```
/******************************************************************************

                              Online C Compiler.
                Code, Compile, Run and Debug C program onlin
Write your code in this editor and press "Run" button to com

*******************************************************************************/
#include<stdio.h>
#include<conio.h>
int a[20][20],reach[20],n;
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);
        dfs(i);
        }
}
int main(){
    int i,j,count=0;
    printf("\n Enter number of vertices:");
    scanf("%d",&n);
    for(i=1;i<=n;i++){
        reach[i]=0;
        for(j=1;j<=n;j++)
            a[i][j]=0;
    }
    printf("\n Enter the adjacency matrix:\n");
    for(i=1;i<=n;i++)
        for(j=1;j<=n;j++)
            scanf("%d",&a[i][j]);
        dfs(1);
        printf("\n");
        for(i=1;i<=n;i++){
            if(reach[i])
                count++;
        }
```

```c
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#include<conio.h>
int a[20][20],reach[20],n;
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);
        dfs(i);
        }
}
int main(){
    int i,j,count=0;
    printf("\n Enter number of vertices:");
    scanf("%d",&n);
    for(i=1;i<=n;i++){
        reach[i]=0;
        for(j=1;j<=n;j++)
            a[i][j]=0;
    }
    printf("\n Enter the adjacency matrix:\n");
    for(i=1;i<=n;i++)
        for(j=1;j<=n;j++)
            scanf("%d",&a[i][j]);
        dfs(1);
        printf("\n");
        for(i=1;i<=n;i++){
            if(reach[i])
                count++;
        }
        if(count==n)
            printf("\n Graph is connected");
        else
            printf("\n Graph is not connected");
        getch();
    return 0;
}
```

```
Enter number of vertices:4

Enter the adjacency matrix:
1 1 1 0
0 1 1 1
1 0 1 1
1 1 1 1

1->2
2->3
3->4

Graph is connected

...Program finished with exit code 0
Press ENTER to exit console.
```