

ICS 52: Introduction to Software Engineering Winter 2004

Instructor: Dr. Richard N. Taylor
TA: Scott Hendrickson

Assignment 1: Requirements
Issued: January, 20th 2004
Due: February, 3rd 2004 (beginning of class)

Requirements Specification Assignment

Students should "interview" the customer (the TA during the discussion sessions) and have him elaborate on the functionality and features of the *UniCal* system that is to be built. They should then write a **Requirements Specification** (using the **structure** below) that resolves the ambiguities and precisely describes what will be the capabilities of the system.

The **Requirements Specification** should specify the criteria that will be used to evaluate whether or not the final product meets the requirements. It should be concise but with sufficient detail to resolve any potential misunderstanding between the students and the customer. It should **not** specify implementation details, such as the data structures and algorithms that will be used to implement; the customer is concerned with what *UniCal* does from the customer's perspective and not how it does it.

Structure of the Requirements Specification

The **Requirements Specification** document should have the following structure:

Table of Contents

1. Introduction

- What is this document about?
- Who was it created for?
- Who created it?

2. Application Context

- A short introduction of the UniCal software
- Describe the situation in which the software will be used
 - How will the situation change as a result of introducing the software?
- Identify all things that the system may or will affect
 - Objects, processes, other software, hardware, and people

- Develop an abstraction for each of those things, characterizing their properties/behavior which are relevant to the software system ("World Model")
- How might this context change in the future?

3. Functional Requirements

- Identify all concepts, functions, features and information that the system provides to its users
- Provide an abstraction for each of those concepts, characterizing their properties and functions that are relevant to the user
 - What is the system supposed to do?
 - What information does the system need?
 - What is supposed to happen when something goes wrong?

4. Environmental Requirements

- Platforms
 - Hardware – Operating systems, types of machines, memory size, hard disk space
 - Software – Development environments
- Programming Language(s)

5. Potential Risks

- Determine factors that increase the occurrence of risk faced by the project.

6. Future Changes

- Determine the changes that the software will undergo in the future including potential future enhancements

7. Acceptance Test Plan

- Organization of tests
- Format of test cases

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

The printed copy of your requirements specification that you turn in for credit should include

- A title page using a 20 point font with the following text centered vertically and horizontally

VirtualArtGallery Requirements Specification

By

First_name Last_name

{Last four digits of your student ID}

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- Page numbers at the bottom of each page
- Font used for the document should be similar to Times New Roman or standard Arial.
- Major section headings in 18 point, other subsection headings in 16 point, and body text in 12 point.
- Stapled once in the upper left hand corner, no binders, no plastic covers.

Grading

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

- 50% - Accuracy (clarity, precision, completeness, and consistency of the specification)
- 25% - Presentation (organization and consistency of the document)
- 25% - Composition (spelling and usage of English)

The 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**