CS2023 - Data Structures and Algorithms Take Home Assignment

Week 9 - Graphs

Note: You are required to answer the below questions and submit a PDF to the submission link provided under this week before the deadline (no extensions will be provided). You can either write / type your answers, but either way your answers should be readable.

Questions

1. Represent the graph given below (Fig.1) as Adjacency Matrix, Adajacency List and COO format (read about COO format and attempt)
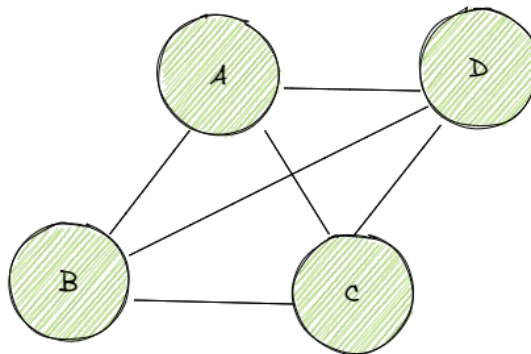

Figure 1: Graph for Question 1

2. By observing the answers in Question 1, which representation is the best choice? and provide why you chose this.
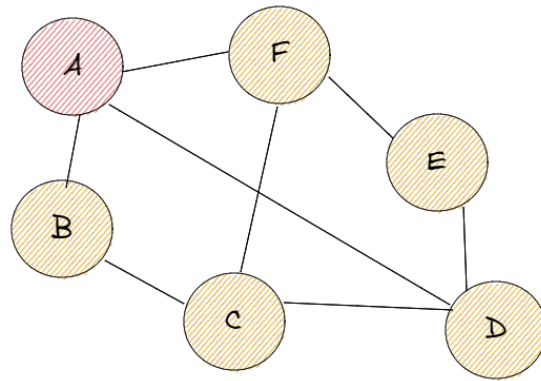
3. Write a pseudo code for BFS.

Figure 2: Graph for Question 4

4. What will be the BFS and DFS output for graph (Fig.2) taking "A" as the start node?