What is the definition of an ancestor in a family tree?

○ A person who is directly related to you

○ A person who is related to you through marriage

○ A person who is related to you through a common ancestor

○ A person who is not related to you at all

How can the concept of ancestor be applied in computer science and algorithms?

What is the time complexity of accessing an element in an array?

○ O(1)

○ O(n)

○ O(log n)

○ O(n^2)

Arrays can only store elements of the same data type.

○ True

○ False

An ancestor can only be a direct parent or grandparent.

○ True

○ False

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How can the concept of ancestor be applied in computer science and algorithms?

Describe an algorithm to find the lowest common ancestor of two nodes in a binary tree.

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What is the time complexity of accessing an element in an array?

○ O(1)

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○ O(n^2)

What is the time complexity of finding the lowest common ancestor of two nodes in a binary tree?

○ O(n)

○ O(log n)

○ O(n^2)

○ O(1)

An ancestor of a node in a tree can also be its descendant.

○ True

○ False

Arrays can only store elements of the same data type.

○ True

○ False