

**CS 383 Final Examination****Name:** \_\_\_\_\_

Answer all problems. Problems are written on both the front and back of each sheet. This is a closed book, closed note exam.

1. (20 points) List the commands a classmate would have to know in order to (a) get a copy of our project from the repository, (b) edit `jicu/src/networking/Message.java` for a few hours, and then (c) put their changes into the repository where the rest of us can benefit from their efforts. Be sure to allow for the fact that others may well change `Message.java` while this classmate is at work.

2. (20 points) What have you learned about software engineering this semester that was not covered in the lecture or in the text? Describe as many things as you can that would be genuinely useful to future students.

3. (30 points) We wrote many interesting use cases this semester, but did we build our software design from them, or did we just throw them in the trash? Explain what Use Cases are good for. How do they relate to other UML diagrams such as class diagrams, statecharts, and collaboration diagrams. Give an example of a use case that we did in fact make use of in our software design for our project this semester.

4. (30 points) What's so difficult about working in teams on software development? If a project will take 6 months with 10 people, can you do it in 3 months with 20 people? Is it best to pick the smartest programmer, or the best “people person” communicator as the leader of a software development team? Explain why your choice is best, and point out the risks. In your CS 383 team, did you have any leadership structure? How was that decided, and what were the consequences?

5. (30 points) Draw a UML statechart to describe the operation of an automobile, from a driver's perspective. Include appropriate events, conditions, and actions.

6. (30 points) Explain to what extent you did or did not refer back to your requirements analysis documentation when developing your design documents this semester. If your answer is other than “We designed exactly and only what we had specified as requirements”, explain what differences emerged, and how they were discovered or realized. Was your requirements document successful in guiding your design? Why or why not?