

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