**PLACEMENT PREPARATION - 2021**

**AIM-SUPERDREAM**

**Important Tree Questions**

1. **Traversals**

* Pre Order, In Order, Post Order, Level Order, Vertical Order

**Note**: Do Level Order Traversal very nicely since almost every question can be solved using it.

1. **All Views**

* Top, Right, Bottom and Left Views
* **Note**: Vertical Order Traversal, Bottom and Top views have almost similar codes and are often asked in interviews.

**Vertical Order Traversal**

Link:<https://www.geeksforgeeks.org/print-a-binary-tree-in-vertical-order-set-3-using-level-order-traversal/?ref=rp>

**Bottom View**

Link:<https://www.geeksforgeeks.org/bottom-view-binary-tree/>

**Top View**

Link:<https://www.geeksforgeeks.org/print-nodes-top-view-binary-tree/>

1. **Miscellaneous Codes**

* Finding Least Common Ancestor
* Spiral Level Order Traversal
* Inverse Level Order Traversal
* Printing all ancestors of a given node
* Finding whether given binary tree is BST or not
* Printing all nodes at k distance from root
* Finding minimum depth
* Root to leaf path sum equal to a given number
* Finding 2 nodes that sum to a given value

**DIVIDE AND CONQUER PARADIGM**(BINARY SEARCH)

**Important Questions:**

* Finding number of occurrences of an element

Link:<https://www.geeksforgeeks.org/count-number-of-occurrences-or-frequency-in-a-sorted-array/>

* Find the minimum element in a sorted and rotated array

Link:<https://www.geeksforgeeks.org/find-minimum-element-in-a-sorted-and-rotated-array/>

* Find the maximum element in an array which is first increasing and then decreasing

Link:[https://www.geeksforgeeks.org/find-the-maximum-element-in-an-array-which-is-first -increasing-and-then-decreasing/](https://www.geeksforgeeks.org/find-the-maximum-element-in-an-array-which-is-first-increasing-and-then-decreasing/)

* **Sorting Techniques** based on this approach

1. MERGE SORT
2. QUICK SORT

**NOTE**: All Sorting Techniques including **Bubble Sort, Insertion Sort, Selection Sort, Quick Sort, Merge Sort** and **Heap Sort** are very important.

**NOTE**:  Questions based on Binary Search or  Divide and Conquer Paradigm are frequently asked in interviews. So prepare them well.