```
#include <iostream>
#include <cstdlib>
using namespace std;

const int MAX = 100;


void DepthFirstSearch(int currentVertex, int v[MAX], int g[MAX]
[MAX], int n)
{

    int i;

    v[currentVertex] = 1;

    for (i=0; i<n; i++)
        if (g[currentVertex][i] && !v[i])
            DepthFirstSearch(i,v,g,n);
}

int main()
{

    int i,j,k;
    int visited[MAX];
    int graph[MAX][MAX];
    int numVert;

    cout << "Enter the number of vertices : ";
    cin >> numVert;

    for (i=0; i<numVert; i++)
        visited[i] = 0;

    cout << "Enter the adjacency matrix :\n";

    for (i=0; i<numVert; i++)
        for (j=0; j<numVert; j++)
            cin >> graph[i][j];

    for (i=0; i<numVert; i++)
    {
        for (k=0; k<numVert; k++)
            visited[k] = 0;

        DepthFirstSearch(i,visited,graph,numVert);

        for (k=0; k<numVert; k++)
        {
            if (!visited[k])
            {
            cout << "\nGraph is not connected since there is no path
between " << i << " and " << k << endl;
```

```
            exit(0);
            }
        }
    }

    cout << "\nGraph is connected."<< endl;
    return 0;
}
```

OUTPUTS

```
Enter the number of vertices : 4

Enter the adjacency matrix :

0 1 0 0

0 0 1 0

0 0 0 1

1 0 0 0

Graph is connected.
```