

Question:

Write a program to check whether given graph is connected or not using DFS method.

Input:

```
#include <stdio.h>
```

```
int n;  
int graph[10][10];  
int visited[10];
```

```
void dfs(int v) {  
    int i;  
    visited[v] = 1;  
  
    for (i = 0; i < n; i++) {  
        if (graph[v][i] == 1 && visited[i] == 0) {  
            dfs(i);  
        }  
    }  
}
```

```
int main() {  
    int i, j;  
  
    printf("Enter number of vertices: ");  
    scanf("%d", &n);  
  
    printf("Enter adjacency matrix:\n");  
    for (i = 0; i < n; i++)  
        for (j = 0; j < n; j++)  
            scanf("%d", &graph[i][j]);  
  
    for (i = 0; i < n; i++)  
        visited[i] = 0;  
  
    dfs(0); // Start DFS from vertex 0  
  
    for (i = 0; i < n; i++) {  
        if (visited[i] == 0) {  
            printf("Graph is NOT Connected\n");  
            return 0;  
        }  
    }  
}
```

```
    }  
}  
  
    printf("Graph is Connected\n");  
    return 0;  
}
```

Output:

```
Enter number of vertices: 3  
Enter adjacency matrix:  
0 1 1  
1 0 0  
1 1 0  
Graph is Connected
```