

COMP 4704 – Spring 2009

HW#2

Instructor:

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Due by:

5pm on April 16, 2009

Please choose **ONE** of following two options. The assignments should be emailed to me at mjr@cs.du.edu before the due date.

Option #1: Chat-Room Program Testing

Note: For those who did not do the programming option for Homework #1 or who had problems getting it all working, I will provide Java and Python implementations that you can use for this assignment.

Part 1: Create a program or a script that can exercise your chat programs some more: you should be able to launch hundreds of clients concurrently against the server. Verify correct operation of the server program (concurrency bugs may rear their head).

Part 2: Quantify somehow (i.e., one using one of: time, CPU usage, memory consumption) the performance differences between the server implementation alternatives.

Deliverables:

- Source code for the script / program you created for **part 1**.
- Brief (one paragraph) description of how you quantified the performance differences and what you found.
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Option #2: Textbook Problems

- Chapter 1, Problem #9
- Chapter 2, Problem #3
- Chapter 2, Problem #5
- Chapter 2, Problem #9
- Chapter 3, Problem #10

Deliverables:

- A document containing detailed (one to two paragraph) answers for each of the five questions.