HABIB UNIVERSITY

Data Structures & Algorithms

CS/CE 102/171 Spring 2023

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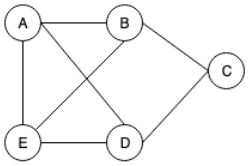
Graph Representations

Student 1: _____

For all the unweighted graphs, assume 0 to represent its weight, where required. For adjacency matrix, use alphabetical or numerical (ascending) order to define the matrix and in turn its nested list

1. For the given **<u>undirected</u>** and **<u>unweighted</u>** graph, define the Graph using all the different types of structures used to represent them:



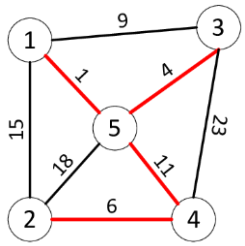
a. Edge List:

b. Adjacency List (Use Dictionary):

c. Adjacency Map (Use Dictionary):

d. Adjacency Matrix (Use Nested Lists):

2. For the given **<u>undirected</u>** and **<u>weighted</u>** graph, define the Graph using all the different types of structures used to represent them:



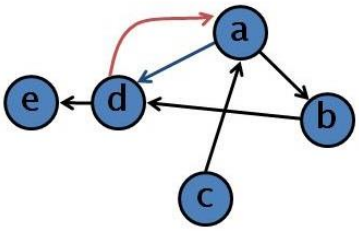
a. Edge List:

b. Adjacency List (Use Dictionary):

c. Adjacency Map (Use Dictionary):

d. Adjacency Matrix (Use Nested Lists):

3. For the given **<u>directed</u>** and **<u>unweighted</u>** graph, define the Graph using all the different types of structures used to represent them:



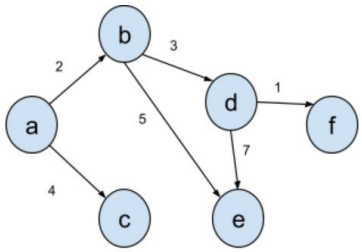
a. Edge List:

b. Adjacency List (Use Dictionary):

c. Adjacency Map (Use Dictionary):

d. Adjacency Matrix (Use Nested Lists):

4. For the given **<u>directed</u>** and **<u>weighted</u>** graph, define the Graph using all the different types of structures used to represent them:



a. Edge List:

b. Adjacency List (Use Dictionary):

c. Adjacency Map (Use Dictionary):

d. Adjacency Matrix (Use Nested Lists):