CSE 403　　　　　FINAL EXAM　　　　June 6, 2005

For this exam, you are to answer THREE of the following essay questions. Each essay question is to be answered on single side of paper. Answer each question on a separate sheet of paper, clearly identifying the question. Put your name on each sheet of paper.

Paper will be provided for you to write your answers on. Additional scratch paper will also be provided, but you are to turn in only one page per question.

We will evaluate your answers to these questions on how well they demonstrate an understanding of software engineering principles and issues, the material presented in class, and the Mythical Man Month.

Answer question 1.

1. What would Frederick Brooks' think of Extreme Programming? Extreme programming is a lightweight methodology which is captured by the rules given below. In your discussion, concentrate on three of the following rules.

> Extreme programming rules:
> 1. System Metaphor - Develop a metaphor for the system
> 2. Planning Game - a way to prioritize requirements
> 3. Small Releases - the planned releases should be small (every 2 weeks is a guideline often used)
> 4. Acceptance Tests - Every release must have a set of automated acceptance tests
> 5. Pair Programming - All production code is written in pairs
> 6. Test First Design - All production code is written to pass a unit test
> 7. Simple Design - All software is written as the simplest thing that could possibly work
> 8. Continuous Integration - The software should be integrated daily
> 9. Refactor Mercilessly - Code refactoring should be done as soon as a need for refactoring is observed
> 10. Collective Ownership - No specialization, everyone works on all the code
> 11. Sustainable Pace - No overtime or pre delivery rush
> 12. Onsite Customer - The customer must be available to answer team questions and participate in team activities

Answer 2a or 2b

2a. Discuss the relevance of Chapter 11: Plan to Throw One Away to current software practice.

2b. Chapter 7, "Why did the tower of Babel Fail?" discusses documents for a large project. How well do Brooks' ideas fit with current practice and technology? (Ignore the latter part of the chapter – starting with the Organization in the Large Programming Project heading).

Answer 3a or 3b

3a. Thinking back over your GizmoBall project, describe two aspects of the team process that you thought were successful, and two aspects of the team process that you thought were unsuccessful. Include specific examples.

3b.   In retrospect, are there aspects of the Mythical Man Month that you wish you had taken into account in your GizmoBall project?