Fall 2022=3 – CS 201 Data Structures and Algorithms Homework-4

Maximum points: 200. Individual Work Only.

Due Date: November 16, before 11:59pm (late submissions will get a score of zero)

Objective

Implement Breadth-First Search and Depth-First Search using a Graph data structure

Problem Description

Complete the implementation of the Breadth-First Search (BFS) and Depth-First Search (DFS) functions in the given Graph class. Please follow the algorithm from the textbook (Cormen et. al.). You don't have to make any changes to the rest of the Graph class. Test the program with the two input files provided in Blackboard.

Program Documentation and Testing

- 1. Use appropriate variables names and indentation in your source code.
- 2. Include meaningful comments to indicate various operations performed by the program.
- 3. Programs must include the following header information within comments:

```
/*
Name:
Email:
Course Section: Fall 2023 CS 201
Homework #:
To Compile: <include instructions to compile here>
To Run: <include instructions to run the program here>
*/
```

Submission

Upload only the source files (.h or .hpp or .cpp or .cc files) to Blackboard in the assignment submission section for this homework. Do not upload zip/tar files to Blackboard, upload individual source files (no object files or executables).

Grading Rubrics

The following rubrics is used for grading:

Description	Points
Correct implementation of BFS	100
2. Correct implementation of DFS	100