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| REV | Change history | Zone | Changed By  Date | Approved  Date |
| 01 | Initial Draft | ALL | Varnitha  03/09/20 | Shalini  03/10/20 |
| 02 | Approved dates,Title,part no.,  Software design tools | 06 | Grace  03/09/20 | Shelly  03/10/20 |
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| Drawn  Shalini | Date  Jan. 16, 2017 | Title  Sample Software Configuration Management Plan | |
| Checked  Varnitha | Date |
| Approved  Grace,shelly | Date | Part no.  0006 | Revision  02 |

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# Introduction

The purpose of this document is to provide the software configuration management plan for the Real Estate Application. Using this application the users can view different rental places. Example:- a Condo, A house etc. The process will be implemented in major version releases, with each release containing additional system features, until all specified functionality is in place in the production environment.

# Terms, Acronyms, and Abbreviations

# Admin: An Administrator who has the access to the application and can modify the application at anay point of time Customer: The stakeholder who gives requirements as to how the application they would like to be developed.

# References

# 1. Mastering software quality assurance by Murali chemuturi

# 2. google, Zello

# Standard and regulatory references

# Regulatory reference of the firm

# Software Configuration Management Activities

# Configuration Identification

Configuration identification is the process of identifying the components that define every aspect of a configuration item. A configuration item is an aggregation of hardware, software, or both, that is designated for configuration management and treated as a single entity in the configuration management process. These components are defined in the software configuration plan and then baselined. Software configuration items are not only program code segments but all type of documents according to development, e.g all type of code files, drivers for tests, analysis or design documents, user or developer manuals, system configurations (e.g. version of compiler used), etc...

The configuration items of our project are:

Software configuration items:

1.Languages: Java

2. Software: Visual studio code

3.Server: google Firebase

4. Connections: Firebase

In our project we using the Visual studio code for coding.

|  |  |  |
| --- | --- | --- |
| **New Functionalities Releases** | **Example Description** |  |
| N1 | Security | |
| N2 | Performance | |

|  |  |
| --- | --- |
| **Defect/Bug Fixes Example Description** | |
| n001 | Causing problem while connecting java software (Neon Eclipse) to firebase.(Real time Database) |

Document version scheme:

1. Project task statement version A01
2. Requirement checklist version 02
3. Software requirement documents version 02
4. Software development plan version A01
5. Quality assurance plan version 02
6. Requirement traceability matrix version 03
7. Test plan and Test cases version A02
8. Risk management documents version 02

# Configuration Control

Configuration change control is a set of processes and approval stages required to change a configuration item's components and then to re-baseline them

Defines the following steps

* Approve specific procedures for encouraging customers to identify improvements and submit change requests.
* Agree on criteria for prioritizing, evaluating, and approving or disapproving change requests
* Approve a prioritized list of changes to be made on the Application current production version
* Set schedules for issuing each new version and ensure that each new version is adequately tested and documented before issuance.

# Change Control

* A misrepresentation discovered during the analysis of a text
* A coding error found during the walk-through of a piece of source code
* A proposal for improvement resulting from a customer's new idea during project work
* A mistake identified in the integration check
* A code change required due to an upgrade to a new version of the system-supporting middleware, which may not be backward compatible

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| --- | --- | --- | --- | --- | --- |
| CI | Originated name | Date of request | Indication of urgency | The need for a change | Description of the requested change |
| Visual studio code | shelly | 03/08/20 | Critical | Password field should be alpha numeric | Before it was only with the alphabet |
| Firebase | Varnitha | 03/09/20 | Critical | Application should be in running condition | Application only get connected when the server is updated |

# Evaluation of the Change Control

• While testing the login page, we got to know that the password field only took numerical value that is supposed to take both numerical and alphabetical value, so we made changes in password validation (character specification) coding.

• We got to know while connecting to the database that we are getting errors that need to be changed to the latest version about the site. We modified the server latest version.

# Change Control Approval or Disapproval

The Configuration Control Board provides the analysis of the changes and it is up to them to decide whether or not to approve or reject the requested changes.

# Implementing Approved Change Controls

Admin verifies and approves the change request forms.

He assigns them to a specific team to make changes and fix them.

The changes are then fully tested and verified in the test environment.

Then the changes made were released into the project.

# Configuration Status Accounting

When a development team that has worked from reference design and eventually introduced changes requests are made the design is substantially different. Developers need to rework code many times and so as to prevent this scenario, the software developers know the configuration status of the specification document.

• The product name, version number and release date of the software packages which are updated or added to the project are noted.

• All customer records of changing request form will be stored as a log.

• The status of all configuration objects for any further verification shall be registered.

• Hardware modifications are tracked by serial number, physical location, IP address and list of components installed.

• All the things that are updated will be documented in the TSR Technical Status Report of all the documentations.

# Configuration Audits

A Physical Configuration Audit (PCA) should be accomplished on the Product Baseline (PBL) for each release to verify its authenticity before the Full Deployment Decision to verify compliance with the stated requirements and to ensure that all life-cycle documentation supports the added functionality.

1. Project Manager: Plan Configuration Audits.

Select audit team members. The audit team must include the Project Configuration Manager, Project Manager, and customer representative. Other stakeholders may also serve as members of the audit team. Notify the Project Configuration Manager of upcoming PCA reviews.

2. Project Configuration Manager: Gather audit review materials.

Distribute the work products and facilitate the PCA for the assigned projects. Gather all applicable material for review. Prepare PCA Checklists.

3. Project Configuration Manager: Support audit.

Ensure audit team members are aware of their responsibilities. Coordinate the PCA activities on the formal audit agenda. Gather all audit interim and finalized checklists at the end of the day for audits that cover more than one day. Review audit status with the audit team at the end and beginning of each day when audit covers more than one day. Consolidate audit results upon completion of the audit.

4. Project Manager: Ensure the accomplishment of the PCA.

Ensure the PCA verifies the design of the CI matches the design documentation.

To conduct a PCA, given inputs is required:

* List of approved changes to the CI

5. Audit Team: Conduct PCA.

Each CI must be audited and the audit team members must perform the following tasks:

* Record the differences between the CI being audited and its configuration management records in the PCA Checklist as comments.
* Review test plans, test scripts and test reports as well as product specifications to ensure the product complies with its design requirements.
* Ensure the correction of the discrepancies noted during the FCA on each CI.
* Ensure all CI design descriptions are defined consistently.
* Ensure all applicable system documentation is complete.
* Certify each CI accepted complies with the specifications and is included in release package.
* Compile the PCA checklist.

6. Project Configuration Manager: Capture and report audit findings.

The Project Configuration Manager will use the PCA checklist to ensure that all tasks are completed during the audit and all findings are documented. The PCA checklist and any support material used to document the audit results must be placed under configuration control and made available to audit team members.

# Build Environment

Describe the GitHub structure (branches, naming conventions and software tagging process). Describe the security and permission access to the environment.

# Build Process

Describe the software build schedule process.

Describe the process for software build logs (which requirements are included in each build).

Describe the process of logging issues/bugs in build.

# Roles and Responsibilities

**Configuration Manager** - Shalini

The configuration manager provides the overall Configuration Management (CM) infrastructure and environment to the product development team. The configuration manager is also responsible for writing the CM Plan and reporting progress statistics based on change requests.

**Change control board member(s)**- Shelly

The board is responsible for reviewing and analyzing change requests. Once a change request is submitted, this is analyzed by the CCB. Impacts of the change on the project must also be assessed. Based on the impacts and alternative solutions to implement the change. Change control board approves or rejects changes.

**Developer** - Varnitha

Creates promotions triggered by change requests or the normal activities of development.

The developer checks in changes and resolves conflicts.

**Auditor** – Grace

Ensures compliance with established internal control procedures by examining records, reports, operating practices, and documentation. Verifies assets and liabilities by comparing items to documentation. Completes audit workpapers by documenting audit tests and findings.