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1  /*
2    | Tarjan |
3    Desc: Algorithm for finding Strongly Connected Components
4    Source: CP2
5    State: Probably works but idk
6  */
7
8  vi dfs_num, dfs_low, S, visited;
9
10 void tarjanSCC(int u) {
11     dfs_low[u] = dfs_num[u] = dfsNumberCounter++; // dfs_low[u] ≤ dfs_num[u]
12     S.push_back(u); // stores u in a vector based on order of visitation
13     visited[u] = 1;
14     for (int j = 0; j < (int)AdjList[u].size(); j++) {
15         int v = AdjList[u][j];
16         if (dfs_num[v.first] == DFS_WHITE)
17             tarjanSCC(v.first);
18         if (visited[v.first]) // condition for update
19             dfs_low[u] = min(dfs_low[u], dfs_low[v.first]);
20     }
21     if (dfs_low[u] == dfs_num[u]) { // if this is a root (start) of an SCC
22         printf("SCC %d:", ++numSCC); // this part is done after recursion
23         while (1) {
24             int v = S.back(); S.pop_back(); visited[v] = 0;
25             printf(" %d", v);
26             if (u == v) break;
27         }
28         printf("\n");
29     }
30 }
```