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//Quick Sort
//Om Dattatray Gavande
//Class:-SY CSE A
//Roll No:-CS2145
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#include <stdio.h>

// Function to swap two elements
void swap(int *a, int *b) {
    int t = *a;
    *a = *b;
    *b = t;
}

// Partition function
int partition(int arr[], int low, int high) {
    int pivot = arr[high]; // pivot element
    int i = low - 1; // index of smaller element

    for (int j = low; j <= high - 1; j++) {
        if (arr[j] < pivot) {
            i++;
            swap(&arr[i], &arr[j]);
        }
    }
    swap(&arr[i + 1], &arr[high]);
    return (i + 1);
}

// Quick Sort function
void quickSort(int arr[], int low, int high) {
    if (low < high) {
        int pi = partition(arr, low, high);
        quickSort(arr, low, pi - 1); // sort left side
        quickSort(arr, pi + 1, high); // sort right side
    }
}

int main() {
    int arr[] = {10, 7, 8, 9, 1, 5};
    int n = sizeof(arr) / sizeof(arr[0]);
    quickSort(arr, 0, n - 1);
    printf("Sorted array: ");
    for (int i = 0; i < n; i++)
        printf("%d ", arr[i]);
    printf("\n");
    return 0;
}
```