Experiment 7

```c
#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 number of edges:");
    scanf("%d",&e);
    printf("Enter the number 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 in 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("\t%d",g[i][j]);
        printf("\n");
    }
    printf("Enter the source:");
    scanf("%d",&source);
        DFS(source-1);
    return 0;
}
```

```
itl4@22DL407:~$ gedit yug.c
itl4@22DL407:~$ gcc yug.c
itl4@22DL407:~$ ./a.out
                        Graphs
Enter the number of edges:5
Enter the number of vertices:8
Enter the edges in format:(v1,v2)=4 3
Enter the edges in format:(v1,v2)=7 5
Enter the edges in format:(v1,v2)=6 8
Enter the edges in format:(v1,v2)=2 1
Enter the edges in format:(v1,v2)=0 2
        0       0       0       0       0       0       0       0
        1       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       0
        0       0       1       0       0       0       0       0
        0       0       0       0       0       0       0       0
        0       0       0       0       0       0       0       1
        0       0       0       0       1       0       0       0
        0       0       0       0       0       0       0       0
Enter the source:4
4 ->3 ->itl4@22DL407:~$
```