Questions for data structures and algorithms

Question
2. Explain what a linked list is and give one advantage it has over an array.
3. Define what a binary tree is and briefly explain what makes it a "binary" tree.
4. What is the purpose of a hash table (or hash map)? Explain its basic working principle.
7. What is the difference between depth-first search (DFS) and breadth-first search (BFS) in a graph traversal algorithm?
8. Describe what a recursive algorithm is and provide a simple example (e.g., calculating a factorial).
10. Explain the concept of a priority queue and give a situation where it might be useful.
6. Explain what a graph data structure is, providing a simple real-world example.
1. Describe the difference between a stack and a queue in terms of how elements are added and removed.
9. What is sorting, and what are two common examples of sorting algorithms (no need to describe the algorithms themselves)?
5. Describe the concept of "Big O" notation and why it's important in algorithm analysis.