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Software Configuration Management (SWEG5103)

Audit Report

Student Login Module, Version: 1.1, Date: Dec. 31, 2025

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Table of Contents

| | |
|---|----------|
| 1. Executive Summary..... | 1 |
| 2. Physical Configuration Audit (PCA)..... | 1 |
| 2.1. Verification of CI Existence and Naming..... | 1 |
| 2.2. Version Consistency Check..... | 2 |
| 3. Functional Configuration Audit (FCA)..... | 2 |
| 3.1. Basic Requirements Verification..... | 2 |
| 3.2. Change Request (CR) Implementation..... | 3 |
| 4. Audit Conclusion and Recommendations..... | 6 |

Configuration Audit Report

Project: Student Login Module

Version: 1.0

Date: December 31, 2025

Auditor: Abduselam Sultan, Abel Maireg

Baseline Audited: Baseline 2 (BL2) /
Release v1.1

1. Executive Summary

This report details the results of the Physical Configuration Audit (PCA) and Functional Configuration Audit (FCA) conducted on the **Student Login Module** project. The audit was performed to verify that the software configuration items (CIs) in **Release v1.1** match the documentation and that all approved Change Requests (CRs) have been correctly implemented.

Audit Result: PASS – The project has met the SCM requirements with no critical non-conformances.

2. Physical Configuration Audit (PCA)

Objective: To verify that the "As-Built" configuration matches the "As-Designed" documentation.

2.1. Verification of CI Existence and Naming

The repository contents were checked against the **CI Register v1.1**. The audit confirmed that all files are present, correctly named (kebab-case for docs and code files), and located in the mandated folder structure (</src>, </docs>, </releases>).

| CI ID | CI Name | Location in Repo | Naming Convention Check | Status |
|--------|---|------------------|-------------------------|----------|
| DOC-01 | scm-plan-v1.0.pdf | /docs | Pass (kebab-case) | Verified |
| DOC-02 | requirement-spec-v1.0.pdf | /docs | Pass (kebab-case) | Verified |
| DOC-03 | ci-register-v1.0.pdf | /docs | Pass (kebab-case) | Verified |

| | | | | |
|---------|---|----------|-------------------|----------|
| CFG-01 | <code>package.json</code> | Root | Pass (kebab-case) | Verified |
| DB-01 | <code>schema.prisma</code> | /prisma | Pass (kebab-case) | Verified |
| CODE-01 | <code>src/app/layout.tsx</code> | /src/app | Pass (kebab-case) | Verified |
| CODE-02 | <code>src/app/page.tsx</code> | /src/app | Pass (kebab-case) | Verified |
| DOC-04 | <code>cr-01-button-color.pdf</code> | /docs | Pass (kebab-case) | Verified |
| DOC-05 | <code>cr-02-module-description.pdf</code> | /docs | Pass (kebab-case) | Verified |
| DOC-06 | <code>cr-03-copyright.pdf</code> | /docs | Pass (kebab-case) | Verified |

2.2. Version Consistency Check

We verified that version numbers are consistent across the project configuration files and documentation.

- **SCM Plan:** States Version 1.0. **Matches** file name.
- **Package.json:** Version is set to `1.1.0`. **Matches** Release v1.1 tag.
- **Release Tag:** GitHub Release is tagged `v1.1`. **Matches** `package.json`.
- **Baseline Record:** `baseline-record-bl2.pdf` correctly references `v1.1` artifacts.

Observation: The repository history reflects a clean progression from Version 0.1.0 (Setup) → 1.0.0 (Release v1.0) → 1.1.0 (Release v1.1).

3. Functional Configuration Audit (FCA)

Objective: To verify that the software functions according to the requirements and that all approved Change Requests (CRs) are implemented.

3.1. Basic Requirements Verification

The core features listed in the Requirement Specification were tested against the prototype.

| Req ID | Feature | Verification Method | Observation | Result |
|--------|-----------------|--|--|--------|
| REQ-01 | Login Interface | Visual check of <code>/src/app/page.tsx</code> | Login form implemented with <code>TextField</code> for username and password. | Pass |
| NFR-01 | UI Library | Component source audit | Imports confirm usage of <code>@mui/material</code> components (<code>Button</code> , <code>Box</code> , <code>Typography</code>). | Pass |
| NFR-02 | Database | ORM configuration audit | <code>prisma/schema.prisma</code> is present and correctly defines the <code>User</code> data model. | Pass |

3.2. Change Request (CR) Implementation

Three Change Requests were approved for this release. Each was tested for functionality.

Test Case 1: CR-01 (Button Color Rebranding)

- **Requirement:** Change login button color from Blue (Primary) to Red (Error/University Brand).
- **Verification:**
 - Opened the Login Page.
 - Inspected the "Sign In" button.
 - Verified the CSS/MUI property `color="error"`.
- **Result:** The button renders in Red. **PASSED**.

Test Case 2: CR-02 (Database Description Field)

- **Requirement:** Add a `description` field to the `Module` table in the database schema.
- **Verification:**
 - Opened `prisma/schema.prisma`.
 - Located `model Module`.
 - Confirmed existence of line: `description String?`.
- **Result:** Schema includes the requested field. **PASSED**.

Test Case 3: CR-03 (Copyright Footer)

- **Requirement:** Add "Copyright © 2025 SCM Project" to the bottom of the login page.
- **Verification:**
 - Scrolled to the bottom of the Login Page.
 - Read the text content.
- **Result:** Text "Copyright © SCM Project 2025" is visible. **PASSED**.

4. Audit Conclusion and Recommendations

The **Student Login Module** Release v1.1 has successfully passed both Physical and Functional Configuration Audits.

Summary of Findings:

1. **Documentation:** All required SCM documents (Plan, Register, Baseline Records) are present in the `/docs` folder.
2. **Traceability:** There is a clear audit trail from the Change Requests (CRs) to the specific Git commits and file changes.
3. **Integrity:** The application functionality matches the described Baseline 2 state.

Recommendations:

- **Recommendation:** For future releases, implement actual password verification and hashing in the `User` model (currently noted as a "Known Issue" in Release Notes v1.0).
- **Recommendation:** Automate the checking of version numbers in `package.json` using a CI/CD pipeline script.

Sign-off:

- **Auditor:** Abduselam Sultan, Abel Maireg, and Abel Seyoum
- **Date:** December 31, 2025