

CSci 435: Homework 3

Requirements

Due February 9th by 11:00 AM

Summary

Beginning with the original project requirements document created by the managers, create a detailed requirements document. Be sure to address:

- What are the functional objectives (features)?
- What are the nonfunctional properties?
- What are the environmental, scheduling, dependability, performance, and other requirements? What are the dependencies between requirements?
- Which are the highest priority requirements? Which are essential for success?
- What are the non-requirements?
- What are the use cases? (i.e. you should have several use cases!)
- In rare cases when there are multiple alternatives, provide enough information for the client to make a good decision. What are the benefits and risks?

While I will lecture on requirements before this homework is due, I won't lecture on use cases in depth until later. Some resources you may find useful:

- Chapter 12 of the book
- Sample requirements document: <http://alistair.cockburn.us/crystal/articles/srd/system-requirementsdocument.html>
- A sample use case template: <http://alistair.cockburn.us/usecases/uctempla.htm>

Format

The format is generally up to you, but the document should be in validated HTML. You should have three sections corresponding to the three milestones. You should also have an additional section in which you do some analysis of your requirements. How do the requirements at different milestones interact with each other? Are there dependencies? Can your requirements be easily verified? Do you anticipate any particularly difficult requirements? Are there options that you want to give the customer? What is the rationale for your requirements?

Requirements should be numbered to allow for traceability, and should cross-reference use cases where appropriate. You may want to format requirements statements differently than the main body of the text. You may also want to embed the rationale into the main sections instead of putting it in the analysis section.

Where to Get Requirements

While working on this homework, you may want to clarify certain requirements. You can do some “market analysis” by looking at what “competitors” have done.

You can also ask the customer what they want. Just post a message to the project forum and I’ll answer it. You should also monitor the forum to see if I state any particular requirements you must address. If you have a general question about this homework, post to the general class forum instead.

Requirements Selection

After this homework has been graded, the project managers will select a few of the best. You will then vote on which requirements sections we will use for our project. For each of your sections that is chosen, you will receive a bonus (probably about 5 points). If all your sections are chosen, you will receive multiple bonuses.

Grading

Make sure that you address *requirements* issues, and not specification or design issues. This is a fuzzy request, since the client might characterize specification and design issues as requirements issues. For example, the use of Java has been made a requirements issue by the customer. Similarly, the user interface is really a design issue, but is so important that it must be addressed at the requirements stage. For anything that is not technically a requirement, be sure to highlight it in some way in your document. When in doubt, ask!

200 points total. You will lose points for at least the following:

- Not clearly labeling things in the document which are not technically requirements
- Failing to address obvious requirements issues
- Formatting so poor it hurts readability
- Poor analysis of requirements
- Obviously incorrect requirements
- Inadequate use cases