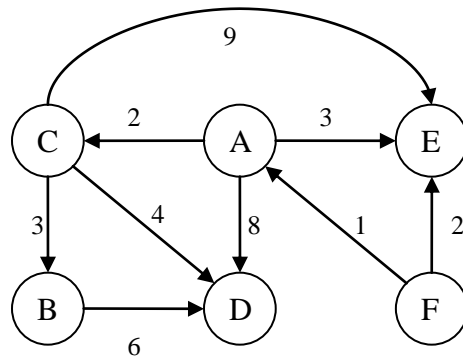


Dijkstra's Exercise

Graphs

Use the following graph to answer the questions below.



1. Give a possible order in which the nodes of this graph could be visited in performing a **Breadth First Search (BFS)** starting at the vertices below. Pick nodes to visit using alphabetical order (when multiple choices are possible).

BFS Starting at A:

BFS Starting at B:

BFS Starting at C:

BFS Starting at D:

BFS Starting at E

2. Give a possible order in which the nodes of this graph could be visited in performing a **Depth First Search (DFS)** starting at the vertices below. Pick nodes to visit using alphabetical order (when multiple choices are possible).

DFS Starting at A:

DFS Starting at B:

DFS Starting at C:

DFS Starting at D:

DFS Starting at E

3. Apply Dijkstra's algorithm three times using **F**, **A**, and **D** as the start (source) node. Indicate the cost and predecessor for each node in the graph after processing each node. Complete a set of tables indicating the cost and predecessor as each node is processed (similar to the tables you see below).

After processing first node:

Node	A	B	C	D	E	F
Cost						
Predecessor						

After processing second node:

Node	A	B	C	D	E	F
Cost						
Predecessor						