#include <stdio.h>

#include <stdlib.h>

int sourceV,Vertex,Edge,time,visited[10],Graph[10][10];

void DepthFirstSearch(int i)

{

int j;

visited[i]=1;

printf(" %d->",i++);

for(j=0;j<Vertex;j++)

{

if(Graph[i][j]==1&&visited[j]==0)

DepthFirstSearch(j);

}

}

int main()

{

int i,j,vertex1,vertex2;

printf("\t\t\tGraphs\n");

printf("Enter no. of edges:");

scanf("%d",&Edge);

printf("Enter no. of vertices:");

scanf("%d",&Vertex);

for(i=0;i<Vertex;i++)

{

for(j=0;j<Vertex;j++)

Graph[i][j]=0;

}

for(i=0;i<Edge;i++)

{

printf("Enter the edges in V1 V2 : ");

scanf("%d%d",&vertex1,&vertex2);

Graph[vertex1-1][vertex2-1]=1;

}

for(i=0;i<Vertex;i++)

{

for(j=0;j<Vertex;j++)

printf(" %d ",Graph[i][j]);

printf("\n");

}

printf("Enter source Vertex: ");

scanf("%d",&sourceV);

DepthFirstSearch(sourceV-1);

return 0;

}

