Engineering Mathematics III

Discrete Mathematics

Lecture 4

Transitive Closure & Warshall's Algorithm

This course is taught to Computer Science Engineering students in SMIT, India during Jun-Dec, 2019.

Stephen Warshall

an American computer scientist

He and a colleague at Technical Operations bet a bottle of rum on who first could determine whether this algorithm always works.

Problem

Using Warshall's algorithm, find the transitive closure of the relation

$$\mathcal{R} = \{(1, 2), (2, 1), (2, 3), (3, 4)\}$$
$$\text{on the set } A = \{1, 2, 3, 4\}.$$

Questions?

Thank you