Homework 6
EE/TE 4367: Telecommunications Networks

NOTE: Please, complete the following table and keep record of your assignment number.

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**Exercise 1.** Consider the graph shown in Fig. 1. Using a graphical or matrix based representation of every intermediate iteration, find the shortest path from any node to node 4 by applying:

A) the Dijkstra algorithm [pt. 15].

![Figure 1: Undirected Graph with 6 nodes and 9 undirected edges.](image1)

**Exercise 2.** Consider the graph shown in Fig. 2. Using a graphical or matrix based representation of every intermediate iteration, find the shortest path from any node to node 1 by applying:

A) the Dijkstra algorithm [pt. 15].

![Figure 2: Undirected Graph with six vertices and nine undirected edges.](image2)

**Exercise 3.** Consider the graph shown in Fig. 3. Using a graphical or matrix based representation of every intermediate iteration, find the shortest path from any node to node 1 by applying:
Figure 3: Undirected Graph with six vertices and eleven undirected edges.

A) the Dijkstra algorithm [pt. 15].