

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

**Instructor: Dr. Richard N. Taylor**

**TA: Justin R. Erenkrantz**

**Assignment 3: Test Plan**

**Issued: Monday, November 8th, 2004**

**Due: Wednesday, November 24th, 2004 (beginning of  
discussion)**

## Test Plan Assignment

The Architecture and Component Design that you just submitted has been tentatively accepted by Phoenix's management. While they review your design, they now ask you to begin the process of creating a test plan that will serve to verify that the system works as expected, your later enhancements do not break the prototype, as well as ensuring that the additional requirements are implemented correctly.

Your next deadline is **Wednesday, November 24th** and Phoenix is looking for a detailed test plan document that fully describes how the game should be **verified** that it satisfies the requirements and adheres to the design. Your project manager (aka TA) will hold twice-weekly meetings to guide you through the selection of test cases.

## Structure of the Test Plan Document

The Test Plan 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 determining the information contained in this document?

### 3. Overall Test Plan

- Explain and justify the overall testing strategy that will be used
- Provide a rationale, with advantages and disadvantages, of the specific testing methodology
- Describe the format of your test cases.
  - Must include expected inputs and outputs
  - Must include rationale (purpose) for the test
- Describe the approach to running the enclosed test cases
- Describe how the test case results should be stored for later analysis
- Describe how a test case is determined to succeed or fail

### 4. Acceptance Test Plan

- What test cases are required to have a successful system?
  - Focus on the high level attributes of the game
  - Focus on test cases for new functionality
- **Suggestion:** Four test cases

### 5. Component Test Plan

- What test cases are required to validate the components?
  - Focus on boundary condition and events

- **Suggestion:** Four test cases

## 6. Regression Test Plan

- What test cases will ensure that nothing is broken?
  - Focus on cases that are currently broken or might easily be broken by your changes
- **Suggestion:** Four test cases

## 7. Test Case Matrix

- For each of your test cases in “Acceptance Test Plan” on page 2 and “Component Test Plan” on page 2 and “Regression Test Plan” on page 3, provide the status of the test case with respect to the current prototype.

## 8. Definitions of Terminology

- Precise definition of terms used throughout the project

## 9. 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 Test Plan**  
**by:**  
**Your\_First\_name Your\_Last\_name**  
**{UCINetID: i.e. panteater@uci.edu}**  
**ICS 52**  
**Instructor: Dr. Richard N. Taylor**  
**Fall 2004**

### **Electronic Criteria**

You must submit your electronic version of your requirements document via the EEE DropBox entitled: **ICS 52 HW #3**. The documents **must** be compressed via ZIP before submission. Word or PDF documents accepted. Other formats accepted by **prior arrangement only**.

### **Grading**

The test plan should be clear, easy to understand, easy to verify, and easy to change. Apply the software engineering principles introduced in the lectures and found in the textbook.

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

- 20%**. Completeness of your acceptance test plan
- 20%**. Completeness of your component test plan
- 20%**. Completeness of your regression test plan
- 30%**. Accuracy of test case matrix
- 10%**. Documentation of your testing process

As a whole, this assignment counts **10%** towards your final grade for the course.

### **Note:**

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