Indian Institute of Information Technology, Vadodara

MEETUP

Quality Assurance Plan

Author:
Pooja Gurjar
Radheyshyam
Shubham Singh

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1 Introduction

1.1 Purpose

Software Quality Assurance refers to checking and ensuring that the developed software meets all the requirements specified in the Software Requirements Specification. The purpose of the SQA plan is:-

1. Methods and tools used to check the quality of the product.
2. Identify the SQA responsibilities of the project developers and the other members.
3. The software development, evaluation and acceptance standards are developed, documented and followed.

2 Management

2.1 Organization

At the end of each phase of the Software Development process,the documents created are reviewed by the team members and the documents are modified by their authors in case of any changes identified after review.

2.2 Roles and Responsibilities

2.2.1 Project Manager

The project manager is responsible for the implementation of the SQA as well as ensuring all products and documentation adheres to the plan.

2.2.2 Front End Developers

They are responsible for providing the users with an attractive and simple to use User Interface while following the software design created during the design phase.

2.2.3 Back End Developers

The role of back-end developers is to implement all the required functionality of the project as understood from the SRS. They need to collaborate with the front-end developers in order to ensure the overall quality of the software.

3 Software Quality

Certain activities must be performed to ensure the overall quality of the product namely:

1. Maintenance of documentation standard.All the documents must be in proper format, technically accurate and completed on time.
2. Inspection and reviews of all the documents. Every document is reviewed by some other team member and changes are suggested. These changes are then incorporated according to the configuration management plans.
3. Coding conventions are followed in the whole project coding and implementation phase. This makes the software code easy to understand and maintain.
4. Verify that relevant documents are updated and based on approved requirement changes.

4 Documentation

4.1 Purpose

The purpose of this section is to specify which documents are required for efficient software development, what they should contain and how they help the development process.

4.2 Documentation Requirements

Following documents are integral part of any project and must be made so as to ensure that the quality of the product is ensured.The following

documentation will be generated and updated throughout the duration of software life cycle:

4.2.1 Project Plan

Purpose of this document is to give a complete yet concise description of purpose, goal, phases, and timings of each phase, risk and cost of the project. It serves a guide for the process of software development. While during the development of the software, the model used for description and the norms specified in this document should be followed so as to ensure that the software is a quality product.

4.2.2 Software Requirement Specifications

This document gives an overview of the Software requirements for the software. It is the ocial statement of what the system developers should implement and it helps to provide an organized way to collect all requirements.

4.2.3 Design High level Low level document

After the purpose and specifications of the software have been defined, we need to do the basic designing of the software.This software design document shows the designs used or intended to be used in implementing the software product.It gives a detailed description of the design aspects of the software i.e, User Interface , Database,Implementation Architecture Style and Procedural Design .It provides details about the architectural style and the architecture followed to develop the software.

4.2.4 Risk Management Mitigation Plan

This document describes the risks that the team may encounter while designing and managing the project and actions that the team will conduct to mitigate these risks.Risk management means dealing with a concern before it becomes a problem.It addresses all the risks surrounding the project past, present and future.It reduces the probability of failure and uncertainty of achieving the overall objectives.

4.2.5 Software Configuration Management Plan

The SCMP shall document methods to be used for identifying software items, controlling and implementing changes, and recording and reporting change implementation status.

5 Standard Conventions

5.1 Documentation Conventions

Documentation standards have been developed with references to IEEE standards. All the documentation reviews have strictly followed the developed standard to ensure clarity and accuracy of the documents.

5.2 Coding Conventions

Standard coding, indentation and commenting conventions for Django, HTML, CSS would be followed.Any changes made to the code have to be updated on the Github repository, so that at any time the latest code will be available to all members.

6 Software Quality Assurance Activities

6.1 Quality Control

When a document is selected for a review, a review team is assigned to that document which performs a review of the document.The factors a document is checked for are completeness, correctness, easy to understand and ensuring there is no ambiguity. If the proposed changes are approved , then another document that needs reviewing is selected.

6.2 Verification Validation

6.2.1 Verification

During verification, we determine whether or not the products of a given stage of the software development lifecycle fulfill the requirements established during the previous stage.

6.2.2 Validation

For validation, we evaluate software at the end of software development process i.e during the testing phase to ensure compliance with software requirements.

6.3 Testing

The plan identifies the items to be tested and the type of testing to be performed.The main purpose is to ensure that all the modules are tested according to the specifications described in the SRS.