



# Java's DataStructures and Algorithms

Are you targeting to FAANG type of companies????

Do you want to rule the IT industry with the coding mania???

Do you want the package minimum 10 LPA as a fresher????

Do you want the salary jump to 5X?????

Do you want to learn the LeetCode and HackerRank challenges with an experienced faculty????

#### Please find the details

Class Timing : 9.00 PM to 6.00 PM

Class type : In-class

**Course Content**:

### **Arrays:**

https://leetcode.com/problems/kth-largest-element-in-an-array/

https://leetcode.com/problems/neither-minimum-nor-maximum/

https://leetcode.com/problems/sort-colors/

https://leetcode.com/problems/missing-number/

https://leetcode.com/problems/maximum-product-of-three-numbers/

https://leetcode.com/problems/remove-duplicates-from-sorted-array/

https://takeuforward.org/data-structure/left-rotate-the-array-by-one/

https://leetcode.com/problems/rotate-array/

https://leetcode.com/problems/move-zeroes/

https://leetcode.com/problems/max-consecutive-ones/

https://leetcode.com/problems/rotate-image/

https://leetcode.com/problems/spiral-matrix/

https://leetcode.com/problems/spiral-matrix-ii/

https://leetcode.com/problems/best-time-to-buy-and-sell-stock

## **Strings:**

https://leetcode.com/problems/valid-anagram/

https://leetcode.com/problems/reverse-string/

https://leetcode.com/problems/reverse-words-in-a-string/

https://leetcode.com/problems/valid-palindrome/

https://leetcode.com/problems/valid-palindrome-ii/

https://leetcode.com/problems/consecutive-characters/

https://leetcode.com/problems/longest-common-prefix/

# HashMap & Sliding window technique:

https://leetcode.com/problems/first-unique-character-in-a-string/

https://leetcode.com/problems/first-letter-to-appear-twice/

https://www.geeksforgeeks.org/counting-frequencies-of-array-elements/

https://leetcode.com/problems/sort-characters-by-frequency/

https://leetcode.com/problems/two-sum/

https://www.geeksforgeeks.org/find-a-pair-with-the-given-difference/

https://leetcode.com/problems/3sum/

https://leetcode.com/problems/intersection-of-two-arrays/

https://leetcode.com/problems/intersection-of-two-arrays-ii/

https://leetcode.com/problems/longest-substring-without-repeating-characters/

https://leetcode.com/problems/longest-substring-with-at-most-two-distinct-characters/

https://leetcode.com/problems/longest-substring-with-at-most-k-distinct-characters/

https://leetcode.com/problems/longest-repeating-character-replacement/

https://www.geeksforgeeks.org/find-if-there-is-a-subarray-with-0-sum/

https://leetcode.com/problems/subarray-sum-equals-k/

https://leetcode.com/problems/subarray-sums-divisible-by-k/

https://leetcode.com/problems/valid-anagram/

https://leetcode.com/problems/group-anagrams/

https://leetcode.com/problems/max-consecutive-ones/

https://www.lintcode.com/problem/883/

https://leetcode.com/problems/max-consecutive-ones-iii/

https://leetcode.com/problems/lru-cache/

https://leetcode.com/problems/sliding-window-maximum/

## **Stacks and Queues:**

https://www.geeksforgeeks.org/stack-data-structure/

https://www.javatpoint.com/ds-array-implementation-of-stack

https://leetcode.com/problems/valid-parentheses/

https://leetcode.com/problems/remove-all-adjacent-duplicates-in-string/

https://leetcode.com/problems/remove-all-adjacent-duplicates-in-string-ii/

https://leetcode.com/problems/removing-stars-from-a-string/

https://leetcode.com/problems/next-greater-element-i/

https://leetcode.com/problems/next-greater-element-ii/

https://leetcode.com/problems/daily-temperatures/

https://leetcode.com/problems/trapping-rain-water/

https://leetcode.com/problems/top-k-frequent-elements/

https://www.geeksforgeeks.org/queue-data-structure/

https://www.geeksforgeeks.org/array-implementation-of-queue-simple/

https://leetcode.com/problems/implement-queue-using-stacks

https://leetcode.com/problems/implement-stack-using-queues

https://leetcode.com/problems/kth-largest-element-in-an-array/

Sum of K largest elements

https://takeuforward.org/data-structure/kth-largest-smallest-element-in-an-array/

Sum of k minimum elements

### Linked list:

https://www.geeksforgeeks.org/search-an-element-in-a-linked-list-iterative-and-recursive/

https://www.geeksforgeeks.org/find-length-of-a-linked-list-iterative-and-recursive/

https://leetcode.com/problems/middle-of-the-linked-list

https://leetcode.com/problems/delete-the-middle-node-of-a-linked-list

https://leetcode.com/problems/merge-two-sorted-lists

https://leetcode.com/problems/palindrome-linked-list

https://leetcode.com/problems/remove-nth-node-from-end-of-list

https://leetcode.com/problems/remove-duplicates-from-sorted-list

https://leetcode.com/problems/remove-linked-list-elements

https://leetcode.com/problems/delete-node-in-a-linked-list

https://leetcode.com/problems/reverse-linked-list

https://leetcode.com/problems/swapping-nodes-in-a-linked-list

https://leetcode.com/problems/flatten-binary-tree-to-linked-list

https://leetcode.com/problems/odd-even-linked-list

### **Recursion:**

https://www.geeksforgeeks.org/introduction-to-recursion-data-structure-and-algorithm-tutorials/

Print 1 to 10 using recursion

https://www.geeksforgeeks.org/java-program-for-factorial-of-a-number/

https://www.geeksforgeeks.org/java-program-to-display-numbers-and-sum-of-first-n-natural-numbers/

https://leetcode.com/problems/fibonacci-number/

https://leetcode.com/problems/combination-sum/

https://leetcode.com/problems/combination-sum-ii/

https://leetcode.com/problems/subsets/

https://leetcode.com/problems/subsets-ii/

### Trees:

# **Binary tree:**

https://takeuforward.org/data-structure/strivers-tree-series-tree-data-structure/#point\_1

https://leetcode.com/problems/binary-tree-preorder-traversal/

https://leetcode.com/problems/binary-tree-inorder-traversal/

https://leetcode.com/problems/binary-tree-postorder-traversal/

https://www.geeksforgeeks.org/search-a-node-in-binary-tree/

https://www.geeksforgeeks.org/sum-nodes-binary-tree/

https://leetcode.com/problems/second-minimum-node-in-a-binary-tree/

https://www.geeksforgeeks.org/find-maximum-or-minimum-in-binary-tree/

https://leetcode.com/problems/maximum-depth-of-binary-tree/

https://leetcode.com/problems/balanced-binary-tree/

https://leetcode.com/problems/diameter-of-binary-tree/

https://leetcode.com/problems/same-tree/

https://leetcode.com/problems/symmetric-tree/

https://leetcode.com/problems/binary-tree-maximum-path-sum/

https://leetcode.com/problems/binary-tree-zigzag-level-order-traversal/

https://leetcode.com/problems/binary-tree-right-side-view/

https://www.geeksforgeeks.org/print-left-view-binary-tree/

https://leetcode.com/problems/lowest-common-ancestor-of-a-binary-tree/

https://leetcode.com/problems/construct-binary-tree-from-preorder-and-inorder-traversal/

https://leetcode.com/problems/construct-binary-tree-from-inorder-and-postorder-traversal/

https://leetcode.com/problems/binary-tree-level-order-traversal/

https://leetcode.com/problems/binary-tree-level-order-traversal-ii/

https://leetcode.com/problems/binary-tree-zigzag-level-order-traversal/

### Binary search tree:

https://leetcode.com/problems/search-in-a-binary-search-tree/

https://practice.geeksforgeeks.org/problems/minimum-element-in-bst/1

Maximum element in bst

https://leetcode.com/problems/insert-into-a-binary-search-tree/

https://leetcode.com/problems/delete-node-in-a-bst/

https://leetcode.com/problems/range-sum-of-bst

https://leetcode.com/problems/increasing-order-search-tree

https://leetcode.com/problems/kth-smallest-element-in-a-bst/

https://leetcode.com/problems/validate-binary-search-tree/

https://leetcode.com/problems/lowest-common-ancestor-of-a-binary-search-tree/

https://leetcode.com/problems/construct-binary-search-tree-from-preorder-traversal/

https://leetcode.com/problems/inorder-successor-in-bst/

https://leetcode.com/problems/two-sum-iv-input-is-a-bst/

https://leetcode.com/problems/balance-a-binary-search-tree

# **Dynamic programming:**

https://leetcode.com/problems/climbing-stairs/

https://leetcode.com/problems/min-cost-climbing-stairs/

https://leetcode.com/problems/house-robber/

https://www.geeksforgeeks.org/0-1-knapsack-problem-dp-10/

https://leetcode.com/problems/coin-change/

https://leetcode.com/problems/coin-change-2/

https://leetcode.com/problems/unique-paths/

https://leetcode.com/problems/best-time-to-buy-and-sell-stock/

https://leetcode.com/problems/best-time-to-buy-and-sell-stock-ii/

https://leetcode.com/problems/best-time-to-buy-and-sell-stock-iii/description/

https://leetcode.com/problems/best-time-to-buy-and-sell-stock-iv/

# **Binary Search:**

https://www.geeksforgeeks.org/binary-search/

https://leetcode.com/problems/binary-search/

https://leetcode.com/problems/search-insert-position/

https://leetcode.com/problems/search-a-2d-matrix/

https://leetcode.com/problems/sqrtx/

https://leetcode.com/problems/find-first-and-last-position-of-element-in-sorted-array/