CSCE 742 - Project Part 2 - System Scope and Requirements

Due Date: Thursday, October 11th, 11:59 PM (in PDF format, via Dropbox)

Your job, this semester, is to understand, document, and extend the architecture of a non-trivial real-world software system. In the last phase of the project, you selected a system, explained why it is architecturally interesting, and identified important quality properties.

In this phase you will provide a short overview of the system and the system requirements that inform the architecture. The idea here is to identify the critical components and interactions at the top-level view of the system. In this phase, you should:

1. Explain the purpose, scope, and audience of the system. Your previous assignment will help in establishing this.
2. Identify the different groups of stakeholders that are relevant to the project and why they care about this project. These stakeholders should be categorized using the stakeholder categories from Lecture 5 and Chapter 9 of the Rozanski and Woods (R&W) book. Examine the stakeholder categories and determine whether each category is relevant for your project, and if so, who are the actual stakeholders of interest (i.e., do not simply list "Acquirers", but name types of acquirers).
3. Describe some of the most important functional and non-functional requirements for the system; these can be in the form of 'shall' statements or use cases. Strive for clarity rather than volume: I do not need more than 10-15 requirements for each category, but I want them to be *well-formed* requirements: specific, unambiguous, and measurable.
4. Define the scope of the system as a UML context diagram followed by a brief explanation of the elements in the diagram and their relationship to the system that you are analyzing. (Lecture 5/Ch. 16 of R&W)
5. Create five important functional scenarios and five important quality-based scenarios for the system. Use the template described in Lecture 7. Note that these scenarios should be *accurate* and *applicable* to the system that you have chosen to examine. Chapter 10 of R&W and the Bass/Clements/Kazman book may help with this.
6. Rate each viewpoint and perspective in Lecture 3 low/medium/high with respect to its importance in the system under consideration and describe why. R&W has more information on each.
7. Define at least 3 change cases describing likely evolutions of the architecture.

I am not looking for an exhaustive set of requirements or scenarios. Rather, I would like you to think of several of each that are critical to stakeholder needs and document them well.

Your submission should be organized as follows:

1. Introduction
2. System Overview

     a. Purpose and Scope (partially from Phase 1, flesh out with material from this assignment)
     b. Audience (overview of the stakeholders)
     c. Why the System is Architecturally Interesting (from Phase 1)
     d. Quality Properties (from Phase 1)

3. Stakeholders and Requirements
     a. Stakeholders
     b. Overview of Requirements
     c. System Scenarios
     d. Change Cases

4. Architectural Views
     a. Context View

(Future phases will flesh this out document out further - you are beginning to build an architectural definition for the system you chose in Phase 1)