

ITCT 241: Computational Problem Solving	Name: Teerathand U.	Lab Score
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Lab09: Warshall Algorithm

In this lab, you will learn how to use the Warshall algorithm to update an adjacency matrix, determining the transitive closure of a graph. The transitive closure shows all possible paths between nodes in a directed graph.

Task Instruction:

Below is the initial adjacency matrix representing a graph with nodes A, B, C, D, E, and F. Each cell (i, j) in the matrix represents whether there is a direct path from node i to node j . (1 for a direct path, 0 for no direct path). For example: $(A, B) = 1$ means node A can reach node B directly and node B can also reach node A.

1. Update the following **adjacency matrix**:



	A	B	C	D	E	F
A		1	0	1	0	0
B	0		0	1	0	0
C	1	1		1	1	1
D	0	0	0		0	0
E	0	1	0	1		1
F	0	0	0	0	0	

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2. Draw the Graph (after update).

