DEPTH FIRST SEARCH:

#include <stdio.h>

#include <stdlib.h>

int source,V,E,time,visited[20],G[20][20];

void DFS(int i)

{

int j;

visited[i]=1;

printf(" %d->",i+1);

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

{

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

DFS(j);

}

}

int main()

{

int i,j,v1,v2;

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

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

scanf("%d",&E);

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

scanf("%d",&V);

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

{

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

G[i][j]=0;

}

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

{

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

scanf("%d%d",&v1,&v2);

G[v1-1][v2-1]=1;

}

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

{

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

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

printf("\n");

}

printf("Enter the source: ");

scanf("%d",&source);

DFS(source-1);

return 0;

}

OUTPUT:

