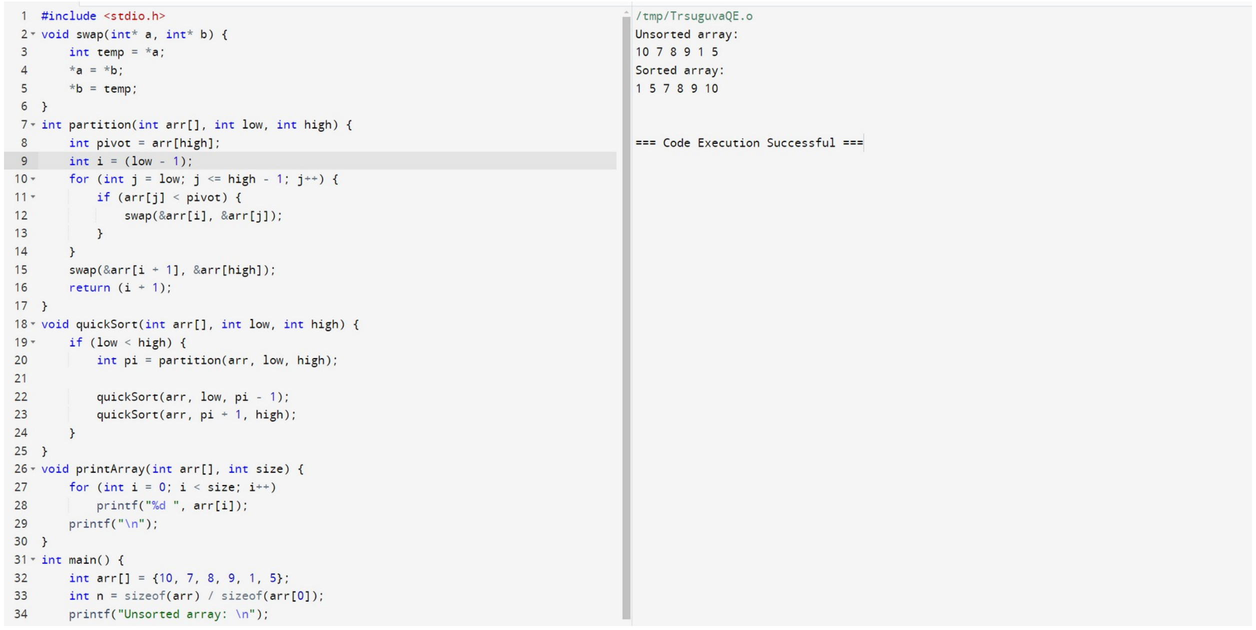
1. Write a C program for QUICK SORT.

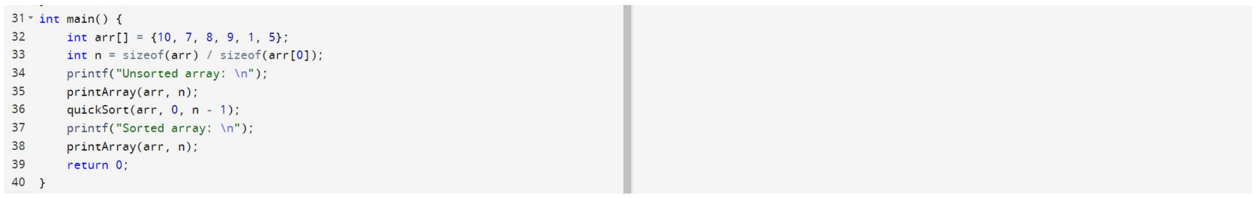


```c
#include <stdio.h>
void swap(int* a, int* b) {
    int temp = *a;
    *a = *b;
    *b = temp;
}
int partition(int arr[], int low, int high) {
    int pivot = arr[high];
    int i = (low - 1);
    for (int j = low; j <= high - 1; j++) {
        if (arr[j] < pivot) {
            swap(&arr[i], &arr[j]);
        }
    }
    swap(&arr[i + 1], &arr[high]);
    return (i + 1);
}
void quickSort(int arr[], int low, int high) {
    if (low < high) {
        int pi = partition(arr, low, high);

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

```
/tmp/TrsuguvaQE.o
Unsorted array:
10 7 8 9 1 5
Sorted array:
1 5 7 8 9 10


=== Code Execution Successful ===
```



```c
int main() {
    int arr[] = {10, 7, 8, 9, 1, 5};
    int n = sizeof(arr) / sizeof(arr[0]);
    printf("Unsorted array: \n");
    printArray(arr, n);
    quickSort(arr, 0, n - 1);
    printf("Sorted array: \n");
    printArray(arr, n);
    return 0;
}
```