Computer Science 507
Software Engineering
The College of Saint Rose
Spring 2013

Lab 4: More UML Diagrams
Due: 6:00 PM, Monday, February 25, 2013

Previously, you developed a UML use case diagram for an example scenario. For a lab exercise this week, you will practice creating a few additional types of UML diagrams.

You may work alone or in groups of 2 or 3 for this exercise.

Updated Scenario

Our example scenario is again a ski school management system. We expand its scope a bit for this week.

At this ski school, customers can purchase a lesson, which could be a regular class lesson, a private lesson, or a young-child lesson, they can sign up for a lesson time, and check in at their lesson. The ski school manager performs scheduling: assigning students to groups and groups to instructors, as well as arranging payment for instructors. Instructors receive teaching assignments, check in for lessons, and request payment for lessons taught. A cashier coordinates all money: taking payment from customers, getting instructor payment information from the manager, and paying the instructors.

We will look in class at a sample use case diagram for this updated scenario.

UML Design Diagrams

Your task is to develop several diagrams (in addition to the use case diagram you developed previously and the one shown in class) for the updated ski school scenario. These diagram types are described in Chapter 5 of Sommerville.

We will assume two "systems" here: a financial system that is involved in customer payments and payroll, and a scheduling system that tracks lesson schedules.

Activity Diagrams

Your first task is to create a UML activity diagram (see Figure 5.2) for the purchase of a lesson and the scheduling of a lesson. Include a new possibility in the lesson scheduling activity: check that the requested lesson slot is not full. If it is, failure should be reported.

Sequence Diagrams

Next, create UML sequence diagrams (see Figure 5.6) for the same two activities.

You are encouraged to think about which other UML diagrams in the remainder of the chapter are relevant to this scenario, and how they would be used. However, you are not required to do so.

Submission and Grading

To submit the assignment, send your diagrams and a few paragraphs that describe them to *terescoj@strose.edu* by 6:00 PM, Monday, February 25, 2013. Alternately, you may submit hand-drawn diagrams on paper.

For electronic submissions, please include a meaningful subject line (something like "CS507 Lab 4 Submission"). Please do not include any additional files, such as emacs backup files, object files, or executable programs.

This lab will be graded out of 15 points.