

Questions for data structures

Question

3. Describe the main operations performed on a queue data structure.
9. Explain what a binary search tree (BST) is and why it's more efficient than a linear search in certain cases.
4. What is the primary characteristic that distinguishes a linked list from an array?
1. Describe the key difference between a linear and a non-linear data structure. Give one example of each.
6. What is a node in the context of data structures, and what information does it typically contain?
10. Briefly describe the concept of a hash table and its use in efficient data retrieval.
2. Explain what a stack data structure is and provide a real-world analogy for how it works.
7. Describe the difference between a singly linked list and a doubly linked list.
5. Explain the concept of a tree data structure and briefly mention one of its common uses.
8. What is a graph data structure, and what are its key components?