

Explorer

GraphsD... Submit

```
1  #include<stdio.h>
2  #include<stdlib.h>
3  struct node {
4      struct node *next;
5      int vertex;
6  };
7  typedef struct node * GNODE;
8  GNODE graph[20];
9  int visited[20];
10 int n;
11
12 void DFS(int i)
13 {
14     GNODE p = graph[i];
15     printf("%d\n", i);
16     visited[i] = 1;
17
18     while(p != NULL)
19     {
20         i = p->vertex;
21         if(visited[i] != 1)
22         {
23             DFS(i);
24         }
25         p = p->next;
26     }
27
28 }
29
30 void main() {
31     int N, E, i, s, d;
32     GNODE q, p;
33     printf("Enter the number of vertices : ");
34     scanf("%d", &N);
35     printf("Enter the number of edges : ");
36     scanf("%d", &E);
37     for(i=1; i<=E; i++) {
38         printf("Enter source : ");
39         scanf("%d", &s);
40
41         printf("Enter destination : ");
42         scanf("%d", &d);
43         q = (GNODE) malloc(sizeof(struct node));
44     }
```

Debugger

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```
45     ....    q->next=NULL;
46     ....    if(graph[s]==NULL)
47 v     ....    graph[s]=q;
48     ....    else{
49     ....    p=graph[s];
50     ....    while(p->next!=NULL)
51     ....    p=p->next;
52     ....    p->next=q;
53     ....    }
54     }
55     ....for(i=0;i<n;i++)
56     ....visited[i]=0;
57     printf("Enter Start Vertex for DFS : ");
58     int start;
59     scanf("%d",&start);
60     ....printf("DFS of graph : \n");
61     ....DFS(start);
62 }
63
64
65
66
67
```



Terminal



Test cases