Technological Institute of Costa Rica

Computer Engineering School

Inspection Report

Software Quality Assurance

I-2024

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Revision Log

Date	Version	Changes
April 10, 2024.	1.0.	Report produced by the Inspection Recorder.

Inspection Report

Introduction

The following report documents the inspection process, decisions, and results regarding the inspection of the software architecture document of the project.

Inspection Preparation

The Inspection Team was formed by Marco Herrera González, who served as the Inspection Leader and Recorder; María Paula Bolaños Apú, who served as an Inspector; Jeffrey Leiva Cascante, who served as an Inspector; and members of the Development Team, who served as Authors and Readers. Each member of the Inspection Team used one hour of time to prepare for the inspection meeting.

The product that was reviewed was the software architecture document of the project. The document consisted of fifty-four pages of material. This document was the only input for the inspection.

Inspection Objectives

The objectives defined for the inspection were:

- Ensure the completeness, maintainability, no ambiguity, and correctness of the software design contained in the document.

- Report any anomalies, errors, and ambiguities contained in the software architecture document of the project.

- Verify the correct writing, grammar, and syntax of the software architecture document of the project.

Completion Criteria

The item under inspection will be considered as approved if there are no critical or catastrophic anomalies found. If there are critical or catastrophic anomalies, then the item will be rejected, and another inspection will have to be conducted on the fixed item. If there are negligible and marginal anomalies, the item will be partially approved until anomalies are fixed, when the item will be totally approved.

Inspection Meeting

The inspection meeting was performed on April 10, 2024, with a total duration of two hours. All members of the Inspection Team were present. During the meeting, the entire document of the software architecture was inspected. Findings of the inspection are specified in the following sections.

Anomaly List

The anomalies found by the inspectors in the software architecture document, discussed during the inspection meeting are:

- On page 9, the fifth user story should specify that the user can only view the orders they have made. The writing makes it seem like a user can view all orders of the system. This is an ambiguity-type anomaly, with a negligible impact.

- The user stories for filtering publications by category and keywords are duplicated. They can be refactored in single user stories, specifying that the actions can be done by both client and administrator users. This is an extra-type anomaly, with a negligible impact.

- On the software design, the controller class could get too big and become a bottleneck when more functions are added, or if there is a lot of traffic into the system. A recommendation is to break the controller class into specialized controller classes for each group of related functions in the system, as this would balance the workload and the design would be more scalable. This is a risk-prone-type anomaly, with a marginal impact.

- On page 21, a recommendation is that on the recover password sequence diagram, the view class should specify when it displays new components to the user to enter input data. The current diagram does not specify this, so it could be difficult to know if new components should be rendered or if others should be removed during the workflow of the user. The same recommendation can be made to all diagrams where components are shown dynamically.

- On the activity diagrams, the workflow of functions regarding the database connection is confusing. It is not clear if the function first closes the database connection and then proceeds with the workflow, or if it is the other way around. This is an incorrect-type anomaly, with a negligible impact.

- On page 49, on the buy shopping cart activity diagram, the activity to close the database connection is not connected to the normal workflow, making it seem like it is an independent activity. This is an incorrect-type anomaly, with a negligible impact.

- Overall, the writing of the document could be improved. There are grammatical and syntactical errors in some parts of the document. This is an inconsistent-type anomaly, with a negligible impact.

Final Considerations

All anomalies found were discussed and reviewed during the meeting, all the Inspection Team members agree on the anomalies list presented on this document. The objectives of the inspection were accomplished, anomalies were reported and sent to the Development Team for rework and corrections, ensuring the quality of the product. Given the completion criteria, the item under inspection is partially approved until all anomalies have been fixed. There is no need for an inspection of the fixed item.