Miami University - CSA470j/570j Enterprise Application Architecture
Spring 2007 - Final Exam

6 questions for a total of 150 points.
Please answer only 4 questions, which will be graded for a total of 100 possible points.

Name: ______________________________

Instructions

Please read through this entire exam very carefully before starting.

You are to complete 4 of the 6 questions on this exam - clearly indicating which question(s) you do not want graded by putting a large `X` through the entire page.

This exam is closed notes and closed books.

All work must be written on the exam pages in order to be graded. If you run out of room for an answer, use the back of the page to continue your answer.

No electronic devices may be used during the exam: this includes iPods, PDAs, and cellular phones.

You have 120 minutes to complete the exam.

Good Luck!

1. (25 points) Consider the both the *Transition Script* and *Domain Model*. When should one be used over the other? What are the advantages / disadvantages of using either pattern?

additional space answer for question 1

2. (25 points) Compare the two data source architectural patterns *Active Record* and *Data Mapper*. What are the advantages of using one over the other?

additional space answer for question 2

3. (25 points) Describe a method for ensuring that if the same record is read and used at 2 different part of a transition, then changes made in both places are saved? Which pattern is this?

additional space answer for question 3

4. (25 points) Describe the difference between the view patterns: *Page Controller* and *Front Controller*. When would you use one over the impact? What are the tradeoffs?

additional space answer for question 4

5. (25 points) Describe the difference between *Optimistic Offline Lock* and *Pessimistic Offline Lock*. Also provide high level details of how each of these could be implemented.

additional space answer for question 5

6. (25 points) Describe how the *Unit of Work* pattern works to keep track of all changes in a transaction. How would this need to be implemented and integrated with the domain model, service, and/or database mapping layers?

additional space answer for question 6