

```
1 class Dijkstra {
2 private:
3     struct node {
4         int id; bool done; vi to; vll cst; int from; ll d;
5     };
6     struct pq_t {
7         int id; ll d;
8         bool operator<(const pq_t & another) const {
9             return d != another.d ? d > another.d : id > another.id;
10        }
11    };
12    vector<node> nodes;
13    int n, m, source;
14 public:
15    Dijkstra(const vvi &lst, const vvll &cst, int start) {
16        n = lst.size();
17        nodes.resize(n);
18        Loop(i, n) nodes[i] = { i, false, {}, {}, -1, LLONG_MAX };
19        Loop(i, n) {
20            Loop(j, lst[i].size()) {
21                nodes[i].to.push_back(lst[i][j]);
22                nodes[i].cst.push_back(cst[i][j]);
23            }
24        }
25        source = start;
26        nodes[source].d = 0;
27        priority_queue<pq_t> pq;
28        pq.push({ nodes[source].id, nodes[source].d });
29        while (pq.size()) {
30            int a = pq.top().id;
31            pq.pop();
32            if (nodes[a].done) continue;
33            nodes[a].done = true;
34            Loop(j, nodes[a].to.size()) {
35                int b = nodes[a].to[j];
36                if (nodes[b].done) continue;
37                ll buf = nodes[a].d + nodes[a].cst[j];
38                if (buf < nodes[b].d) {
39                    nodes[b].d = buf;
40                    nodes[b].from = a;
41                    pq.push({ b, nodes[b].d });
42                }
43            }
44        }
45        return;
46    }
47    vi get_path(int v) {
48        stack<int> stk;
49        stk.push(v);
50        int a = v;
51        while (nodes[a].from != -1) {
52            stk.push(nodes[a].from);
53            a = nodes[a].from;
54        }
55        if (a != source) return {};
56        vi ret;
57        while (stk.size()) {
58            ret.push_back(stk.top());
59            stk.pop();
60        }
61        return ret;
62    }
63    ll get_dist(int v) {
64        return nodes[v].d;
65    }
66 };
```