```cpp
#include <iostream>
#include <set>
#include <map>

using namespace std;

long long d[100005];
int n;
int a[100005];

int lowbit(int x)
{
    return -x & x;
}

void update(int p, int val)
{
    while (p <= n)
    {
        d[p] += val;
        p += lowbit(p);
    }
}

long long query(int p)
{
    long long res = 0;
    while (p)
    {
        res += d[p];
        p -= lowbit(p);
    }
    return res;
}

int main()
{
    cin >> n;
    set<int> s;
    map<int, int> m;
    for (int i = 1; i <= n; i++)
    {
        cin >> a[i];
        s.insert(a[i]);
```

```cpp
    }
    set<int>::iterator it;
    int cnt = 0;
    for (it = s.begin(); it != s.end(); it++)
    {
        m[*it] = ++cnt;
    }
    for (int i = 1; i <= n; i++)
    {
        a[i] = m[a[i]];
    }
    long long ans = 0;
    for (int i = 1; i <= n; i++)
    {
        ans += query(n) - query(a[i]);
        update(a[i], 1);
    }

    cout << ans << endl;
    return 0;

}
```