**Selection Sort in C**

Selection Sort is a simple sorting algorithm that repeatedly finds the minimum element from an unsorted array and swaps it with the first element of the unsorted part.

**Algorithm:**

1. **Find the minimum element:**
   * Iterate through the unsorted part of the array to find the minimum element.
2. **Swap the minimum element with the first element:**
   * Swap the found minimum element with the first element.
3. **Repeat steps 1 and 2 for the remaining unsorted part.**

**C Implementation:**

**void selectionSort(int arr[], int n) {**

**for (int i = 0; i < n - 1; i++) {**

**int minIdx = i;**

**for (int j = i + 1; j < n; j++) {**

**if (arr[j] < arr[minIdx]) {**

**minIdx = j;**

**}**

**}**

**int temp = arr[minIdx];**

**arr[minIdx] = arr[i];**

**arr[i] = temp;**

**}**

**}**

**Time Complexity:**

* **Best Case:** O(n^2)
* **Average Case:** O(n^2)
* **Worst Case:** O(n^2)

**Space Complexity:** O(1)

**Key Points:**

* Selection Sort is a simple but inefficient sorting algorithm for large datasets.
* It's not suitable for large datasets as it has a quadratic time complexity.
* It can be useful for small datasets or when memory writes are expensive.