Lecture 10

CSE 331

Implementation Steps

(0) How to represent the input?

(1) How do we find a free woman w?

(2) How would w pick her best unproposed man m?

(3) How do we know who m is engaged to?

(4) How do we decide if m prefers w’ to w?

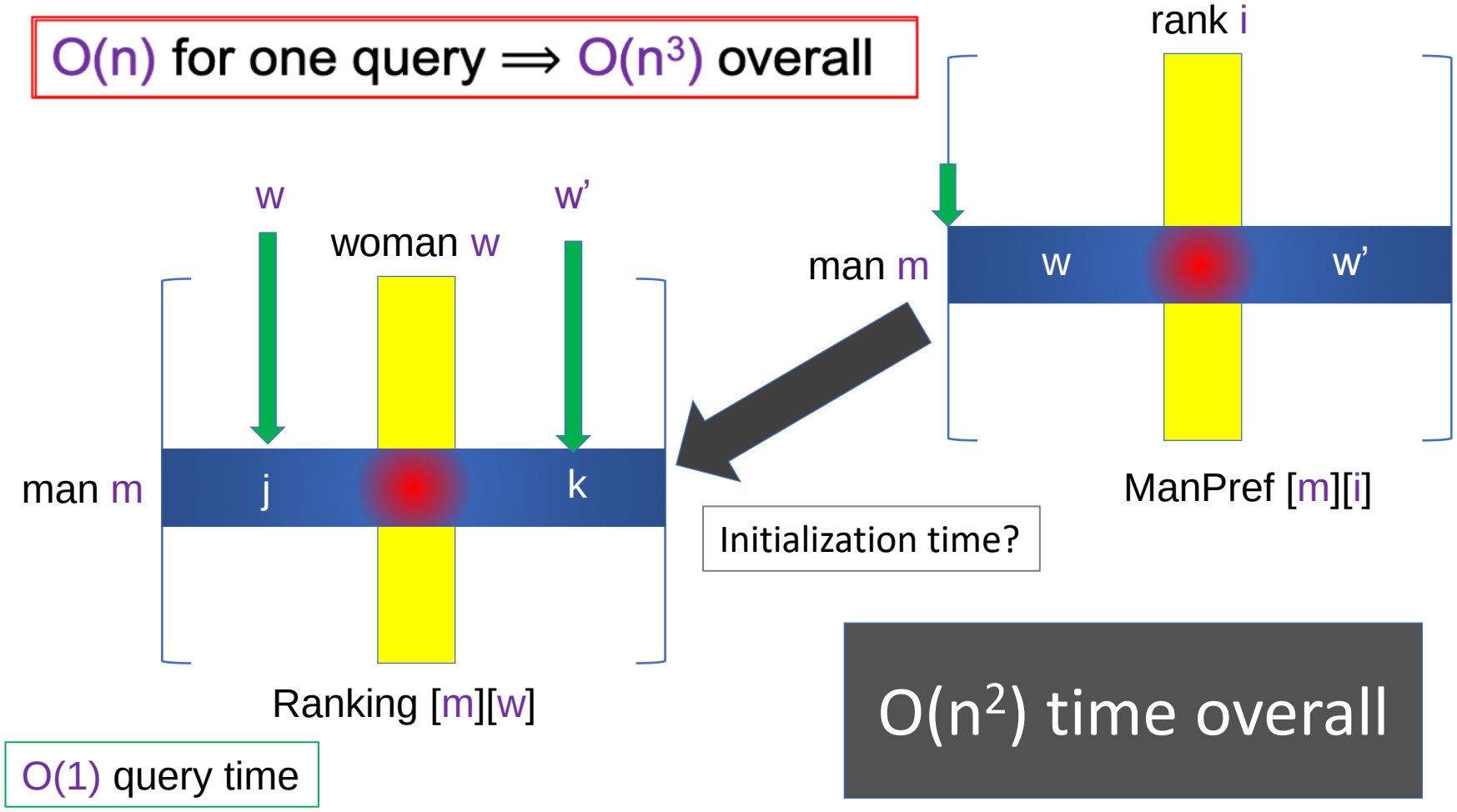
Overall running time

Init(1-4)

n^2 X (Query/Update(1-4))

Back to Board

Answering Q4

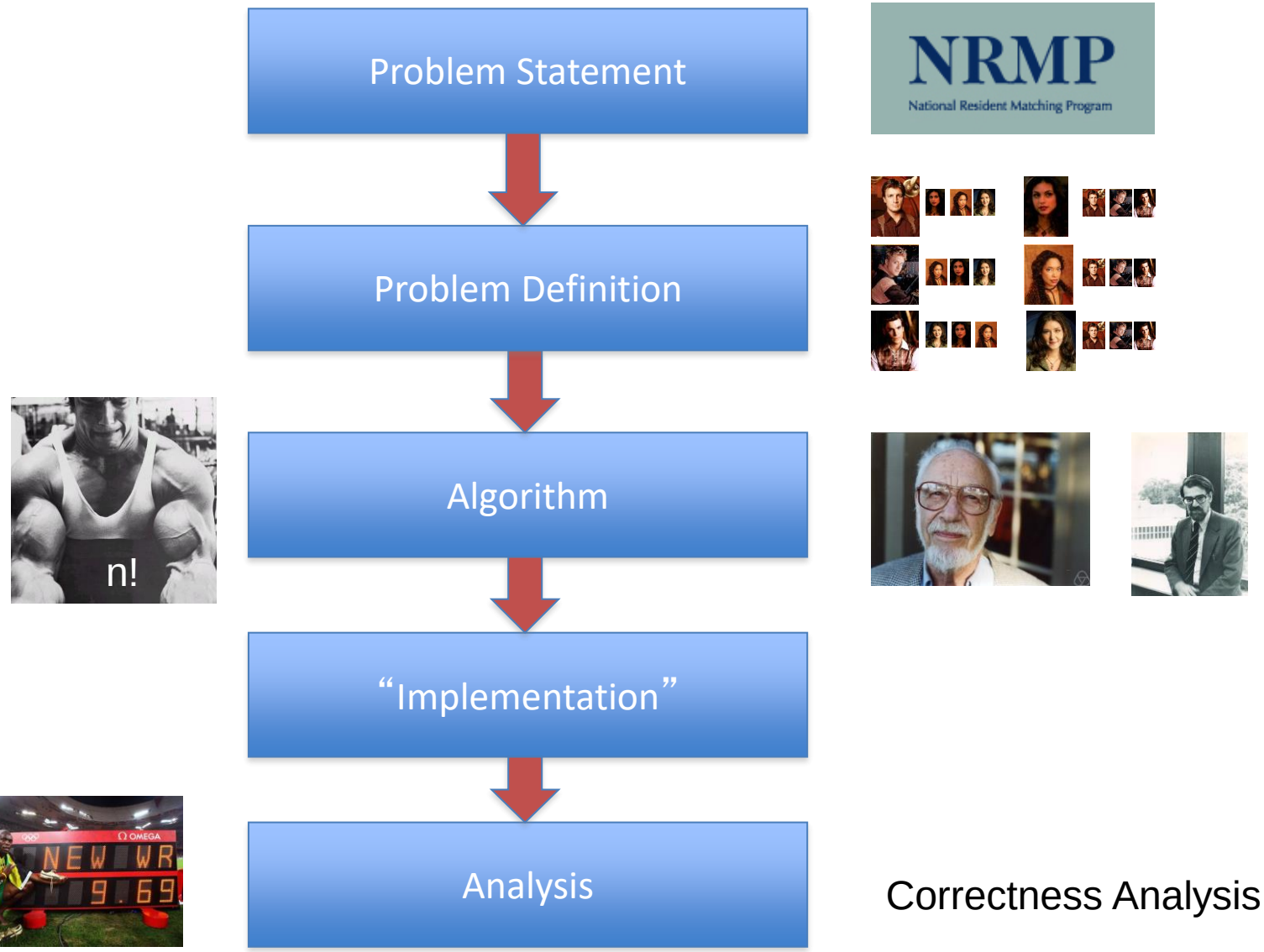


(4) How do we decide if m prefers w' to w?

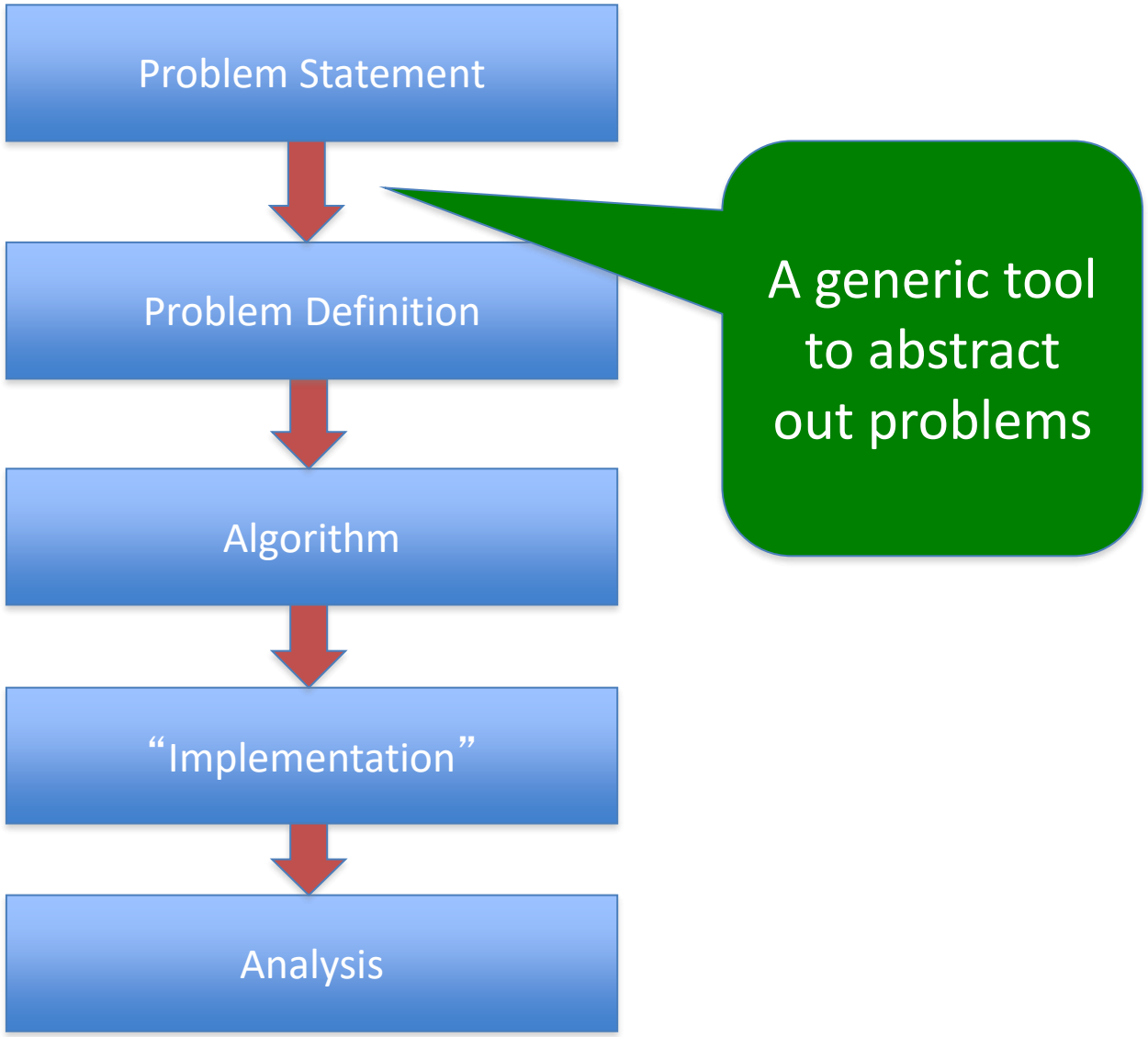
Reading Assignments

Sec 1.1 and Chap. 2 in [KT]

Main Steps in Algorithm Design

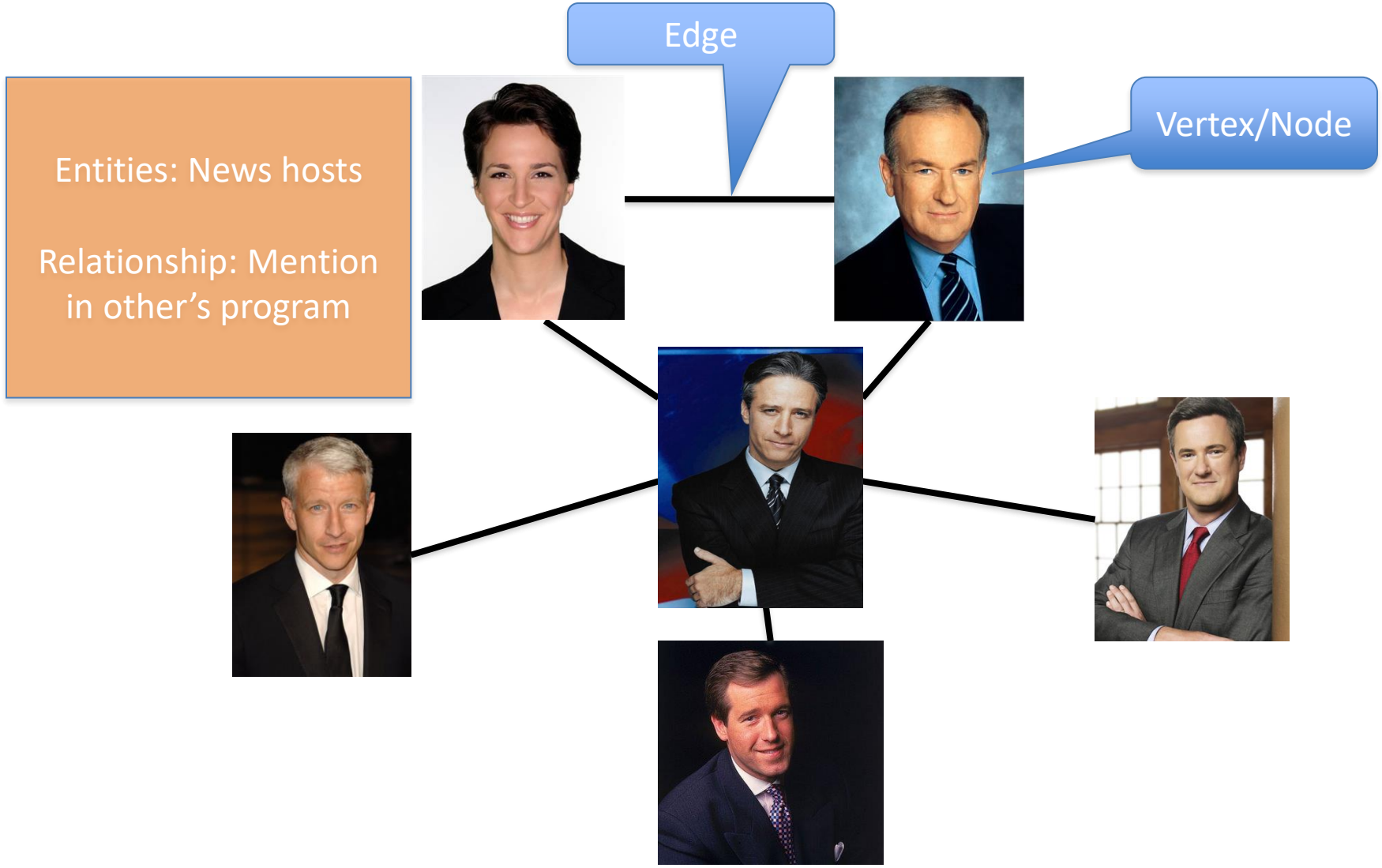


Up Next….


Problem Statement
Problem Definition
Algorithm
“Implementation”
Analysis
A generic tool to abstract out problems

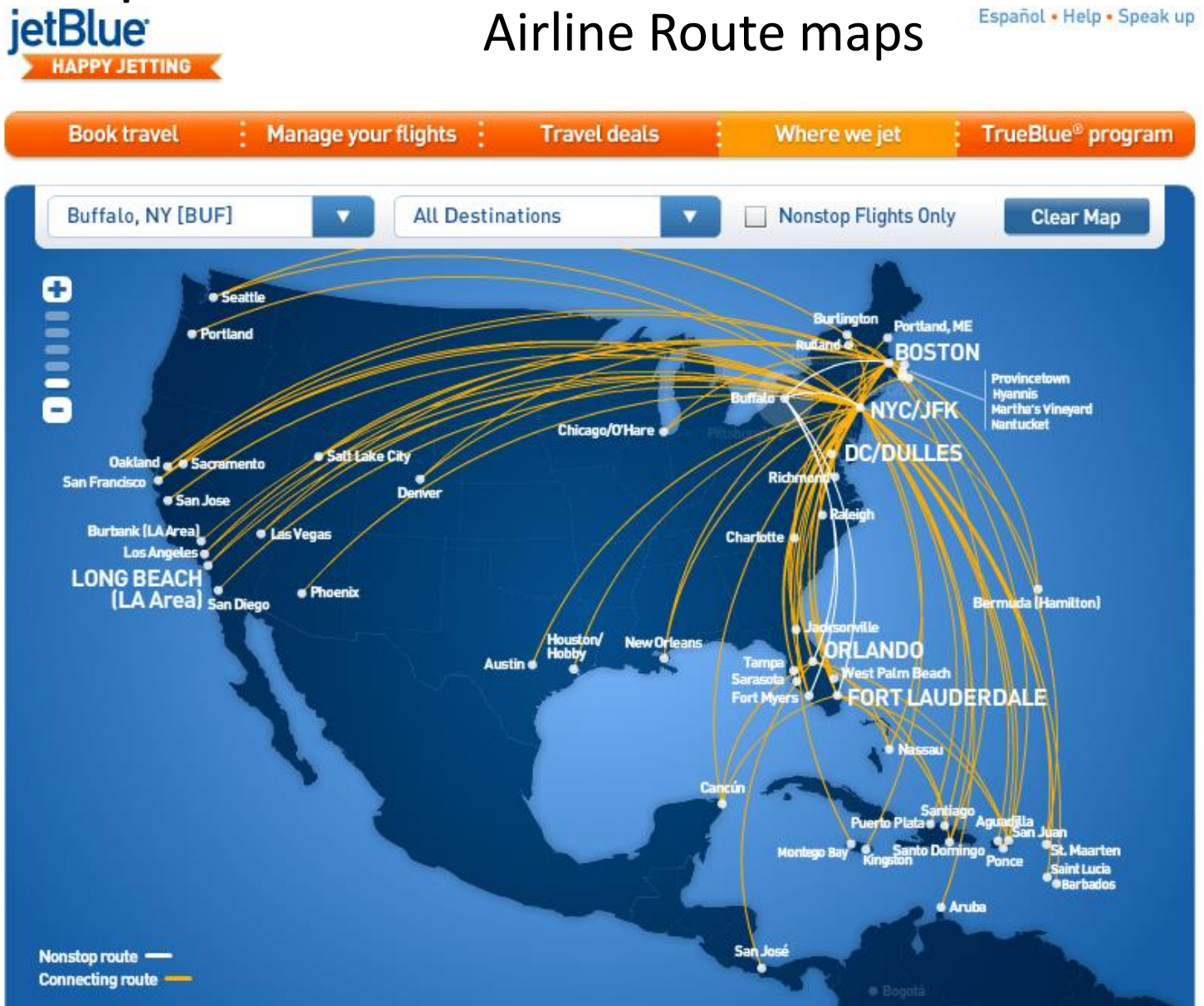
Graphs

Representation of relationships between pairs of entities/elements

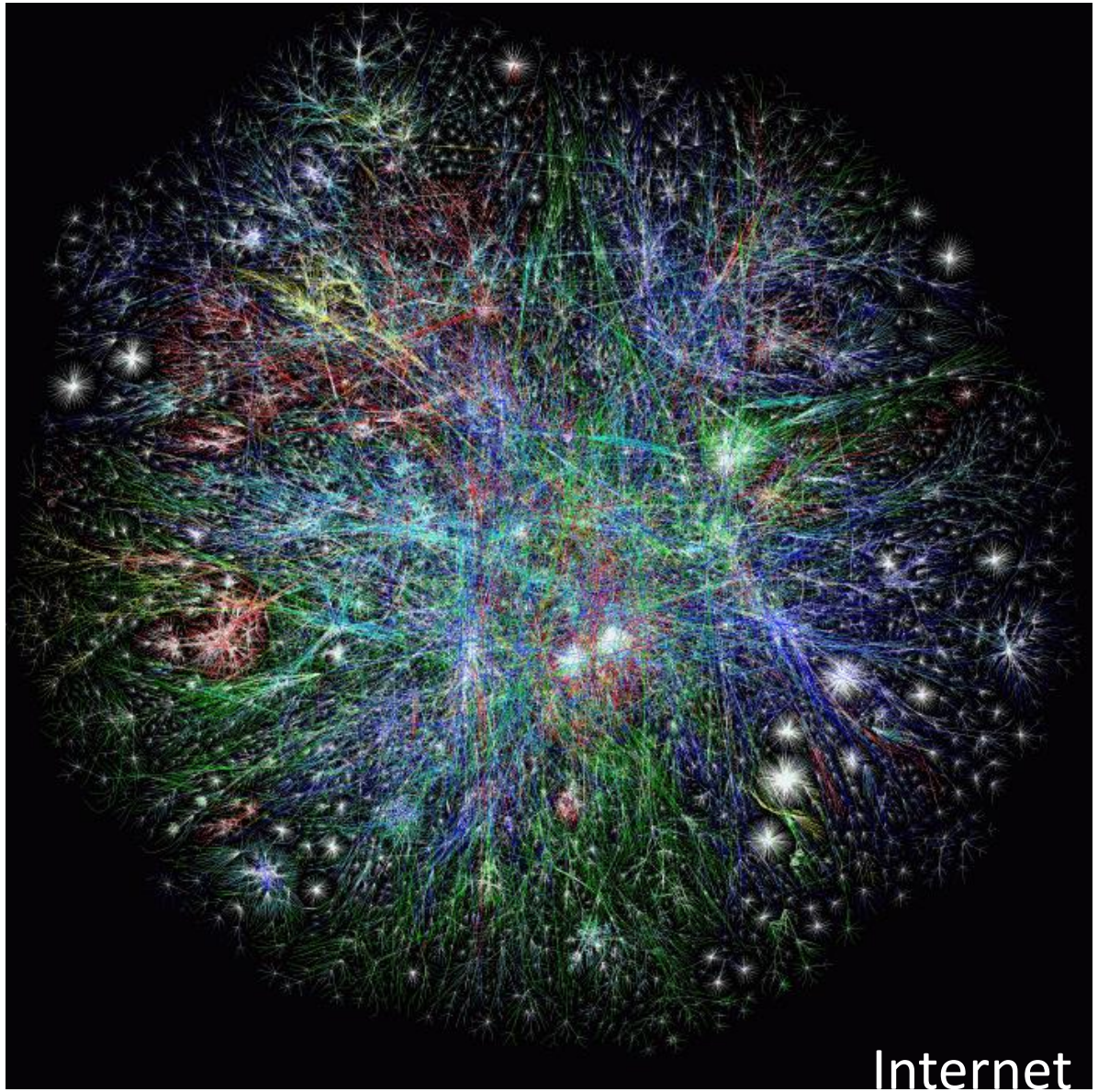


Graphs are omnipresent

Airline Route maps

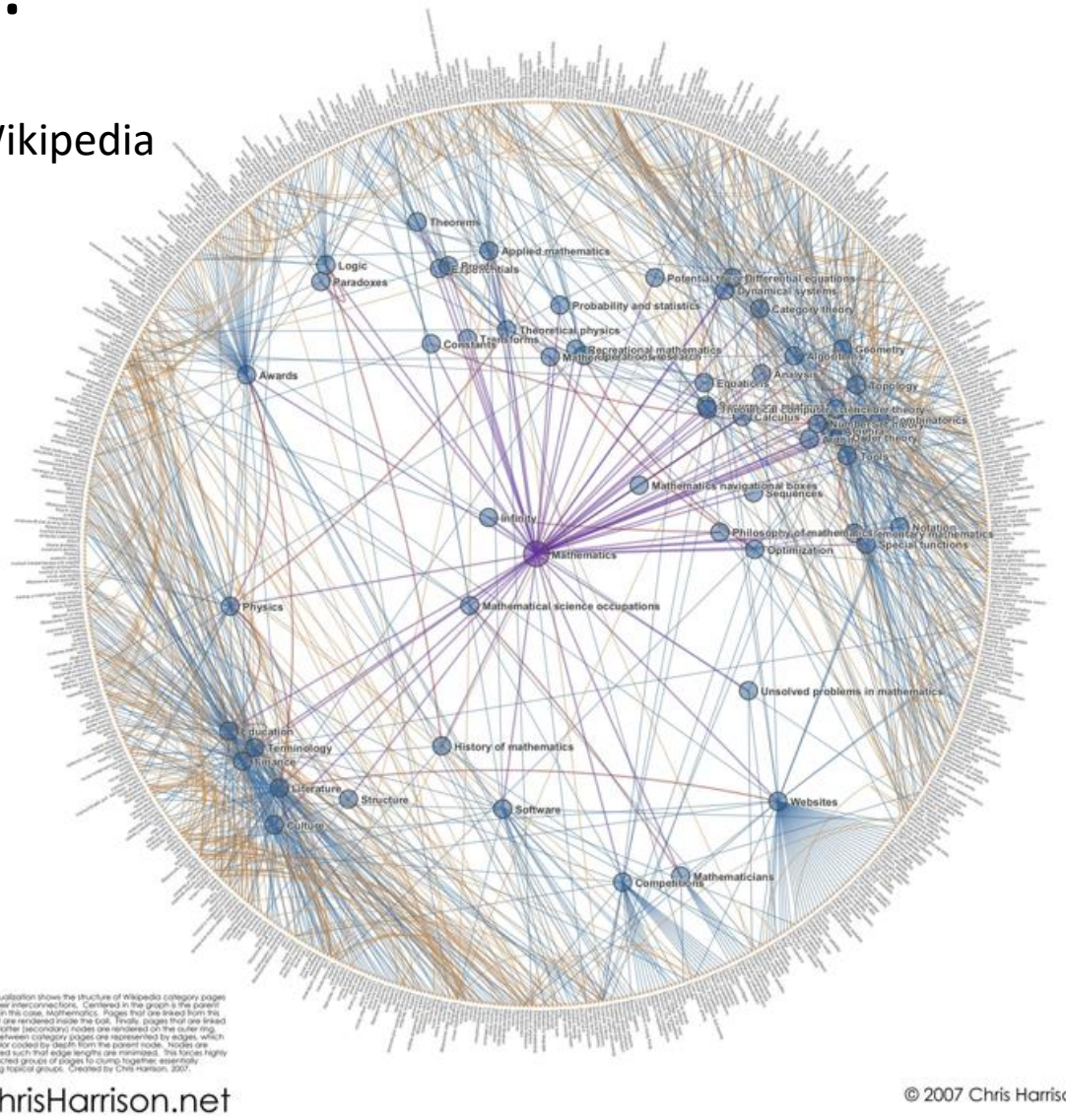


What does this graph represent?



And this one?

Math articles on Wikipedia



And this one?

Buildings on North Campus connected by tunnels