Competitive Programming Notebook

Programadores Roblox

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4.1 Example Code

```cpp
// name of algorithm/structure
//
// description and more information
//
// links of problems solved with it (to make sure it works)
//
// complexity (of each funcion, if applicable)

struct Example {
    // code
};
```

4.2 Dijkstra

```cpp
vector<pii> adj[MAXN];

vector<int> dijkstra(int S) {
    vector<bool> vis(MAXN, 0);
    vector<ll> dist(MAXN, LLONG_MAX);
    dist[S] = 0;
    priority_queue<pii, vector<pii>, greater<pii>> pq;
    pq.push({0, S});
    while(pq.size()) {
        ll v = pq.top().second;
        pq.pop();
        if(vis[v]) continue;
        vis[v] = 1;
        for(auto &[peso, vizinho] : adj[v]) {
            if(dist[vizinho] > dist[v] + peso) {
                dist[vizinho] = dist[v] + peso;
                pq.push({dist[vizinho], vizinho});
            }
        }
    }
    return dist;
}
```

5 Math

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