

15 Lecture - CS301

Important Subjective

1. **What is level-order traversal of a binary tree?**

Answer: Level-order traversal is a technique used to traverse a binary tree in which nodes are visited level by level, from top to bottom and from left to right.

2. **How can level-order traversal be implemented?**

Answer: Level-order traversal can be implemented using a queue data structure.

3. **What is the time complexity of level-order traversal?**

Answer: The time complexity of level-order traversal is $O(n)$, where n is the number of nodes in the binary tree.

4. **What is the space complexity of level-order traversal?**

Answer: The space complexity of level-order traversal is $O(n)$, where n is the number of nodes in the binary tree.

5. **Can level-order traversal be used to find the minimum depth of a binary tree?**

Answer: Yes, level-order traversal can be used to find the minimum depth of a binary tree.

6. **Can level-order traversal be used to find the maximum depth of a binary tree?**

Answer: Yes, level-order traversal can be used to find the maximum depth of a binary tree.

7. **Can level-order traversal be used to sort the nodes in a binary tree?**

Answer: No, level-order traversal cannot be used to sort the nodes in a binary tree.

8. **Can level-order traversal be used to find the lowest common ancestor of two nodes in a binary tree?**

Answer: Yes, level-order traversal can be used to find the lowest common ancestor of two nodes in a binary tree.

9. **What is the advantage of level-order traversal?**

Answer: The advantage of level-order traversal is that it can be used to find the shortest path between two nodes.

10. **What is the disadvantage of level-order traversal?**

Answer: The disadvantage of level-order traversal is that it requires more memory than other traversal techniques.