

CSE293 CSE Design Laboratory – Project 2

Detailed Specification/SW Quality Analyses

DUE: Third Class

The second part of your semester project focuses on the initial draft (increment/iteration) of a specification for your project. You must be sure that you have enough expertise to qualify as both an expert and a “customer” in the area, in addition to your role as a software engineer. You should have chosen an application that is sufficiently complex, and would require a significant team effort for developing its solution.

In writing your first draft of the specification, you are to limit your response to at most 8, single spaced, 12 pt pages, with 1 inch margins on all sides. You also may have up to 10 additional pages if they represent various diagrammatic and functional views of your application, e.g., general system structure, software architecture, screen mockups, etc. A strong requirement for your specification is the utilization of multiple (at least 2) UML use-case diagrams. Do not do detailed DFDs, FSMs, ER diagrams, or other UML diagrams, since those are needed for the next phase of your project. Within the ten pages of text, you should address as many of the 10 sections of the specification as you believe are feasible for your application (see examples on web page as well). At a minimum, it is expected that your specification contains sections for an Introduction, Glossary, Operating Environment, Interfaces, Information, Performance, and Security. You may or may not have the remaining 3 sections depending on your emphasis and the application domain.

Note, that as a team, you must clearly identify (using initials or names) who wrote which sections of the specification. The Introduction and Glossary are to be shared sections done by all team members. For the Glossary, each team member should place initials next to the terms that s/he defines. The other five required sections, Operating Environment, Interfaces, Information, Performance, and Security, are to be split equally among team members, with each member solely responsible for at least one section. Clearly identify who did which section.

Analysis is an important part of any project. To accompany the specification, you are to analyze your written specification against the software qualities (see Chapter 2 of Ghezzi or other Software Engineering textbook). Focus on the following qualities:

Performance	Portability	Understandability	Productivity
Reliability	User Friendliness	Robustness	Repairability
Reusability	Maintainability	Interoperability	Evolvability

Split the qualities equally among team members and cover all quality, making sure that you discuss:

- Importance and relevance of the quality to your problem/domain.
- The attainment/incorporation of the quality in your specification and eventually in your design and implementation.

For each quality, limit yourself to at most 1/2 page of 12pt, word-processed, single spaced text. This means, at most 6 pages for this handin.

Finally, each team member must write a individual 1/2 single-spaced page that (1) reflects on the team oriented experience and (2) identifies which aspects of the specification process were most impacted by team dynamics. Turn these reflections in by email to me without consulting your fellow team members!

Note that your project is due at the start of the third class. The graded projects will be available to you by the next day to in preparing your solution to Project 3.