#include <iostream>

#include <vector>

using namespace std;

class Graph {

public:

int V;

vector<int> distances;

Graph(int V) : V(V), distances(V, 0) {}

void preprocess(const vector<pair<int, int>>& edges) {

for (int i = 1; i < V; ++i) {

distances[i] = distances[i - 1] + edges[i - 1].second;

}

}

int getDistance(int u, int v) {

return abs(distances[u] - distances[v]);

}

};