Top View Of Binary Tree [GFG](https://practice.geeksforgeeks.org/problems/right-view-of-binary-tree/1)

Given below is a binary tree. The task is to print the top view of binary tree. Top view of a binary tree is the set of nodes visible when the tree is viewed from the top.

Example:

5

/ \

3 7

/ \ \

11 1 6

/ \ / \

9 12 13 15

Output: Top of Binary Tree: 9, 11, 3, 5, 7, 6, 15

**Approach 1: Function to print Top View of a binary tree using a iterative approach.**

* The iterative approach uses level-order traversal (BFS) to traverse the tree.
* It maintains a map to store nodes at each horizontal distance from the root.
* While traversing, it checks if a horizontal distance has been encountered before, and if not, it adds the node at that distance to the map.
* This way, it ensures that the leftmost node at each horizontal distance is stored in the map, representing the top view.
* Finally, it extracts and prints the nodes from the map in order of increasing horizontal distance.

**Time Complexity:**

* **The time complexity is O(N), where N is the number of nodes in the tree, as each node is visited once during level-order traversal.**

**Space Complexity:**

* **The space complexity is O(N) in the worst case, primarily due to the queue used for level-order traversal and the map used to store top view nodes.**