

PROJECT DOCUMENTATION

WORK PACKAGE

Project: **Certichain - A secure certificate verification system for Institute Santha Rita**

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Author: I. Hassaan (Start-up manager)

Owner: Dr. Yasas Jayaweera (Project Executive)

Client: Mr. Ravi Muditha

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1 Work Package History

1.1 Document Location

This document is only valid on the day it was printed.

The source of the document will be found on the project's PC in location.

1.2 Revision History

Date of this revision:

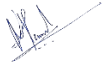
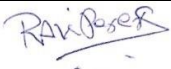
Date of Next revision:

Revision date	Previous revision date	Summary of Changes	Changes marked
08/02/2024		First issue	

1.3 Approvals

This document requires the following approvals.

Signed approval forms are filed in the Management section of the project files.

Name	Signature	Title	Date of Issue	Version
Dr. Yasas Jayaweera		Project board	09/02/2024	1.0
A. A. M. N Perera		Project manager	08/02/2024	1.0
Mr. Ravi Muditha		Client	08/02/2024	1.0

1.4 Distribution

This document has been distributed to:

Name	Title	Date of Issue	Version
A. A. M. N. Perera	Project Manager	08/02/2024	1.0
I. Hassaan	Start-up manager	08/02/2024	1.0
Nethrough Wickramasinghe	Quality manager	08/02/2024	1.0
Shenuka Fernando	Risk Manager	08/02/2024	1.0
P. A. Gunawardhana	Scheduling manager	08/02/2024	1.0

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3 Purpose

Work packages are critical for clearly defining and assigning tasks or deliverables to team leads and members. They provide a systematic approach to organize and manage the work items and outputs produced during a sprint.

The objectives of work packages in this context include - precise task definition, responsibility assignment, deliverable identification, and collection of relevant information. Work packages enable seamless handover of work from project manager to team by providing documented bundles of information.

By issuing formal work packages, the project manager can transfer ownership of tasks and deliverables to team members, empowering them to progress independently with the assigned items. This methodical decomposition and distribution of work enables structured execution while maintaining transparency.

4 Work Package Description

This planning technique provides a detailed explanation of the work that needs to be done, which helps with decision making and the completion of significant project milestones. More details about who completed the job, when it will be finished, and how long it will take are provided. Each of these packages should be sufficiently controllable to enable the project manager to plan, budget, monitor, and work packages in addition to estimating the project's time and cost.

5 Product Description(s)

Certichain is a blockchain-based certificate management system designed for Santha Rita Institute. It provides a shared immutable ledger for certificate data while offering tailored capabilities to administrators and students.

6 Techniques / Processes / Procedures

Certichain leverages CELO blockchain for decentralized and tamper-proof certificate storage. For the web application front-end, HTML, CSS, JavaScript with libraries like jQuery and Ajax are used along with Bootstrap 5 framework.

The backend is built using PHP programming language. MySQL database is employed for supplementary data storage needs.

Key integrations include the Tatum library for interfacing with the blockchain and IPFS for decentralized file storage.

7 Quality Checking Method

- **Requirements Review:** Detailed evaluation of project documentation by quality personnel to validate completeness and accuracy.
- **Client Inputs:** Incorporate feedback from client on scope, expectations, and parameters to align project execution.
- **Expert Assessments:** Obtain reviews from seasoned professionals to identify flaws and optimization areas based on industry best practices.
- **Risk Assessment:** Conduct brainstorming session focused on risk identification to highlight potential issues and mitigation plans.
- **Team Appraisal:** Facilitate collaborative reviews within project team to enhance cooperation and ensure unified understanding.
- **QA Protocols:** Execute standardized tests and checks tailored to critical phases like deployment to uphold quality standards.

8 Configuration Management Requirements

Sub-Products

- Blockchain Network Infrastructure
- Web Application Frontend
- Administrator Portal
- Student Portal
- Certificate Storage and Authentication Functions.
- Existing System Integration Modules.

Dependent Products

The following sub-products are dependent on other products:

- Web Application Frontend is dependent on Blockchain Network Infrastructure
- Administrator Portal and Student Portal are dependent on Web Application Frontend
- Certificate Storage and Authentication Functions are dependent on Blockchain Network Infrastructure and Web Application Frontend
- Existing System Integration Modules are dependent on Certificate Storage and Authentication Functions

The Blockchain Network Infrastructure and Web Application Frontend are core platform components that enable the other sub-products to function. The Portal interfaces leverage the underlying frontend and blockchain infrastructure. And the Integration Modules rely on the certificate management capabilities provided by the blockchain network and frontend application.

By identifying these dependencies, we can coordinate development and testing of the interfacing components appropriately in line with the overall product architecture and integration needs.

9 Stage Plan Extracts

<https://drive.google.com/drive/folders/1tbUfxK1KpoX12gwCjdCL8P5So-hnDzl6>

10 Sign – Off Requirements

Project Manager – A.A.M.N Perera

11 Work Return Arrangements

Twice a month, team members provided status updates and reports to demonstrate the project's advancement and schedule the return of work.

12 Completion

The Certichain project manager will formally advise key institutional stakeholders in writing upon the successful completion of all scope items outlined in the stage plan.

An official project completion report will be submitted by the project manager to the Santha Rita Institute leadership team and system steering committee. This will include:

- A closing statement affirming 100% fulfilment of the agreed functional and technical requirements.
- Sign-off from solution architects, development leads and testing managers.
- Summary of final product deliverables, deployment, and adoption resources.
- Documentation of acceptance criteria matched against finished solution.
- Request for final project acceptance and closure from Santha Rita Institute

This formal advisory will notify institute leadership on the conclusion of the Certichain blockchain project based on verification that committed deliverables meet all defined quality parameters for the certificate management system. It enables the transition from successful project delivery to platform adoption across the institution for credential workflows.

13 Independent Quality Checking Arrangements

The quality manager employs rigorous validation testing across all project artifacts including applications, reports, and documentation. Evaluation results are compiled in periodic assessments presented to leadership and clients to enable transparent oversight.

Expert reviews of documents, features and other deliverables are conducted through board meetings for additional perspective. Clients are provided access to quality dashboards and test reports during collaborative working sessions to instil confidence.

By taking an all-encompassing approach to quality control and facilitating multi-level assessments, the project aims to uphold highest standards throughout the development lifecycle.

14 Reporting

Weekly reports and logs are submitted via Google Drive to the project board, and board meetings will be held physically held on campus.

15 Problem Handling and Escalation

A risk/issue log will be maintained with clear classification of risks by priority, impact, and cause. Potential risks that may occur over the course of the project are pre-emptively identified and assessed by the Risk Manager. Corresponding mitigation strategies and contingency plans are defined during risk response planning sessions.

Team members are required to report emerging and potential issues to the Risk Manager for inclusion and tracking in the log.

If any of the assumed risks get manifested, the mitigation plans formulated earlier are to be immediately activated by the team. The Risk Manager monitors their effectiveness through the issue log.