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Insertion Sort

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

int insertionsort(int a[], int b)
{
    int z=0;
    int t=0;
    int j;
    for(int i=1;i<b;i++)
    {
        t = a[i];
        for(j = i-1;j>=0;j--)
        {
            if(t<a[j])
            {
                a[j+1] = a[j];
                z++;
            }
            else
                break;
        }
        a[j+1] = t;
```

```cpp
        }
        return z;
    }
    int main()
    {
        int a[] = {6,5,4,3,2,1};
        int n = sizeof(a) / sizeof(int);

        int s = insertionsort(a, n);
        for (int i = 0; i < n; i++)
        {
            cout<<a[i]<<" ";
        }
        cout<<endl<<s;
    }



    /*
    output

    best case{1,2,3,4,5,6} --> comp = 0 times
    average case{5,4,6,2,1,3} --> comp = 11 times
    worst case{6,5,4,3,2,1} --> comp = 15 times
    */
```