### csce750 — Analysis of Algorithms Fall 2020 — Lecture Notes: Elementary graph algorithms

This document contains slides from the lecture, formatted to be suitable for printing or individual reading, and with some supplemental explanations added. It is intended as a supplement to, rather than a replacement for, the lectures themselves — you should not expect the notes to be self-contained or complete on their own.

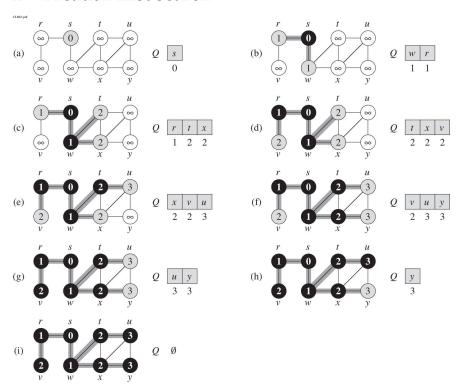
#### 1 Graphs

CLRS 22

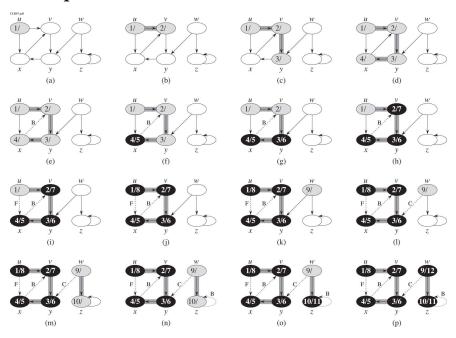
Chapter 22 covers graph representations (adjacency matrices, adjacency lists) and some basic graph algorithms (breadth-first search, depth-first search, topological sorting, connected components).

This material is important, but because you should have seen it before, we will only review it very quickly.

#### 2 Breadth-first search



# 3 Depth-first search



## 4 Topological sorting

