COURSE CODE: SEN401

COURSE TITLE: SOFTWARE CONFIGURATION MANAGEMENT AND MAINTENANCE LAB LECTURER: MR. TAIWO AITALEGBE

GROUP 2

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Software Configuration Management Plan(SCMP)

Purpose

The purpose of this SCMP is to define the processes and conditions which must be followed to manage the configuration items of our travel app, a mobile application that allows users to book flights on any airline.

Scope

This is within the bounds of all components of the software, configuration identification and all configuration items.

SCM ORGANIZATION & ROLES

SCM Manager (Waweru Ezaga): Approves all changes and maintains the configuration processes.

SCM Administrator (Doreen Okoro): The SCM Administrator is responsible for the operational execution of the SCMP. She ensures SCM processes are correctly applied and supports project stakeholders in their use.

Developer (Abdurrahman Yabani): Responsible for creating and committing code and submitting merge requests.

Quality Assurance / Test Engineer (Awazi Arigu): Verifies changes before release or staging an environment.

Configuration Librarian (Ademola Afolabi): The Configuration Librarian controls the storage, identification, and integrity of configuration items and baselines as defined by IEEE SCM practices.

Auditor (Maimunah Haruna): The Auditor conducts configuration audits to verify compliance with the SCMP and IEEE SCM requirements.

CONFIGURATION IDENTIFICATION

Configuration Items

1. Frontend source code
2. Backend source code
3. Database schema
4. Project documentation
5. Third-party integration
6. Configuration files

Each configuration item is to use the following naming convention formats

Document naming format: [ProjectName]_[DocType]_[version].[extension]

Souce code naming format: [ModuleName]_[Function].[extension]

Example:

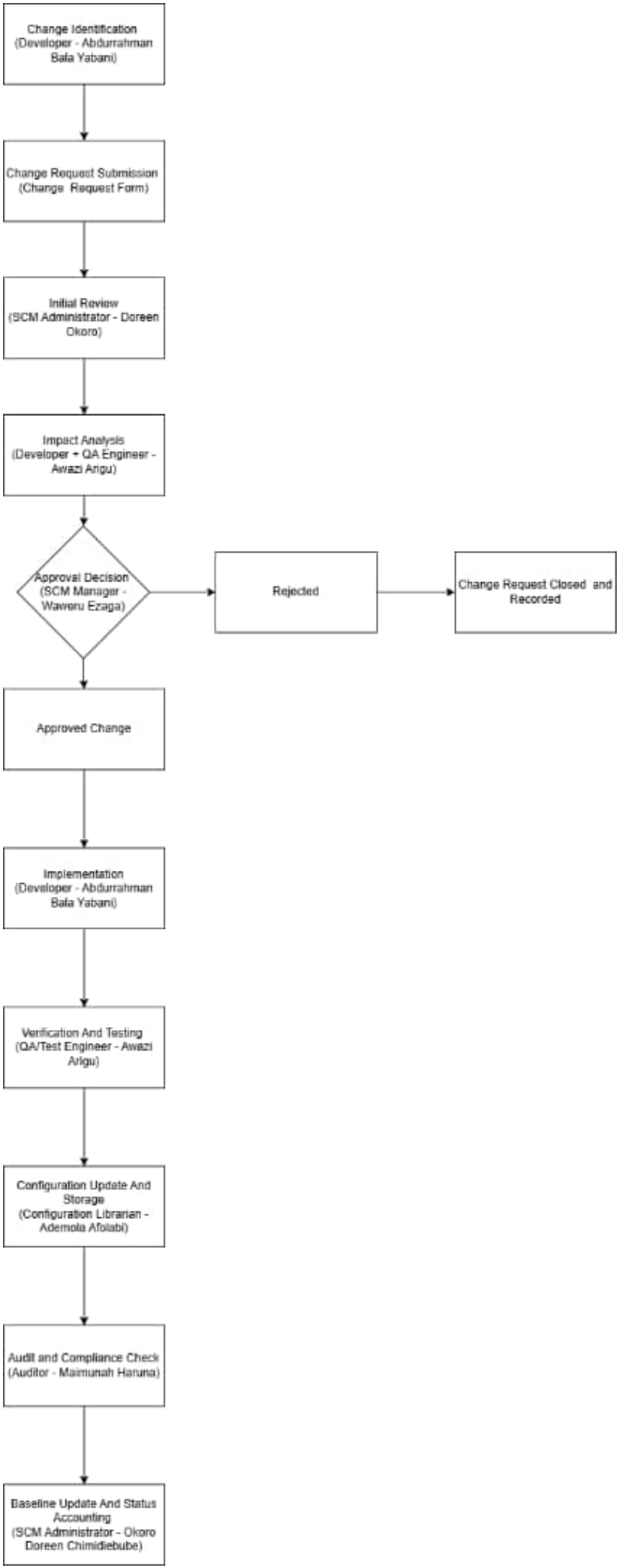
1. Document :
   -SCMSRS_SRS_V1.1.0.docx
   -SCMProject_TestPlan_v1.0.docx
2. Source code :
   -Login_Authentication.java
   -Signup_Authentication.java
   -BookFlight_JobCreation.java

Version Numbering

1.2.1 where 1 is the major version, 2 is the minor and 1 is the patch

MAJOR.MINR.PATCH

CHANGE CONTROL PROCEDURES


Change Identification (Developer - Abdurrahman Bala Yabani)
Change Request Submission (Change Request Form)
Initial Review (SCM Administrator - Doreen Okoro)
Impact Analysis (Developer + QA Engineer - Awazi Arigu)
Approval Decision (SCM Manager - Waweru Ezaga)
Rejected
Change Request Closed and Recorded
Approved Change
Implementation (Developer - Abdurrahman Bala Yabani)
Verification And Testing (QA/Test Engineer - Awazi Arigu)
Configuration Update And Storage (Configuration Librarian - Ademola Afolabi)
Audit and Compliance Check (Auditor - Maimunah Haruna)
Baseline Update And Status Accounting (SCM Administrator - Okoro Doreen Chimidiebube)

STATUS ACCOUNTING & AUDITING

STATUS ACCOUNTING

This is the administrative tracking, documenting, and reporting of all software items formally identified and controlled.

Procedures:

1. Recording Changes: Documenting all changes made to configuration items (CIs), including the "why, when, who, and what" of each modification.

2. Tracking Status: Monitoring the status of CIs as they move through different stages (e.g., development, testing, production, retirement).

3. Managing Change Requests: Keeping records of all change requests (CRs), including their approval status and implementation progress.

4. Generating Reports: Producing periodic reports and documentation, such as change logs, progress reports, and CI status reports, for project stakeholders.

5. Ensuring Traceability: Providing the information needed to trace the software system's life cycle and verify that documentation matches the actual items delivered.

AUDITING

Configuration auditing is a systematic process used to verify that the software products and processes comply with specified requirements, standards, and the SCM plan itself.

Procedures:

- Planning the Audit: Defining the audit's objectives, scope (e.g., specific components, documents, change records), timeline, and audit team.

- Reviewing Status Accounting: The auditor reviews the status accounting logs for completeness and accuracy to ensure that all changes were properly documented and traceable.

- Verifying Change Control: Confirming that all changes were made according to the defined and approved change management process.

- Conducting Physical and Functional Audits:

    + Physical Configuration Audit (PCA): Verifies that all components listed in the configuration records are physically present and properly labelled, and that the documentation accurately describes the software as implemented.

    + Functional Configuration Audit (FCA): Confirms that the software meets its functional requirements as defined in the baseline specifications.

- Documenting and Follow-Up on Corrective Actions: Non-conformances or discrepancies are formally documented, categorized by severity, and followed up on to ensure corrective actions are addressed. Re-audits may be necessary for critical issues.