

```
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++; //  $dfs\_low[u] \leq dfs\_num[u]$ 
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] == DFS_WHITE)
17             tarjanSCC(v);
18         if (visited[v]) // condition for update
19             dfs_low[u] = min(dfs_low[u], dfs_low[v]);
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 }
```