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1: #include<iostream>
2: #include<vector>
3: #include<stack>
4: #include<omp.h>
5: using namespace std;
6:
7: const int MAX=10000;
8: vector<int> graph[MAX];
9: bool visited[MAX];
10:
11: void dfs(int node)
12: {
13:     stack <int> s;
14:     s.push(node);
15:     while(!s.empty())
16:     {
17:         int currNode=s.top();
18:         s.pop();
19:         if(!visited[currNode]){
20:             visited[currNode]=true;
21:             if(visited[currNode])
22:                 cout<<currNode<<" ";
23:             #pragma omp critical for
24:             for(int i=0;i<graph[currNode].size();i++)
25:             {
26:                 int adjNode=graph[currNode][i];
27:                 if(!visited[adjNode])
28:                     s.push(adjNode);
29:             }
30:         }
31:     }
32: }
33:
34: int main()
35: {
36:     int n,m,startNode;
37:     cout<<"\nEnter the no of node: ";
38:     cin>>n;
39:     cout<<"\nEnter the no. of edges: ";
40:     cin>>m;
41:     cout<<"\nEnter the pair of edges: ";
42:     for(int i=0;i<m;i++)
43:     {
44:         int u,v;
45:         cin>>u>>v;
46:         graph[u].push_back(v);
47:         graph[v].push_back(u);
48:     }
49:     #pragma omp parallel for
50:     for(int i=0;i<n;i++)
51:     {
52:         visited[i]=false;
53:     }
54:     cout<<"\nEnter the start node: ";
55:     cin>>startNode;

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56:     dfs(startNode);  
57:     return 0;  
58:  
59: }
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