Software Quality Assurance Plan

KSU Student Portal

Version 1.0

Submitted in partial fulfillment of the requirements of the degree of MSE

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1. Purpose

This document is intended to define a plan describing what measures will be taken throughout the project lifecycle to achieve an acceptable level of quality in the final product.

2. References

1. Vision Document
2. Project Plan

3. Management

3.1. Organization

Supervisory Committee

- Dr. Torben Amtoft
- Dr. Daniel Andresen
- Dr. William J. Hankley

Major Professor

- Dr. William J. Hankley

Developer

- Javier Ramos Rodríguez
3.2. Formal Technical Inspectors

3.2.1. Responsibilities

Supervisory committee

The members of the supervisory committee will be responsible for attending all three presentations given by the developer at the end of each project phase. Also, all members will provide feedback and suggestions to the student after the presentations.

Major Professor

The major professor will be responsible for meeting with the developer on a weekly basis to evaluate progress and give suggestions.

Developer

The developer will be responsible for all project documentation and implementation tasks as detailed in the project plan. He will be responsible for presenting his work to the committee at the end of each phase. He will meet with the major professor on a weekly basis for reporting progress.

Formal Technical Inspectors

The technical inspectors will review the project architecture artifacts and submit a formal report.

3.2.2. Tasks

All tasks to be carried out throughout the project lifecycle are documented in the Project Plan. The project plan includes a chart detailing the schedule of each task and activity.
4. Documentation

All required documentation for MSE students is defined at http://www.cis.ksu.edu/~sdeloach/mse/portfolio.htm describing the complete software portfolio to be built. The documentation will include a vision document, a project plan, a software quality assurance plan, test plan, architecture design and a user manual. All documentation will be reviewed and evaluated by the supervisory committee.

The software portfolio for the developer will be found at http://www.cis.ksu.edu/~jramos/MSEProject.html

5. Standards, practices conventions and metrics

Documentation standards: Wherever applicable IEEE standards will be used as a guideline to prepare all documentation. Object oriented analysis and design methods will be used.

Coding standards: Java naming conventions will be used throughout the project. Javadoc will be used to generate API documentation.

Metrics: COCOMO will be used for effort estimation

6. Reviews and audits

The supervisory committee will review and evaluate each document prepared by the developer.

They will provide feedback and suggestions after each presentation. The committee members will comment on the demonstrated prototypes providing suggestions and improvements to the project. Two technical inspectors will review the architecture artifacts and report their findings.
7. Test and problem reporting

A test report will consist of the test matrix detailing all tests that were conducted and their outcome. Unresolved issues will be specifically documented and reported to the major professor.

8. Tools, techniques and methodologies

The following tools will be used for coding, testing, and documentation:

- JDeveloper IDE – for development
- Java JDK 1.5 – for coding
- JSF and EJB – for implementation
- Alloy – for formal specification
- MS Word – for documentation
- Microsoft Project – for project schedule

9. Media Control

The software tool will be made available on a CD for installation. A user manual soft copy will also be available on the CD to aid with the installation process and use of the software. Complete project documentation from the developer’s website
http://www.cis.ksu.edu/~jramos/MSEProject.html will also be made available on the CD.
10. Deliverables

Phase I:

- Vision Document
- Project Plan
- Initial Prototype
- Software Quality Assurance Plan

Phase II:

- Vision Document 2.0
- Project Plan 2.0
- Formal Requirements Specification
- Architecture Design
- Test Plan
- Technical Inspection Checklist
- Executable Prototype

Phase III:

- User Manual
- Component Design
- Source Code
- Project Evaluation
- Formal Technical Inspection Letters
- Executable Project