Software Quality Assurance Plan

Online Book Store
Version 1.0

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CIS 895 – MSE Project

KSU

Major Professor

Dr. Torben Amtoft
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1. Purpose

The purpose of Software Quality Assurance Plan is to define all the techniques, procedures, and methodologies that will be used in the project to assure timely delivery of the software that meets specified requirements within project resources. Software Quality Assurance involves reviewing and auditing the software products and activities to verify that they comply with the applicable procedures and standards and providing the software project and other appropriate managers with the results of these reviews and audits.

2. Reference Documents

- Project Plan 1.0
- Vision Document 1.0

3. Management

3.1 Organization and Responsibilities

The organization consists of supervisory committee, major professor, developer and formal technical inspectors.

Supervisory Committee

- Dr. Torben Amtoft
- Dr. Daniel Andresen
- Dr. Mitchell Neilsen

The committee will be responsible for attending the presentations and reviews at the end of each phase. After each presentation, the committee will provide feedback and suggestions regarding the project.
**Major Professor**

- Dr. Torben Amtoft

The major professor will be responsible for supervising and evaluating the work and progress done by the developer on a weekly basis.

**Developer**

- Vamsi Mummaneni

The developer should submit all the deliverables and complete the project functionalities on time. He should keep updating his weekly progress to the Major Professor.

**Formal Technical Inspectors**

- Vinodh Sareddy

The formal technical inspectors will be responsible for a technical review of the architecture design artifacts and the formal requirements specifications and will also be required to submit a formal report based on their findings.

**Formal Technical Inspection Checklist**

<table>
<thead>
<tr>
<th>Item to be Inspected</th>
<th>Pass/Fail/Partial</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>All the symbols used in the class diagrams are according to the UML standards.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>All the classes in the class diagram are clear as to what they represent in the architecture design document.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The symbols used in the sequence diagram correspond to UML standards.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sequence diagram matches class diagram.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>All the classes in the USE model are represented in the class diagram.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The multiplicities in the USE model have been depicted in the class diagram.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>All the requirements in the Software Requirements Specification have been covered in the Architecture Design Document.</td>
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</tbody>
</table>


3. 2 Tasks
All tasks to be performed are mentioned in the Project Plan 1.0. After the first phase if any changes are required the Major Professor will discuss with the developer.

4. Documentation
The documentation will consist of all the deliverables. They are vision document, project plan, software quality assurance plan, formal requirements specification, architecture design, test plan, formal technical inspection, prototype, user manual, component design, source code, assessment evaluation, project evaluation, references, and formal technical inspection letters. The committee members will review all documentation for final approval.
All documentation will be posted on the developer’s website at
http://people.cis.ksu.edu/~vamsim/mseproject.html

5. Standards, Practices, Conventions, and Metrics
- **Documentation Standards**
The IEEE standards are used as reference for all the documents of Online Book Store project. IEEE Standard for Software Quality Assurance Planning is used for SQA 1.0.

- **Coding Standards**
The project coding standards follow C#. As the project is developed using the C# language.

- **Testing Standards**
The various types of testing performed would be mentioned in the Test Plan document at the end of second phase.

6. Reviews and Audits
All the deliverables produced in each phase of project development are reviewed by the major professor and supervising committee. These are evaluated by the committee, at the end of each phase and provide comments on the software prototype as well as suggestions for any changes or addition to the requirements specification. The two formal
technical inspectors will assess the architecture design artifacts and submit a formal report based on their findings.

7. Test and Problem Reporting
All the testing procedures used for the project would be mentioned in the test plan document at the end of second phase. The results would be reviewed and all the unresolved problems will be reported to the committee members.

8. Tools, Techniques and Methodologies
The following tools, techniques and methods would be used for the project for the specified purpose:

- **Coding**: C#, CSS, HTML, ASP.Net, Microsoft VisualStudio.Net 2005 IDE, Microsoft SQL Server 2005
- **Testing**: Junit
- **Documentation**: MS Word, Rational Rose, MS Project, OCL.

9. Records collection, Maintenance, and Retention
Three sets of design documentation would be produced and distributed to the University Library, Major Professor and developer. The source code, documentation and web pages are submitted to the Major Professor in the form of a CD.

10. Deliverables
The deliverables for all the three phases are listed below:

**Phase I**
- Vision Document 1.0
- Project Plan 1.0
- Software Quality Assurance Plan

**Phase II**
- Action Items – identified during phase I
- Vision Document 2.0
- Project Plan 2.0
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SQA Plan

- Formal Requirements Specification
- Architecture Design
- Test Plan
- Formal Technical Inspection
- Executable Architecture Prototype

Phase III
- Action Items - identified during phase I
- User Manual
- Component Design
- Source Code
- Assessment Evaluation
- Project Evaluation
- References
- Formal Technical Inspection