CS 253 Programming Assignment 5

Fall 2003 (Due December 04, 2003) at the beginning of class

Be sure to read the Programming Style document when turning in your assignment. As a change, you will work alone for this assignment; you may re-use code from any of your previous assignments in this project.

The maximum flow in a weighted digraph (network) is a powerful technique not only to determine commodity flows, but to also determine power flow, and determine graph connectivities for fault tolerance in computer networks. In this project you will implement the basic Edmonds – Karp algorithm algorithm of Ch 26. The complexity of the algorithm is $O(|E^2||V|)$. You may use your developed graph classes from Project 4 and random graphs as test data.

- In this project you should implement the max flow and run it on a large enough network to force it to exhibit its asymptotic complexity.
- As always, follow the programming style. In particular, as an invariant, notice the algorithm must always maintain "flow balance."

For extra credit consider multiple sources and multiple sinks. 10%

Names	Group
Jonathan Mitchem	1
Kyle Owen	1
Esteban Aparicio	1
Benjamin Moss	1
Michael Ames	2
Shawn Tracy	2
Robert Pangrazio	2
Nguyen, Hai	2
Qian Fu Jim	3
Hoi Ho	3
Timothy Krupinski	3
Brian Van Vertloo	3
James Townsend	4
Eric Mertens	4
Jeffrey Slane Jr	4
Benjamin Milster	4