

**ICS 52: Introduction to Software Engineering
Fall 2004**

Instructor: Dr. Richard N. Taylor

TA: Justin R. Erenkrantz

Assignment 4: Implementation

Issued: Wednesday, November 10th, 2004

**Due: Wednesday, December 1st, 2004 (beginning of
discussion)**

Implementation Assignment

The Architecture and Component Design that you just submitted has been tentatively accepted by Phoenix's management. While they review your design and you proceed on creating a suitable test plan as described previously, they now ask you to begin the process of creating the final implementation. To recap, management had asked you to sketch out a new architectural design to satisfy the following additional requirements into the system (please refer to the **Design Addendum** for the specific requirements):

- *High Score*
- *Save functionality*
- *Number klax*

However, management has suddenly realized that it might not be feasible to implement all three of the additional functionalities that they requested. Yet, they do believe that it should be possible to implement **two** of the above functionalities. In their infinite wisdom, management has asked you to make the final call about which two features should actually be implemented.

The final deadline is **Wednesday, December 1st** and Phoenix is looking for the delivered implementation. So, besides an implementation that resolves the bugs in the current prototype, they also want the two new features successfully implemented. Your project manager (aka TA) will hold twice-weekly meetings to guide you through the implementation process.

Structure of the Implementation Document

The Implementation document should have the following structure:

1. Table of Contents

- Listing all relevant sections and their page numbers

2. Introduction

- A short introduction of the system
- What is this document about?
- Who was it created for?
- What steps were involved in producing the information contained in this document?

3. Implementation Plan

- Describe which two additional features you will implement and why
- Describe which bugs present in the current prototype you will address and why

4. Implementation Post-Mortem

- Describe any changes you had to make to your design/architecture
- Describe any issues you had with the implementation

5. Test Case Matrix

- For each of your test cases in your Test Plan (see **Assignment #3**), provide the status of each test case with respect to the final prototype.

6. Definitions of Terminology

- Precise definition of terms used throughout the project

7. Reference documents

- Pointers to existing literature and tools
- Pointers to other similar software

Submission Criteria

You **must** submit a hard copy at the beginning of discussion that follows these guidelines, and you **must also** submit an electronic copy to the course EEE DropBox.

Printed Criteria

The printed copy of your test plan that you turn in for credit **must** include:

- Page numbers at the bottom of each page
- Double-spacing for all paragraphs
- Use proportional font similar to either Times (New Roman) or Arial.
- Major section headings in 14 point, subsection headings in 12 point, and body text in 12 point.
- One inch margins around the page
- **(Optional)** Duplex (two-sided) printing is acceptable
- Stapled once in the upper left hand corner, no binders, no plastic covers.
- A title page using a 18 point font with the following text centered vertically and horizontally:

Klax Implementation Plan

by:

Your_First_name Your_Last_name
{UCINetID: i.e. panteater@uci.edu}

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Electronic Criteria

You must submit your electronic version of your implementation plan via the EEE DropBox entitled: **ICS 52 HW #4**. You **must also submit the new implementation electronically**. The documents **must** be compressed via ZIP before submission. Word or PDF documents accepted.

Other formats accepted by **prior arrangement only**.

Grading

The implementation should be runnable by someone with the necessary environmental assumptions satisfied. Apply the software engineering principles introduced in the lectures and found in the textbook.

The grading of this assignment will be *roughly* broken down as follows:

- 30%**. Implements Feature #1
- 30%**. Implements Feature #2
- 10%**. Implementation corrects bugs in prototype
- 20%**. Accuracy of final test case matrix
- 10%**. Documentation of your implementation process

As a whole, this assignment counts **7%** towards your final grade for the course.

Note:

- Do not work in teams to complete this assignment
- No late assignments will be accepted