

```
1 class Connected_Components {
2 private:
3     int n;
4     vi cc_gid;
5     vvi ccs;
6     void dfs(int a, int gid, const vvi &lst) {
7         cc_gid[a] = gid;
8         ccs.back().push_back(a);
9         Foreach(b, lst[a]) {
10             if (cc_gid[b] == -1) dfs(b, gid, lst);
11         }
12     }
13 public:
14     Connected_Components(const vvi &lst) {
15         n = lst.size();
16         cc_gid = vi(n, -1);
17         int gid = 0;
18         Loop(i, n) {
19             if (cc_gid[i] == -1) {
20                 ccs.push_back({});
21                 dfs(i, gid, lst);
22                 gid++;
23             }
24         }
25     }
26     vi get_cc_gid() {
27         return cc_gid;
28     }
29     vvi get_ccs() {
30         return ccs;
31     }
32 };
```