

Depth First Search

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#include<stdio.h>
#include<conio.h>
int adj[20][20],visited[20],n;
void dfs(int v)
{
    int i;
    visited[v]=1;
    for (i=1;i<=n;i++)
        if(adj[v][i] && !visited[i])
        {
            printf("\n %d->%d",v,i);
            dfs(i);
        }
}
void main()
{
    int i,j;
    clrscr();
    printf("\n Enter number of vertices:");
    scanf("%d",&n);
    for (i=1;i<=n;i++)
    {
        visited[i]=0;
        for (j=1;j<=n;j++)
            adj[i][j]=0;
    }
    printf("\n Enter the adjacency matrix:\n");
    for (i=1;i<=n;i++)
        for (j=1;j<=n;j++)
            scanf("%d",&adj[i][j]);
    dfs(1);
    getch();
}
```