Graph Traversal

Experiment 22

Sample code:

```
#include <stdio.h>
#define MAX 10
int graph[MAX][MAX], visited[MAX];
int n;
void DFS(int vertex) {
   visited[vertex] = 1;
   printf("%d ", vertex);
   for (int i = 0; i < n; i++) {
      if (graph[vertex][i] && !visited[i])
         DFS(i);
   }
}
int main() {
   int edges, u, v, start;
   printf("Enter number of vertices: ");
   scanf("%d", &n);
   printf("Enter number of edges: ");
   scanf("%d", &edges);
   for (int i = 0; i < n; i++)
      for (int j = 0; j < n; j++)
         graph[i][j] = 0;

   printf("Enter edges (u v):\n");
   for (int i = 0; i < edges; i++) {
      scanf("%d %d", &u, &v);
```

```
        graph[u][v] = 1;
        graph[v][u] = 1; // Remove this line for directed graph
    }

    printf("Enter starting vertex: ");
    scanf("%d", &start);

    printf("DFS traversal: ");
    DFS(start);
    printf("\n");

    return 0;
}
```