

Start here X dfsc.c X

```
1 #include<stdio.h>
2 #define MAX 20
3
4 int stack[MAX], top = -1;
5 int visited[MAX];
6
7 void push(int v){
8     stack[++top] = v;
9 }
10
11 int pop(){
12     if(top == -1) return -1;
13     return stack[top--];
14 }
15 void dfs_stack(int adj[MAX][MAX], int n, int start){
16     int i,v;
17     for(i = 0;i < n;i++){
18         visited[i] = 0;
19     }
20     push(start);
21     while( top != -1){
22         v= pop();
23
24         if(!visited[v]){
25             visited[v] = -1;
26             for(i = n-1;i >0;i--){
27                 if(adj[v][i] == 1 && !visited[i]){
28                     push(i);
29                 }
30             }
31         }
32     }
33 }
34
35 int main(){
36     int n, adj[MAX][MAX];
37     int i,j;
38
39     printf("Enter number of vertices: ");
40     scanf("%d", &n);
41     printf("Enter Adjacency matrix: \n");
42     for(i=0;i<n;i++)
43         for(j=0;j<n;j++)
44             scanf("%d", &adj[i][j]);
45
46     dfs_stack(adj,n,0);
47
48     int connected = 0;
49     for(i=0; i<n;i++){
50         if(!visited[i]){
51             connected = 0;
52             break;
53         }
54     }
55
56     if(connected)
57         printf("Graph is connected\n");
58     else
59         printf("Graph is not connected\n");
60
61 }
62 }
```

Logs & others

C/C++ Windows (CR+LF) WINDOWS-1252 Line 29, Col 21, Pos 511 Insert Read/Write default

SE-L4\Desktop\1bm24cs176\dfsc.c

11:34:49 08-12-2025 ENG IN

C:\Users\BMSCECSE-L4\Desktop

Enter number of vertices: 4

Enter Adjacency matrix:

1 0 0 1

0 1 1 0

1 1 0 0

0 0 1 1

Graph is not connected

Process returned 0 (0x0) execution time : 29.197 s

Press any key to continue.

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