LAB PROGRAM 9b

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

```
#include <stdio.h>

int n;
int adj[10][10];
int visited[10];

void dfs(int v) {
   int i;
   visited[v] = 1;

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

int main() {
   int i, j, start = 0, flag = 1;

   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", &adj[i][j]);

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

    dfs(start);

    for (i = 0; i < n; i++) {
        if (visited[i] == 0) {
            flag = 0;
            break;
        }
    }

    if (flag == 1)
        printf("Graph is Connected\n");
    else
        printf("Graph is Not Connected\n");

    return 0;
}
```

OUTPUT:

```
C:\Users\nandi\CLionProjects\untitled5\cmake-build-debug\
Enter number of vertices:3

Enter adjacency matrix:
1 1 0

1 0 0

0 1 0

Graph is Not Connected

Process finished with exit code 0
```