Sorting Algorithms

1 Overview

Sorting algorithms arrange elements of a list into a specified order, typically ascending or descending. Sorting is a fundamental operation used to improve efficiency in searching and data processing.

2 Comparison-Based Sorting

- **Bubble Sort**
- **Insertion Sort**
- **Merge Sort**
- **Quick Sort**

3 Properties

Important properties include time complexity, space complexity, stability, and adaptiveness.

4 Applications

Sorting is widely used in databases, operating systems, and scientific computing.