

**Deliverable:** #5 - Final Implementation  
**Due Date:** Nov 29 @ 0800 via e-mail  
**Title:** SE2: Software Design and Architecture  
**Course ID:** CS 446, SE 464, ECE 452, CS 646

**WWW:** <http://www.cs.uwaterloo.ca/~rtholmes/teaching/2011fall/cs446/index.html>  
**Twitter:** <https://twitter.com/cs446>

**Lectures:** Tuesday & Thursday 1600 - 1720 MC 1056  
**Tutorials:** Friday 1430 - 1520 MC 4060

**Instructor:** Dr. Reid Holmes; DC 3351. Office hours by appointment. [rth.se2@gmail.com](mailto:rth.se2@gmail.com)  
**TAs:** Kevin Shelley; DC 3334. Office hours by appointment. [karshell@cs.uwaterloo.ca](mailto:karshell@cs.uwaterloo.ca)  
Wei Wang; DC 3334. Office hours by appointment. [w65wang2cs.uwaterloo.ca](mailto:w65wang2cs.uwaterloo.ca)

### Description:

This document will detail how your final system corresponded to the architectural and design properties you set out to support (Deliverable #2) and your proposed the architecture and design (Deliverable #4). Your target audience for this report is a programmer who initially investigated your architectural and design documents before attempting to evolve your system to support some major new features. The document should help them understand how your system varies in reality from the prior documentation. Strong emphasis should be placed on **why** the differences exist.

### Requirements:

1. Title page, including project name, team name, and each team members name and Quest IDs.
2. Implementation differences.
3. Source code; this should be compressed into a single zip file (`cs446-d5_<project-name>.zip`).
4. Personal component. Make sure your project name is on this somewhere.
5. Parts 1-2 must be compiled in a PDF document. Part 4 must be in a separate PDF document.
6. Only one team member needs email the team component to [rth.se2@gmail.com](mailto:rth.se2@gmail.com) by 0800 on Nov 29.  
File naming scheme: `cs446-d5_<project-name>.pdf`  
\* (use - instead of space in file names)  
Only one team member needs to send the code as well (or a link to the ZIP, if you would prefer).
7. Each team member needs email their personal document to [rth.se2@gmail.com](mailto:rth.se2@gmail.com) by 0800 on Nov 29.  
File naming scheme: `cs446-d5_<project-name>_<your-name>.pdf`  
\* (use - instead of space in file names)

### Implementation Differences:

You are to describe the differences between your proposed architecture and design with your final product. The document should capture the differences and (most importantly) concretely explain the rationale for these differences. The TAs and instructor will check the code to look for differences not captured in the document. Discussing your architecture in terms of its conceptual notion vs. concrete realization may make sense for your project.

The goal of this project is to help developers understand how and why your architecture and design evolved from their proposed versions to the final form that exists in the source code. If there are no deviations, this will be a very short assignment; if you made significant changes the assignment will be longer.

This report should be a companion to your previously-submitted system architecture and design. Ideally, your report should repeat as little of the material as possible from these existing documents, although providing annotated before and after versions of the component diagram and class diagrams may help to clarify your text.

**Personal component:**

Reflect on how this project challenged your architectural, design, and development skills. Do you feel more comfortable architecting systems now than you did before? Do you feel like a more competent system designer? By implementing your design, did you learn new skills that will help you design more effectively in the future? What aspects of the course helped you improve the quality of your architecture and design and what aspects hindered you? How would you modify this course to help future developers become more competent architects and designers?

The limit for this component is two pages.

**Assorted points:**

The personal component **MUST** be completed individually; no collaboration is acceptable.

**Assessment:**

This deliverable is pass/fail. Be sure that each required component of the deliverable is complete and included in the final document and that the documents are submitted in the correct format, with the appropriate file name, by the due date.

For the group component the emphasis will be on the completeness of the described differences between the system and its proposed design and architecture and the soundness of the rationale justifying the changes. Major changes are completely acceptable as long as they are adequately justified.

For the individual component, the key aspects involve shedding light on how your attitudes towards architecture and design were helped (or hindered) by working on your project and partaking in the course.