

```
1 class Finding_Arts {
2 private:
3     struct node {
4         int id; bool done; vi to; int from; int pre; int low;
5     };
6     vector<node> nodes;
7     int n;
8     int ord;
9     vi arts;
10    void lowlink_dfs(int a, bool isroot) {
11        nodes[a].done = true;
12        nodes[a].pre = nodes[a].low = ord;
13        ord++;
14        int cnt = 0;
15        Loop(i, nodes[a].to.size()) {
16            int b = nodes[a].to[i];
17            if (b == nodes[a].from) continue;
18            if (!nodes[b].done) {
19                nodes[b].from = a;
20                lowlink_dfs(b, false);
21                nodes[a].low = min(nodes[a].low, nodes[b].low);
22                if (nodes[a].pre <= nodes[b].low) cnt++;
23            }
24            else {
25                nodes[a].low = min(nodes[a].low, nodes[b].pre);
26            }
27        }
28        if (cnt > (isroot ? 1 : 0)) arts.push_back(a);
29        return;
30    }
31 public:
32    Finding_Arts(const vvi &lst) {
33        n = lst.size();
34        nodes.resize(n);
35        Loop(i, n) nodes[i] = { i, false, {}, -1, -1, -1 };
36        Loop(i, n) {
37            Foreach(j, lst[i]) {
38                nodes[i].to.push_back(j);
39            }
40        }
41        ord = 0;
42        Loop(i, nodes.size()) {
43            if (!nodes[i].done) lowlink_dfs(i, true);
44        }
45        sort(arts.begin(), arts.end());
46    }
47    vi get_arts() {
48        return arts;
49    }
50 };
```