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B-Trees

* A B-tree is a self-balancing search tree that keeps data sorted and allows for efficient insertion, deletion, and searching.
* The value of B (the branching factor) determines how many children each node has.
* In an external memory setting, the time complexity of B-tree operations is proportional to the number of nodes accessed.

Chained Hash Tables

* A chained hash table uses a linked list for collision resolution.
* The multiplicative hash function is used to map keys to indices in the array.
* The expected length of the list at each index is bounded by the load factor (nx + 2), where nx is the number of occurrences of x.

Binary Search Trees

* A binary search tree is a data structure that keeps nodes ordered and allows for efficient insertion, deletion, and searching.
* The `add` method in BinarySearchTree adds a new value to the tree by first searching for it and then inserting it if not found.

Graph Traversal

* Breadth-first search (BFS) is an algorithm that traverses a graph level by level, starting from a given node.
* The BFS algorithm uses a queue to keep track of nodes to visit next.

Index

The index at the end of the book provides a list of key terms and concepts related to data structures.

Let me know if you'd like me to elaborate on any specific topic or provide further clarification.