Code:

```
#include <iostream>
using namespace std;

int partition(int arr[], int beg, int end) {
  int pivot = arr[end];
  int i = beg - 1;

  for (int j = beg; j <= end - 1; j++) {
    if (arr[j] < pivot) {
      i++;
      int temp = arr[i];
      arr[i] = arr[j];
      arr[j] = temp;
    }
  }

  int temp = arr[i + 1];
  arr[i + 1] = arr[end];
  arr[end] = temp;

  return (i + 1);
}

void quick(int arr[], int beg, int end) {
  if (beg < end) {
    int p = partition(arr, beg, end);
    quick(arr, beg, p - 1);
    quick(arr, p + 1, end);
  }
}

void printArray(int a[], int n) {
  for (int i = 0; i < n; i++)
    cout << a[i] << " ";
}

int main() {
  int n;
  cout << "Enter the number of elements: ";
  cin >> n;
  int arr[n];

  cout << "\nEnter the elements: " << endl;
  for (int i = 0; i < n; i++) {
    cin >> arr[i];
  }
```

```
  cout << "\nArray Before Sorting: " << endl;
  printArray(arr, n);

  quick(arr, 0, n - 1);
  cout << endl << "\nArray After Sorting: " << endl;
  printArray(arr, n);
}
```

Sample Output:

```
Enter the number of elements: 5
Enter the elements:
89 45 12 55 5
Array Before Sorting:
89 45 12 55 5

Array After Sorting:
5 12 45 55 89
```