

CSSE 574 – Software Architecture and Design I

Project Milestone 4

This is a continuation of Milestone 3, which introduced you to the first Iteration for your project. You detailed the problem space with System Sequence Diagrams (SSD) and developing Operation Contracts (OC) for relevant operations. This step also laid the foundation for producing a Software Architecture for your project. In addition to SSDs and OCs for this iteration, you also devised a Logical Architecture and Package Diagram(s) showing the packages, layers, and partitions appropriate to your project. These documents are to help organize your software implementation.

In Milestone 4, you finish the associated coding for these aspects of your design. While it is likely you did some parts of the design that go beyond what you will be able to code, or want to code, as a first iteration, you want to code and test enough that you believe you have validated major aspects of the design you did. For example, if you showed how the system is divided into layers with interfaces between them, then testing those interfaces with some code is a logical next step. Or, if you described how the database will exist as a layer at the bottom, then actually devising and connecting to that database would be in order.

Objective

There are three objectives in Milestone 4:

- 1) Make any additions or adjustments needed to your design documents from Milestone 3. This might be based on feedback you got on this assignment, on your own efforts to turn the design into code, or on just deciding that you should go ahead and define some additional things.
- 2) Finish an initial working version of the software system that has the major infrastructure in place. The goal is that you can demonstrate how this start of your system would function, and how the parts you have now created could be used in following stages.
- 3) Find people to whom you can explain how this will work, using your code to illustrate that the design works! At a minimum, this means demonstrating that in class. If you also can find others to whom you can show Iteration 1, that's even better! In a real system that's going to become a product (which yours may well be!), this is the point at which you discover both whether you can explain how it's going to work - and others buy into that, and also if they can understand what they would do if they were working on an elaboration of this design (which they may be!).

Due Date

Class time, Week 5 - Wed, January 12th, 2011). An in-class software demonstration and explanation of the code will be the main event. You also should turn-in any revised design artifacts, in the drop box.

Tasks

Develop an initial working version of your system. You will need to identify the basic elements of your domain layer to implement first. This core implementation should provide the basic infrastructure on which you will build functionality in future iterations.

For example, you may need to have user interface and database technologies in place. Or you may be using some open source components in your design that you will need to analyze and begin programming against. Please have your code accessible for the instructor to review.

Submitting Your Work

Please submit your revised documents (with your SSDs, OCs, Logical Architecture, Interaction Diagrams, and Design Class Diagrams, etc.) as a single document to the appropriate Angel drop box.