04/24/18 10:58:41 D:\git-repos\data-structure-homework\07\e20.cpp

```
 1  #include <cstdio>
 2  #include <cstring>
 3  #include <vector>
 4  #define MXN 107
 5  using namespace std;
 6  vector<int> v[MXN];
 7  bool tag[MXN];
 8  int n, m;
 9  int x;
10  bool dfs(int root, int dep, int target, int k) {
11      if (dep > k) return false;
12      if (target == root && dep == k) return true;
13      for (auto i : v[root]) {
14          if (!tag[i]) {
15              tag[i] = true;
16              if (dfs(i, dep + 1, target, k))
17                  return true;
18              tag[i] = false;
19          }
20      }
21      return false;
22  }
23  int main() {
24      scanf("%d %d", &n, &m);
25      for (int i = 0; i < m; ++i) {
26          int a, b;
27          scanf("%d %d", &a, &b);
28          v[a].push_back(b);
29          v[b].push_back(a);
30      }
31      int a, b, k;
32      while (~scanf("%d %d %d", &a, &b, &k)) {
33          memset(tag, 0, sizeof(tag));
34          tag[a] = true;
35          puts(dfs(a, 0, b, k) ? "YES" : "NO");
36      }
37  }
38  /**
39   root ▶ … ❯ git-repos ❯ data-structure-homework ❯ 07 ▶ g++ e20.cpp -std=c++11
40   root ▶ … ❯ git-repos ❯ data-structure-homework ❯ 07 ▶ ./a.out
41  7
42  11
43  5 6
44  5 7
45  7 6
46  6 2
47  7 4
48  2 4
49  2 3
50  4 1
51  1 2
52  3 1
53  4 3
54  1 4 5
55  YES
56  1 4 6
57  YES
58  1 4 7
59  NO
60  6 4 5
61  NO
62  6 4 3
63  YES
64  6 4 4
65  YES
66  ^Z
67  [1]  + 1112 suspended  ./a.out
68   root ▶ … ❯ git-repos ❯ data-structure-homework ❯ 07 ▶ 1 ▶    ◀ 148 ◀ ⑂ master
69  */
```