Usman Institute of Technology
عثمان انسٹیٹیوٹ آف ٹیکنالوجی

CS-322 DESIGN AND ANALYSIS OF ALOGORITHM

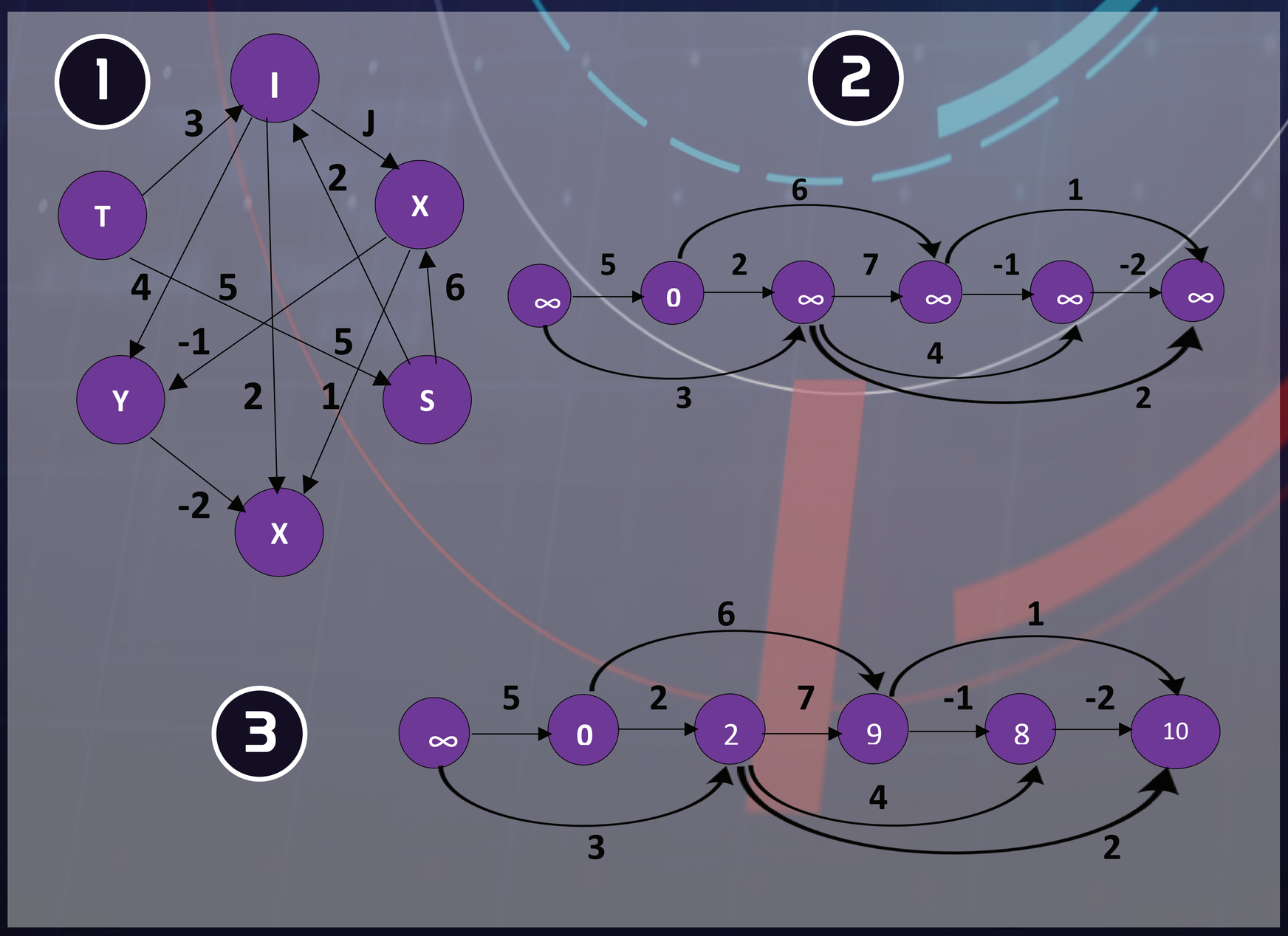
Instructor: Muhammad Qasim Pasta

LONGEST PATH PROBLEM

In graph theory and theoretical computer science, the longest path problem is the problem of finding a simple path of maximum length in a given graph.

ALGORITHM TO FIND LONGEST PATH:

STEP 1: Input vertices of the graph and their edges weight
STEP 2: Initialize the distance of all vertices (inif) excluding the source distance is zero.
STEP 3: Find a topological order of all vertices.
STEP 4: Repeat for every vertex of Graph in topological order.
STEP 5: Repeat for every adjacent vertex s of t
STEP 6: if distance of vertex t is less then from distance of vertex 's' + weight from 's' to 't' then Update the distance of vertex 't' with the distance of vertex 's' + weight from vertex 's' to 't'.



GROUP MEMBERS

Mohib Ahmed 15B-001-BS
Arsalan Akhter 15B-009-BS
Aashir Shahid 15B-068-BS