CSE222

HW8 Report

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Q1

**Class Diagram:**

**No Class Diagram (no code written)**

**Problem Solution approach:**

For this question the given graphs were represented as a adjacency list and adjacency matrix then the number of vertices and edges and the density of each graph were calculated and explained the best way to represent each graph then breadth first search and depth first search algorithms were performed on each graph.

**Test Cases:**

**No code written**

**Running commands and results:**

**No code written**

**Q3**

**Class Diagram:**

**A screenshot of a cell phone

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**Problem Solution approach:**

In this question a maze was provided as a file consists of 0s and 1s. 0s being empty space and 1s being a wall and the task was to convert the file content to a graph and use an algorithm to find the exit

The file was successfully converted to a List graph and the vertices were conjunction points in the maze then the vertices were connected by edges and then depth first algorithm was used to find the exit.

**Test Cases:**

Search function uses DFS to find the exit and prints the order of traversal in case the exit was found

DrawMaze function draws the maze and marks the vertices

getEdges function prints all vertices and their neighbors

A close up of a logo

Description automatically generated**Running command and results:**

**A close up of a keyboard

Description automatically generatedA close up of a black keyboard

Description automatically generated**