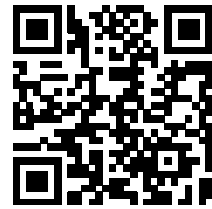


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Data Structures in Coding



In the world of _____, understanding data structures is crucial. Data structures help programmers organize and store _____ efficiently. For example, an _____ stores elements of the same type in a contiguous block of _____. This makes it easier to access elements quickly. Another common structure is the _____, which allows for dynamic resizing and can store elements of different types. The _____, particularly the binary search tree, enables fast search, insert, and delete operations. In a tree, each node has at most two _____, which helps in maintaining a sorted order of elements. Graphs are essential for representing _____, like social media connections, where nodes represent entities and _____ the connections between them. A _____ operates on the principle of first in, first out (FIFO), useful for tasks like printing documents. Similarly, a _____ follows the last in, first out (LIFO) principle, vital for undo _____ in software. The choice of a data structure depends on the specific _____ of the application. Proper use of data structures can greatly enhance the _____ of software. Therefore, learning about data structures is a fundamental step for every aspiring _____.

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