In homework 4 you are required to revise homework 3 according to the instructor and TA’s advices, and to perform application analysis of your project (see section 3). Please keep all the items and content you constructed in homework 3 and make any revision if necessary. Note that the homework structure (format) has been reorganized in homework 4.

The following is the format of homework 4:

0. A cover page includes the project title, homework number, and team members

1. Requirement document
   1.1 Change history
   1.2 Problem statement [OOMD05, 11.3]
   1.3 System context diagram [OOMD05, Figure 11.3]
   1.4 Summary of system features [Larman02, 6.14]
   Use cases (move to 3.1.2)
   1.5 Non-functional requirements and constraints [Larman02, 6.14]
   1.6 Data dictionary [OOMD05, 12.2.3]
   1.7 Software environments
2. (10%) Domain Analysis

2.1 Domain class model

2.1.1 Domain class diagram showing only concepts [OOMD05, 12.2]

2.1.2 Add associations [OOMD05, 12.2.4–12.2.5]

2.1.3 Add attributes [OOMD05, 12.2.6–12.2.7]

2.2 Domain state model [OOMD05, 12.3.4]

Find a class in your domain model which state is complex and cannot be adequately described by a list of operations. Then, construct a state diagram for this class.

3. (90%) Application Analysis (new in homework 4)

3.1 Application interaction model

3.1.1 Draw a use case diagram for your system [OOMD05, p.218, Figure 13.3].

3.1.2 Revise your use cases written in homework 3.

3.1.3 For each use case, draw a sequence diagram to represent the normal scenario [OOMD05, p.222, Figure 13.3].

3.2 Application class model

3.2.1 Specify user interface of your system at a coarse level of detail.

3.2.2 Define boundary classes of your system.

3.2.3 Define controllers classes of your system

3.2.4 Construct application class model of your system [OOMD05, p.228, Figure 13.8].

3.3 Application state model

Choose a controller class you found in 3.2.3 and construct a state diagram for the application class.

Please login the Open Cyber Classroom using your student ID from the following URL:  http://mslin.ee.ntut.edu.tw/teacher/ctchen_OOAD_2005_Spr/student/. The classroom is “OOAD 2005 Spring”. You have to submit a printed version of the homework and upload the electronic version (Microsoft Word format) to the web. If you do not upload the electronic version, your homework will not be graded.