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Importance of Specialized Data Structures

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Structured data is the practice of organizing and arranging data in specific formats, which results in easier processing, analyzing, and making the data easier to use. The advantages of structured data include easier to analyze data, consistency, efficient data processing, and integration. Disadvantages include limited flexibility, constant data entry, expensive process of setup and maintenance, and potential incomplete data.

Binary trees are data structures that have nodes that each have at most two children. Binary trees use data and pointers that point to the left and right child. You can perform different operations on binary trees such as insert an element, remove an element, search for an element, and traverse an element. Binary heaps are complete binary trees with left and right children. Hashing is used to store and retrieve data quickly and efficiently. Hash tables store a key and a value pair in a list. You can use the insert, get, and delete operations on the hash tables.

Sources:

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