# DATA STRUCTURES

# ASSIGNMENT 4

NAME: SUGANDHI SAGGU

TCD ID: 21355223

## Task 1:

```
DFS: A  B  C  D  F  E
BFS  A  B  D  E  C  F
--------------------------------
Process exited after 16.63 seconds with return value 1
Press any key to continue . . .
```

Student STDOUT.txt
```
1  DFS: A  B  C  D  F  E
2  BFS  A  B  D  E  C  F
```

Expected STDOUT.txt
```
1  DFS: A  B  C  D  F  E
2  BFS  A  B  D  E  C  F
3
```

## Task 2:

```
A B C G E D F
The length of the shortest path between A and A is 0
The length of the shortest path between A and B is 1
The length of the shortest path between A and C is 2
The length of the shortest path between A and D is 7
The length of the shortest path between A and E is 5
The length of the shortest path between A and F is 7
The length of the shortest path between A and G is 3
--------------------------------
Process exited after 15.23 seconds with return value 1
Press any key to continue . . .
```

Student STDOUT.txt
```
1  A B C G E D F
2  The length of the shortest path between A and A is 0
3  The length of the shortest path between A and B is 1
4  The length of the shortest path between A and C is 2
5  The length of the shortest path between A and D is 7
6  The length of the shortest path between A and E is 5
7  The length of the shortest path between A and F is 7
8  The length of the shortest path between A and G is 3
```

Expected STDOUT.txt
```
1  A B C G E D F
2  The length of the shortest path between A and A is 0
3  The length of the shortest path between A and B is 1
4  The length of the shortest path between A and C is 2
5  The length of the shortest path between A and D is 7
6  The length of the shortest path between A and E is 5
7  The length of the shortest path between A and F is 7
8  The length of the shortest path between A and G is 3
9
```

Task 3:

In this task, we load values from "edges.csv" and applying dijkstra algorithim from task 2 to adjacency matrix and then again loading values from "vertices.csv" and printing the path.