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//22.depth first search

#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 : ");
    }
}

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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;

```

Graphs

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Enter no. of edges:2
Enter no. of vertices:2
Enter the edges in V1 V2 : 2
2
Enter the edges in V1 V2 : 2
2
0 0
0 1
Enter source Vertex: |
}

```