

IT-314 Software Engineering

StarContests.com

**If it's not here it's not
happening.**

Quality Assurance Plan_v1.0

**Team 8
[28-03-2015]**

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Revision History

| Version | Author | Description | Reviewed by | Date Completed |
|---------|---------------|-------------------------|--------------|------------------------------|
| 1.0 | Archit Gajjar | Initial Document of QAP | Krupal Barot | 28 th March, 2015 |

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Introduction

Software quality assurance (SQA) consists of a means of monitoring the software engineering processes and methods used to ensure quality. Software Quality Assurance (SQA) is a formal process for evaluating and documenting the quality of the work products produced during each stage of the software development lifecycle. It aims at ensuring high quality software according to stated requirements and standards.

Purpose

The purpose of Quality Assurance Plan is to set goals, responsibilities and appropriate processes which are required to assure Quality for the project. The Quality Assurance Plan defines techniques, methodologies that assures quality, timely completion and deployment of the software.

Reference Documents

- Project Plan
- SRS

Tools, Techniques, Methodologies

- Server Side:
 - Database: PHPMyAdmin
 - Tools : Dreamweaver, Microsoft Word
 - Languages :
 - Front end : HTML, CSS
 - Back end : PHP
- Client Side:
 - Web Browser
 - Running Operating System

Team Work

Team work also has a great contribution in Software Quality.

This section describes the management and organizational structure, its responsibilities, and the software quality tasks to be performed.

Team Organization:

The efforts to build StarContests involved a team of 9 members, who have been distributed different roles in the course of the project. Our team structure is Egoless so every member contributes fully and ideas To improve quality are contributed by all at any time of the project.

Tasks Management

The tasks to be performed during the development, operations, and maintenance of the software are selected based on the Project schedule specified in the project plan, planned deliverables and identified reviews.

Various activities to be performed by members of project team are:

1. Requirement Gathering
2. Requirement Analysis
3. Design Documentation
4. System Designing
5. Graphical User Interface design
6. Coding
7. Test Cases
8. Testing and Test Report
9. Reviewing documents
10. Project monitoring and management

Software Documentation

Every work is properly documented during each phase so that the necessary things can be obtained at a later stage during different phases of project development. In case of a sudden fix at any point, the team can go back by referring to the document. Changes made can be easily monitored and configured during easily with the help of proper documentation. If any member of the team catch up with the workflow and can quickly follow the project by referring to the preserved documents, saving lot of re-work and time.

In short, proper documentation controls the development controls the development of software.

Documents required:-

- Feasibility Report
- Project Plan
- System Requirement Specification
- Draft User Manual
- System Design Document
- Test Plan
- Quality Assurance Plan
- Coding Standards
- Test Report
- Review Documents
- Termination Analysis

Document Conventions

Following are the conventions followed throughout the document:

| S. No. | Metrics | Inference |
|--------|--|-----------------|
| 1. | Font size:22 Font type:Cambria Font Style:Bold | Heading |
| 2. | Font size:18 Font type:Cambria Font Style:Bold | Sub Heading |
| 3. | Font size:16 Font type:Cambria Font Style:normal | Sub-Sub Heading |
| 4. | Font size:14 Font type:Cambria Font Style:normal | Body |

Software Reviews

Various reviews are done at the end of each phase in order to ensure that the work done till now is in synchronization with project plan and project requirements and is meeting deadlines.

1. Plan Review: The project plan is reviewed to ensure project is on right track.
2. Feasibility review: Feasibility report is reviewed to ensure that completion of product is feasible and that planning done earlier is correct and reliable.
3. Requirements Review: Reviewed in order to ensure that requirements specified by the client is taken care of.
4. Design Review: reviewed in order to evaluate the technical adequacy of the software design and the acceptability of the design to satisfy the functional requirements.

5. Coding review: Coding review is done at the end to assess the feature implemented in the product and recommends appropriate action to be done.

Quality Check Points

There would be Quality Checkpoints at the end of various phases, to assure that the deliverables are of acceptable quality. It is planned that the products at the end of each phase in the lifecycle of the software would be reviewed by the team, and the changes suggested would be incorporated by the corresponding reviewer and the author of that document. In case of the code segment which is being reviewed, the changes would be incorporated by the author of that code segment, based on the suggestions by the reviewer in the meeting. A Quality Control Manager would be appointed who would ensure that suggestions are incorporated well within the deadline.

Problem reporting and corrective actions

Problem reporting and actions are very important to achieve an error/bug free system. The ultimate target of this is to establish a process that continuously improves the safety and reliability of the system. When a document is reviewed, its quality and correctness is checked and if any changes or modifications are required, they are made accordingly. Even at later stage of the project development, we might discover additions or modifications needed in a document and thus another version of it is released and the updated document is penned in the review document.