

CS 6515: Homework 3

Due on Sunday, September 17, 11:59pm via Gradescope.
Late submission with 10% penalty until Monday, September 18, 11:59pm.

Professor Brito

Instructions.

For the graded problems, when asked to design an algorithm you must describe it in plain English. Do not use pseudocode! Always address the runtime of your design. You should aim for the fastest (in big- O notation).

Suggested reading.

From Algorithms by Dasgupta, Papadimitriou, and Vazirani, chapter 7.2 covers flows in networks.

Problem 1

(Max flow using the bottleneck path)

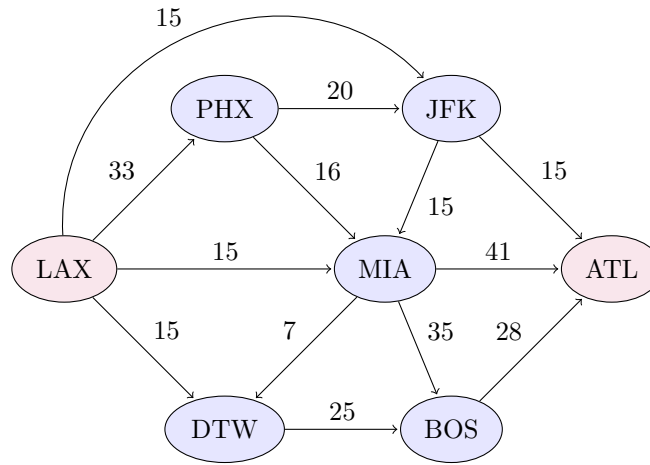
(a)

(b)

(c)

Problem 2

(*Push-Relabel algorithm*)



(a)

(b)

(c) (*Optional*)