insertion-sort-algorithm.cpp

```
// C++ program for insertion sort

#include <bits/stdc++.h>
using namespace std;
// insertion sort
void insertionSort(int arr[], int n)
{
   int i, key, j;
   for (i = 1; i < n; i++) {
      key = arr[i];
      j = i - 1;
      while (j >= 0 && arr[j] > key) {
         arr[j + 1] = arr[j];
         j = j - 1;
      }
      arr[j + 1] = key;
   }
}

int main()
{
   int arr[] = { 12, 190, 18, 9, 6, 244, 0, -11, 27 };
   int n = sizeof(arr) / sizeof(arr[0]);
   insertionSort(arr, n);
   cout << "Sorted array: \n";
   int i;
   for (i = 0; i < n; i++) {
      cout << arr[i] << " ";
   }
   return 0;
}
```

OUTPUT

```
PS S:\WorkSpace\CollegeWork\DataStructure> g++ .\insertion-sort-algorithm.cpp
PS S:\WorkSpace\CollegeWork\DataStructure> ./a
Sorted array:
-11 0 6 9 12 18 27 190 244
PS S:\WorkSpace\CollegeWork\DataStructure>
```