```c
#include <stdio.h>
#include <stdlib.h>
int a[20][20],q[20],visited[20],reach[10],n,i,j,f=0,r= -1,count=0;

void dfs(int v)
{
int i;
 reach[v]=1;
for(i=1;i<=n;i++)
 {
 if(a[v][i] && !reach[i])
 {
 printf("\n %d->%d",v,i);
 count++;
 dfs(i);
 }
 }




}
void main()
{
int v, choice;
 printf("\n Enter the number of vertices:");
 scanf("%d",&n);
for(i=1;i<=n;i++)
 {
 q[i]=0;
 visited[i]=0;
 }
for(i=1;i<=n-1;i++)
 reach[i]=0;
printf("\n Enter graph data in matrix form:\n");
for(i=1;i<=n;i++)
 for(j=1;j<=n;j++)
 scanf("%d",&a[i][j]);
 printf("-------DFS------");

 printf("\n Enter the starting vertex:");
 scanf("%d",&v);

 dfs(1);
 if(count==n-1)
 printf("\n Graph is connected");
 else
 printf("\n Graph is not connected");

 }
```