e-store

Software Quality Assurance Plan

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Abstract

This document is about the Software Quality Assurance Plan ($SQAP$) of our system, e-store which is an e-commerce platform for online merchants. It provides the power to grow your web business, reach more customers and sell more products and services. It enables businesses to experience an integrated workflow for their business: Sales, Inventory and Order Management and Customer Service under one platform.

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1 Introduction

1.1 Purpose

This document describes the procedures and control methods to obtain the desired quality level of the end product and the process by which the end product is created. This document serves as a guide for the managers and developers of the e-store project. This plan describes the SQA activities to be performed and defines a set of standardized techniques for performing those activities. All team members must read this document and apply the procedures stated in it.

1.2 Scope

The e-store project should follow the RESTful architectural style. The entire system has to be developed using the Flask microframework, with ajax doing the client requests. There will be a clear separation of concerns between the client and the server for easy maintenance and scalability.

1.3 List of Definitions

Term	Definition
ATDD	Acceptance Test Driven Development
TDD	Test Driven Development
BDD	Behavior-Driven Development
SQA	Software Quality Assurance
UML	Unified Modeling Language
ERD	Entity Relationship Diagram
MSU-IIT	Mindanao State University - Iligan Institute of Technology
REST	Representational State Transfer
FLASK	Web Framework
Python	Programming Language
SCS	School of Computer Studies
Sales Inventory	The list of items such as the goods that are in stock
E-commerce	The buying and selling of goods over an electronic network, primarily the internet
Customer	The person who transacts in the store page of the business
Admin	The owner of the products sold in the store.
Product	The items being sold in the website
Cart	The list of items the customer is going to buy
Checkout	The process in which the customer is going to buy and pay the items inside the cart
Gherkin	Business Readable, Domain Specific Language that lets you describe software's behaviour without detailing how that behaviour is implemented.
QAM	Quality Assurance Manager
SQAP	Software Quality Assurance Plan
SQMP	Software Quality Management Plan
PM	Project Manager
CM	Configuration Manager
AD	Architectural Design
DD	Detailed Design
CI	Configuration Items
UML	Unified Modeling Language

Table 1: List of Definitions

1.4 List of References

- [*SQAP*] Software Quality Assurance Plan, SPINGRID team, TU/e, 0.1.3, June 2006
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- Best Practices, Development Methodologies, and the Zen of Python, Valentin Haenel
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2 Management

This section describes each major element of the organization that influences the quality of the software.

2.1 Organization

Good software practice requires a measure of independence for the SQA group. This independence provides a key strength to SQA; that is, SQA has the freedom, if the quality of the product is being jeopardized, to report this possibility directly above the level of the project. While in practice this rarely occurs, for almost all problems are correctly addressed at the project level, the fact that the SQA group can go above the project level gives it the ability to keep many of these problems at the project level.

2.2 Tasks

The SQA team's main task is to check whether the procedures are followed and that standards are handled correctly as defined in the [SQAP]. Additionally, the SQA team inspects whether all group members fulfill their tasks according to the parts of the [SQAP] applying to their specific tasks.

Besides the described main task, the SQA team has to check the consistency and coherence between documents.

2.3 Responsibilities

As described in section 2.2, the main responsibility for the SQA tasks lies with the QAM. Within the SQA team, the QAM can delegate the tasks. Minor problems can be solved by each member of the SQA team, whereas major problems are matter of the QAM and are also reported to the PM. Every problem found by a team member has to be reported to the QAM. Reporting to project members outside the SQA team is done by the QAM. The vice-QAM will assume his tasks if the QAM will be unavailable for a short period of time. If the QAM will be unavailable for a longer period of time, the SQA team must be expanded and the tasks reorganized. The project manager will be responsible for this.

3 Documentation

The documents to be delivered in the specific phases of the project will be based in Chapter 4. Document standards are described in the same chapter.

4 Standards, Practices, Conventions And Metrics

4.1 Documentation Standards

During this project many different documents will be made. Every document has to be approved by: The author(s) The leader of the responsible team A member of the SQA team

In case that these three people happen to be one and the same, a second member of the responsible team has to give these approval as well. Only approved documents affect the project. The documentation standards involve the following: All documents must be written in English. Requirements on review and approval as described in Chapter 5. Procedures involving the change of documents.

These standards apply to all documents, to electronic versions as well as printed ones. However the layout requirements do not apply to documents other than the project and product documents. All documents made are available through the document repository. In case of unavailability of the document repository, the CM sees to it that there are three copies available of every document (latest version with the highest status of approval) in the group's workspace. The three copies consist of one copy on paper and two digital copies on two different geographical locations.

4.2 Design Standards

The design standards in the Architectural Design (AD) and Detailed Design (DD) phase will be defined. The software design paradigm that will be used is Object Oriented Programming. UML will be used as modeling technique for object oriented designs.

4.3 Coding Standards

Coding standards will be based in the Python Coding Standards.

4.4 Comment Standards

4.5 Testing Standards

4.6 Metrics

4.7 Compliance Monitoring