Homework 04, CPSC-4175

Chapter 13, Object-Oriented and Classical Software Engineering

August 30, 2017

Grading Note These questions are *individual* questions, and must be answered *individually*. They are *not* team questions. Each student must answer each question without consultation with their teammates. Identical answers by teammates will be deemed a violation of the honor code, and will be dealt with accordingly. However, use of the solutions to these questions can and should be used by each team after the solutions have been submitted for grading.

Your diagrams must be in PDF format and pushed to Github. If you would like, you can embed your diagrams in your MD file — no extra points for this, but this is a useful thing to know how to do.

This homework assumes that you have read all of chapter 13. Please do so before attempting this homework assignment.

1. What is an *entity* class? A *boundry* class? A *control* class?

2. Write a *use case* pertaining to your project.

3. Write a *successful scenario* pertaining to your project.

4. Write an *unsuccessful scenario* pertaining to your project.

5. Using your answers to the three previous questions, use the *noun extraction* method to extract the classes. If practicable, identify the classes you extract as entity, boundary, and control classes. If all your classes are entity classes, you will not be able to do this.

6. Using your answer to the previous question, draw an appropriate *class diagram*.

7. Complete a CRC card for one of your classes.

8. Draw a *statechart* for one specific behavior of your project.

9. Draw a *communication diagram* for one specific realization of a use case.

10. Draw a *sequence diagram* for one specific realization of a use case.