Segment Tree Implementation

```cpp
#include <bits/stdc++.h>
using namespace std;

const int N = 1e5; // Adjust N as needed
int segment[4 * N];
int n, q;

void update(int idx, int val, int node = 0, int low = 0, int high = n - 1) {
    if (low == high) {
        segment[node] = val;
        return;
    }
    int mid = (low + high) >> 1;
    if (idx <= mid)  update(idx, val, (node << 1) + 1, low, mid);
    else             update(idx, val, (node << 1) + 2, mid + 1, high);
    segment[node] = segment[(node << 1) + 1] + segment[(node << 1) + 2];
}

int query(int l, int r, int node = 0, int low = 0, int high = n - 1) {
    if (l <= low && high <= r) return segment[node];
    if (r < low || l > high) return 0;
    int mid = (low + high) >> 1;
    return query(l, r, (node << 1) + 1, low, mid) +
           query(l, r, (node << 1) + 2, mid + 1, high);
}
```