

```
1 #include <bits/stdc++.h>
2 const long long INF = 1e9;
3 const long long MOD = 1e9+7;
4 const long long LINF = 1e18;
5 #define dump(x) cout << 'x' << ' = ' << (x) << ' ` `';
6 #define FOR(i,a,b) for(long long i=(a);i<(b);++i)
7 #define REP(i,n) for(long long i=0;i<(n);++i)
8 #define REPR(i,n) for(long long i=n;i>=0;i--)
9 #define FOREACH(x,a) for(auto& (x) : (a) )
10 typedef long long ll;
11 using namespace std;
12
13 // ここからライブラリ //
14
15 class union_find {
16 private:
17     vector<ll> par;
18     vector<ll> ran;
19     vector<ll> m_size;
20 public:
21     union_find(int n);
22     int find(int x);
23     void unite(int x, int y);
24     bool same(int x, int y);
25     ll size(int x);
26 };
27
28 union_find::union_find(int n){
29     par.resize(n);
30     iota(par.begin(), par.end(), 0);
31     ran.resize(n, 0);
32     m_size.resize(n, 1);
33 };
34
35 int union_find::find(int x) {
36     if (par[x] == x) return x;
37     else return par[x] = find(par[x]);
38 };
39
40 void union_find::unite(int x, int y) {
41     x = find(x);
42     y = find(y);
43     if (x == y) return;
44     if (ran[x] < ran[y]) swap(x,y);
45     par[y] = x;
46     m_size[x] += m_size[y];
47     if (ran[x]==ran[y]) ran[x]++;
48 };
49
50 ll union_find::size(int x) {
51     return m_size[find(x)];
52 }
53
54 bool union_find::same(int x, int y) {
55     return (find(x) == find(y));
56 };
57
58 // ここまでライブラリ //
59
60 int main() {
```

```
61     int n,q;
62     cin >> n >> q;
63     union_find uf(n);
64     REP(i,q) {
65         int c,x,y;
66         cin >> c >> x >> y;
67         if (c) cout << uf.same(x,y) << endl;
68         else uf.unite(x,y);
69     }
70 }
```