

**FUNIX UNIVERSITY**

**Capstone Project Report**

**Report 2 – Project Management Plan**

– Hanoi, Jan 2025 –

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# I. Record of Changes

|  |  |  |  |
| --- | --- | --- | --- |
| Date | A\* M, D | In charge | Change Description |
| 20/01/2025 | A\* | dainpfx00342 | Create the report |
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\*A - Added M - Modified D - Deleted

# II. Project Management Plan

## 1. Overview

### 1.1 Cost & Time Estimations

|  |  |  |  |
| --- | --- | --- | --- |
| **#** | **Work Package** | **Est. Effort**  **(pds)** | **Deadline** |
| ***1*** | ***Stage 1: Project Initiating (week 1)*** | ***3*** | ***23/01/2025*** |
| 1.1 | Report 1 (Project Introduction) | 3 | 23/01/2025 |
| ***2.*** | ***Stage 2: Project Planning & Initial Requirements (weeks 2-3)*** | ***12*** | **04/02/2025** |
| 2.1 | Report 2: Project Management Plan v1.0 | 4 | 27/01/2025 |
| 2.2 | Report 3: SRS v0.9 (Overall Requirement) | 5 | 01/02/2025 |
| 2.3 | Vertical Prototypes (Code Demo) | 3 | 04/02/2025 |
| ***3*** | ***Stage 3: Software Design (weeks 4-5)*** | ***14*** | **18/02/2025** |
| 3.1 | Vertical Prototypes (POC, or Proof Of Concepts) | 4 | 08/02/2025 |
| 3.2 | Report 4: SDS v1.0 (High Level Design Specifications) | 3 | 11/02/2025 |
| 3.3 | Report 5: Test Planning (ref Report5\_Test Documentation) | 3 | 14/02/2025 |
| 3.4 | Report 3: SRS v1.0 (Detailed Requirements for Iteration 1) | 4 | 18/02/2025 |
| ***4*** | ***Stage 4: Implementation (weeks 6-11)*** | ***42*** | **01/04/2025** |
| 4.1 | Implementation Iteration 1 (weeks 6-7) | 14 | 04/03/2025 |
| 4.1.1 | Report 4: Detailed Design Specifications (SDS) v1.1 | 3 | 21/02/2025 |
| 4.1.2 | Code Package & Unit Testing Report | 4 | 25/02/2025 |
| 4. 1.3 | Report 5: Integration Test Cases | 2 | 27/02/2025 |
| 4. 1.4 | Report 5: Integration Test Report | 2 | 01/03/2025 |
| 4.1.5 | Report 3: SRS v1.1 (Detailed Requirements for Iteration 2) | 2 | 03/03/2025 |
| 4.1.6 | Software Package Version 1 | 1 | 04/03/2025 |
| 4.2 | Implementation Iteration 2 (weeks 8-9) | 14 | 18/03/2025 |
| 4.2.1 | Report 4: Detailed Design Specifications (SDS) v1.2 | 3 | 07/03/2025 |
| 4.2.2 | Code Package & Unit Testing Report | 4 | 11/03/2025 |
| 4. 2.3 | Report 5: Integration Test Cases | 2 | 13/03/2025 |
| 4. 2.4 | Report 5: Integration Test Report | 2 | 15/03/2025 |
| 4.2.5 | Report 3: SRS v1.2 (Detailed Requirements for Iteration 3) | 2 | 17/03/2025 |
| 4.2.6 | Software Package Version 2 | 1 | 18/03/2025 |
| 4.3 | Implementation Iteration 3 (weeks 10-11) | 14 | 01/04/2025 |
| 4.3.1 | Report 4: Detailed Design Specifications (SDS) v1.3 | 3 | 21/03/2025 |
| 4.3.2 | Code Package & Unit Testing Report | 4 | 25/03/2025 |
| 4.3.3 | Report 5: Integration Test Cases | 2 | 27/03/2025 |
| 4.3.4 | Report 5: Integration Test Report | 2 | 29/03/2025 |
| 4.3.5 | Report 5: System Test Cases | 2 | 31/03/2025 |
| 4.3.6 | Software Package Version 3 | 1 | 01/04/2025 |
| ***5*** | ***Stage 5: Verification & Validation (weeks 12-13)*** | ***12*** | **13/04/2025** |
| 5.1 | Report 5: System Test Report | 3 | 04/04/2025 |
| 5.2 | Report 5: Acceptance Test Support | 3 | 07/04/2025 |
| 5.3 | Report 6: User Guides (Installation Guides, User Manuals) | 2 | 09/04/2025 |
| 5.4 | Final Software Package (Documents, Source Codes, etc.) | 4 | 13/04/2025 |
| ***6*** | ***Stage 6: Closing (week 14)*** | ***2*** | **15/04/2025** |
| 6.1 | Report 7: Final Project Report | 1 | 14/04/2025 |
| 6.2 | Presentation File | 1 | 15/04/2025 |

98 man-days

### 1.2 Project Objectives

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **#** | **Metric** | **Unit** | **Planned** | **Actual** | **Notes / References** |
| 1 | Effort Usage | Person-day | 98 |  |  |
| 2 | Review Defects | No of defects | 8 |  |  |
| 3 | Unit Test Defects | No of defects | 50 |  |  |
| 4 | Integration Test Defects | No of defects | 30 |  |  |
| 5 | System Test Defects | No of defects | 25 |  |  |
| 6 | Acceptance Test Defects | No of defects | 0 |  |  |
| 7 | Timeliness | % | 100% |  |  |
| 8 | Requirement Completeness | % | 100% |  |  |

### 1.3 Project Risks

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **#** | **Risk Description** | **Impact** | **Possibility** | **Response Plans** |
| 1 | **Difficulties in technology integration** | Medium | Medium | Select appropriate frameworks and technologies (e.g., Angular, Spring Boot). Train the development on new technologies. |
| 2 | **Poor quality data from farms** | High | Medium | Create guidelines for farms when uploading products and standardize the data entry process. |
| 3 | **System unable to handle high traffic** | High | Low | Design a scalable system, perform performance testing, and optimize the database. |
| 4 | **Changing user requirements** | Medium | High | Adopt Agile methodology to accommodate requirement changes in development iterations. |
| 5 | **Unexpected Personal Challenges** | Medium | Medium | Set buffer time in the project schedule to handle delays. Prioritize critical tasks to ensure core functionality is delivered even with limited time. Maintain regular progress tracking and adjust plans dynamically if needed. |

## 2. Management Approach

### 2.1 Quality Management

To improve Project quality, we plan to use several approaches as follows:

• Reviewing: Conduct review, inspection, and evaluation of key project documents. Besides, there is a design review, a source code review, and a function view to ensure the project is built according to the basic rules.

• Unit Testing: Members perform unit tests for their own modules to ensure that basic errors do not occur

• Integration Testing: Conduct integrated testing of the combination of components and modules in the system to ensure that they can be compatible with each other without causing errors, and overcome problems of asynchrony between modules in the system.

• Performance Testing: Evaluate and test the system's operability and performance, test the system's load capacity in many different situations. To ensure that the system has a good load capacity, meeting the requirements for processing speed and response time.

• Security Testing: Test and verify the security of data, access rights, authentication and other security methods in the system.

• System Testing: Perform comprehensive testing to ensure operation, performance, and meet set quality requirements.

### 2.2 Project Training Plan

|  |  |  |
| --- | --- | --- |
| Training Area | Participants | When, Duration |
| Java Spring Boot | Nguyễn Phước Đại - dainpfx00342 | 21/01/2025, 5 man-days |
| Git, Github | Nguyễn Phước Đại - dainpfx00342 | 27/01/2025 , 3 man-days |

## 3. Responsibility Assignments

3.1 Team and Structure

**

3.2 Role & Responsibility

|  |  |  |
| --- | --- | --- |
| **Role** | **Name** | **Responsibilities** |
| **Supervisor** | Phạm Đức Thắng | * Give instruction to the project team * Verify deliverables * Supervise project team’s status |
| **Developer and Tester** | Nguyễn Phước Đại | * Create document * Implement product * Design Architecture * Planning * Testing |

## 4. Project Communications

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Communication Item** | **Who/ Target** | **Purpose** | **When, Frequency** | **Type, Tool, Method(s)** |
| Weekly Meeting | All team | Guide to do project, progress monitoring and tracking | Every weekend | Goolge meet |

## **5. Configuration Management**

### 5.1 Document Management

All project documents are managed and stored on Google Drive. This ensures centralized access, easy collaboration, and version control. Team members can view, edit (if permitted), and download documents anytime and anywhere.

### 5.2 Source Code Management

The project’s source code is stored in a GitHub repository. The repository is structured to maintain clarity and organization, with proper use of branching strategies (e.g., main, develop, feature) for tracking changes. Access permissions are configured to ensure security while allowing collaboration. Pull requests are used to review and merge changes to the main branch, maintaining code quality.

### 5.3 Tools & Infrastructures

|  |  |
| --- | --- |
| **Category** | **Tools / Infrastructure** |
| **Technology** | CSS/Bootstrap (Frontend), Spring Boot (Backend) |
| **Database** | MySQL |
| **IDEs/Editors** | Intellij IDEA 2024 2.5 |
| **Diagramming** | StarUML, DrawIO |
| **Documentation** | Libre Office, Google Docs/Sheets/Slides |
| **Version Control** | GitHub (Source Codes), Google Drive (Documents) |
| **Deployment server** | Local server |
| **Project management** | Libre Spreadsheet (Scheduling) |