must-do as far as Data Structure and Algorithm is concerned.

[Heap](https://practice.geeksforgeeks.org/courses/dsa-self-paced?gclid=Cj0KCQjwse-DBhC7ARIsAI8YcWKSL-ry-kB7rkmOnFFqJ_zQ0J2YrkHMeSk3MSTqXF1UBBSAQC8T2KcaAr3IEALw_wcB#topic17)

* **Introduction & Implementation**
* **Binary Heap**
  + Insertion
  + Heapify and Extract
  + Decrease Key, Delete and Build Heap
* **Heap Sort**
* **Priority Queue in C++**
* **PriorityQueue in Java**
* **Problems(With Video Solutions):**
  + Sort K-Sorted Array
  + Buy Maximum Items with Given Sum
  + K Largest Elements
  + Merge K Sorted Arrays
  + Median of a Stream
* **Practice Problems**
  + This track contains many practice problems for the users which are considered important and must-do as far as Data Structure and Algorithm is concerned.

[Graph](https://practice.geeksforgeeks.org/courses/dsa-self-paced?gclid=Cj0KCQjwse-DBhC7ARIsAI8YcWKSL-ry-kB7rkmOnFFqJ_zQ0J2YrkHMeSk3MSTqXF1UBBSAQC8T2KcaAr3IEALw_wcB#topic18)

* **Introduction to Graph**
* **Graph Representation**
  + Adjacency Matrix
  + Adjacency List in CPP and Java
  + Adjacency Matrix VS List
* **Breadth-First Search**
  + Applications
* **Depth First Search**
  + Applications
* **Problems(With Video Solutions):**
  + Shortest Path in an Unweighted Graph
  + Detecting Cycle
    - In the Undirected Graph
    - In the Directed Graph
  + Topological Sorting
    - Kahn's BFS Based Algorithm
    - DFS Based Algorithm
* **Shortest Path in Directed Acyclic Graph**
* **Prim's Algorithm/Minimum Spanning Tree**
  + Implementation in CPP
  + Implementation in Java
* **Dijkstra's Shortest Path Algorithm**
  + Implementation in CPP
  + Implementation in Java
* **Bellman-Ford Shortest Path Algorithm**
* **Kruskal’s Algoritm**
* **Kosaraju's Algorithm**
* **Articulation Point**
* **Bridges in Graph**
* **Tarjan’s Algorithm**
* **Practice Problems**
  + This track contains many practice problems for the users which are considered important and must-do as far as Data Structure and Algorithm is concerned.

[Greedy](https://practice.geeksforgeeks.org/courses/dsa-self-paced?gclid=Cj0KCQjwse-DBhC7ARIsAI8YcWKSL-ry-kB7rkmOnFFqJ_zQ0J2YrkHMeSk3MSTqXF1UBBSAQC8T2KcaAr3IEALw_wcB#topic19)

* **Introduction**
* **Activity Selection Problem**
* **Fractional Knapsack**
* **Job Sequencing Problem**
* **Practice Problems**
  + This track contains many practice problems for the users which are considered important and must-do as far as Data Structure and Algorithm is concerned.

[Backtracking](https://practice.geeksforgeeks.org/courses/dsa-self-paced?gclid=Cj0KCQjwse-DBhC7ARIsAI8YcWKSL-ry-kB7rkmOnFFqJ_zQ0J2YrkHMeSk3MSTqXF1UBBSAQC8T2KcaAr3IEALw_wcB#topic20)

* **Concepts of Backtracking**
* **Rat In a Maze**
* **N Queen Problem**
* **Sudoku Problem**
* **Practice Problems**
  + This track contains many practice problems for the users which are considered important and must-do as far as Data Structure and Algorithm is concerned.

[Dynamic Programming](https://practice.geeksforgeeks.org/courses/dsa-self-paced?gclid=Cj0KCQjwse-DBhC7ARIsAI8YcWKSL-ry-kB7rkmOnFFqJ_zQ0J2YrkHMeSk3MSTqXF1UBBSAQC8T2KcaAr3IEALw_wcB#topic21)

* **Introduction**
* **Dynamic Programming**
  + Memoization
  + Tabulation
* **Problems(With Video Solutions):**
  + Longest Common Subsequence
  + Coin Change Count Combinations
  + Edit Distance Problem
    - Naive Approach
    - DP Approach
  + Longest Increasing Subsequence Problem
    - Naive Approach
    - Efficient Approach
  + Maximum Cuts
  + Minimum coins to make a value
  + Minimum Jumps to reach at the end
  + 0-1 knapsack problem
    - Naive Approach
    - Efficient Approach
  + Optimal Strategy for a Game
  + Variation of Longest Common Subsequence
  + Variation of Longest Increasing Subsequence
  + Egg Dropping Problem
  + Count BST with nkeys
  + Maximum Sum with No Consecutive
  + Subset Sum Problem
  + Matrix Chain Multiplication
  + Palindrome Parititioning
* **Practice Problems**
  + This track contains many practice problems for the users which are considered important and must-do as far as Data Structure and Algorithm is concerned.

[Trie](https://practice.geeksforgeeks.org/courses/dsa-self-paced?gclid=Cj0KCQjwse-DBhC7ARIsAI8YcWKSL-ry-kB7rkmOnFFqJ_zQ0J2YrkHMeSk3MSTqXF1UBBSAQC8T2KcaAr3IEALw_wcB#topic22)

* **Introduction**
  + Representation
  + Search
  + Insert
  + Delete
* **Count Distinct Rows in a Binary Matrix**
* **Practice Problems**
  + This track contains many practice problems for the users which are considered important and must-do as far as Data Structure and Algorithm is concerned.

[Segment Tree](https://practice.geeksforgeeks.org/courses/dsa-self-paced?gclid=Cj0KCQjwse-DBhC7ARIsAI8YcWKSL-ry-kB7rkmOnFFqJ_zQ0J2YrkHMeSk3MSTqXF1UBBSAQC8T2KcaAr3IEALw_wcB#topic23)

* **Introduction**
* **Construction**
* **Range Query**
* **Update Query**
* **Practice Problems**
  + This track contains many practice problems for the users which are considered important and must-do as far as Data Structure and Algorithm is concerned.

[Disjoint Set](https://practice.geeksforgeeks.org/courses/dsa-self-paced?gclid=Cj0KCQjwse-DBhC7ARIsAI8YcWKSL-ry-kB7rkmOnFFqJ_zQ0J2YrkHMeSk3MSTqXF1UBBSAQC8T2KcaAr3IEALw_wcB#topic24)

* **Introduction**
* **Find and Union Operations**
* **Union by Rank**
* **Path Compression**
* **Kruskal's Algorithm**
* **Practice Problems**
  + This track contains many practice problems for the users which are considered important and must-do as far as Data Structure and Algorithm is concerned.