Group01

Tạp Hóa Chuối Bì To
Software Development Plan (Small Project)
Version <1.0>

Revision History

Date	Version	Description	Author
09/Nov/2022	1.0	Release	Lê Hồ Bảo Nhật Trần Minh Hiệp Nguyễn Thiện Hoàng Trí Ninh Trần Hoàng Quân

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Software Development Plan (Small Project)

1. Introduction

The introduction of the **Software Development Plan** provides an overview of the entire document.

1.1 Purpose

The purpose of the *Software Development Plan* is to gather all information necessary to control the project. It describes the approach to the development of the software and is the top-level plan generated and used by managers to direct the development effort.

The following people use the *Software Development Plan*:

- The **project manager** uses it to plan the project schedule and resource needs and to track progress against the schedule.

- **Project team members** use it to understand what they need to do when they need to do it, and what other activities they are dependent upon.

1.2 Scope

This *Software Development Plan* describes the overall plan to be used by the "Tạp Hóa Chuối Bì To" project, including the deployment of the product.

The plans as outlined in this document are based upon the product requirements as defined in the *Vision Document*.

1.3 Overview

This *Software Development Plan* contains the following information:

Project Overview — provides a description of the project's purpose, scope, and objectives. It also defines the deliverables that the project is expected to deliver.

Project Organization — describes the organizational structure of the project team.

2. Project Overview

2.1 Project Purpose, Scope, and Objectives

Many people nowadays do not know anywhere to buy safe food, especially vegetables. They, therefore, have to buy necessary foods from traditional markets that cannot give customers any information about how these foods were grown or where they came from. Consequently, consuming these products consistently can lead to various lethal diseases like stomach cancer, and thus, this phenomenon can put the medical care system in trouble.

To alleviate this situation, our team has come up with an online shopping website called "Tạp Hóa Chuối Bì To" which provides everyone with an easier, more convenient alternative way to buy clean, nutritious vegetables. This project is a measure to protect our community from several unwanted health problems.

Our plan is to build a shopping website about purchasing safe, home-grown vegetables for everybody regardless of their age or gender including:

- People are too busy working all day to go to markets, they can just sit at their office and order a bunch of vegetables.

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- Introverts who are not comfortable about going to busy markets

- Housewives who want their family to have healthy meals

- Gymers who are taking steroids which are damaging their organs; therefore they want to consume safe vegetables to minimize the effect on their health.

- Vegetarians (such as monks, Buddhists, etc) who cannot live without fresh vegetables in their meals.

2.2   Assumptions and Constraints

- **Time requirement**: The project must be completed in 12 weeks.
- **Budget**: We run the project with no budget.
- **Staff**: Our team has 4 members together creating the website.
- **Equipment**: Laptops and PCs to manage everything.
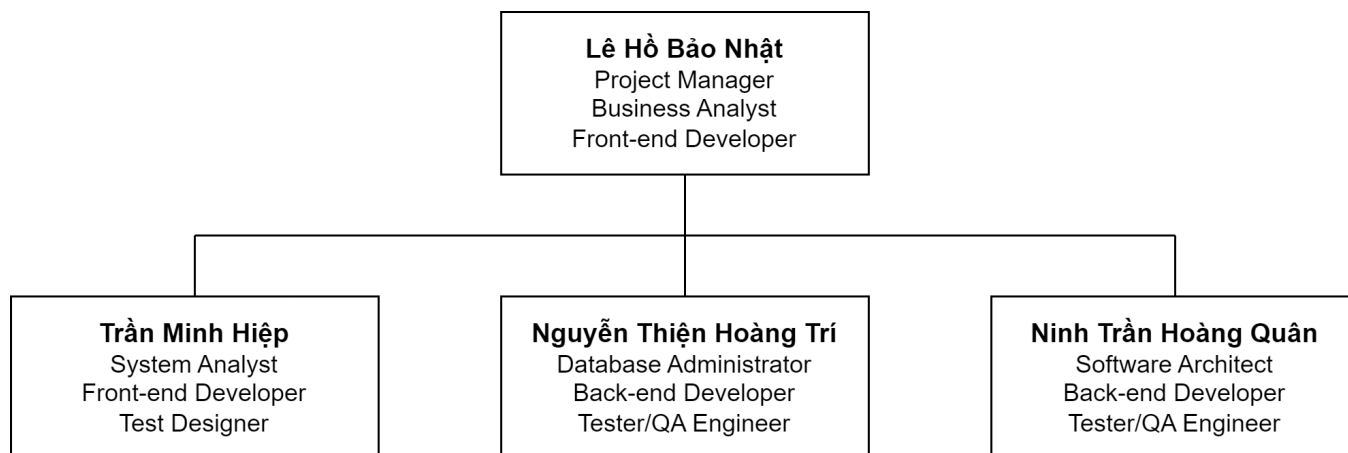
2.3   Project Deliverables

- Deliverables for each project phase are identified in the Development Case.
- Our final deliverable is an online shopping website.
- Deliverables are delivered towards the end of the iteration, as specified in section *4.2.4* Project Schedule.

3.   Project Organization

3.1   Organizational Structure

Project organization structure

```
              ┌──────────────────────┐
              │    Lê Hồ Bảo Nhật     │
              │    Project Manager    │
              │   Business Analyst    │
              │  Front-end Developer  │
              └──────────────────────┘
```

Trần Minh Hiệp	Nguyễn Thiện Hoàng Trí	Ninh Trần Hoàng Quân
System Analyst	Database Administrator	Software Architect
Front-end Developer	Back-end Developer	Back-end Developer
Test Designer	Tester/QA Engineer	Tester/QA Engineer

Project members mapped to roles

Member	Role	Allocation
Trần Minh Hiệp	System Analyst	100%
	Front-end Developer	50%
	Test Designer	75%
Lê Hồ Bảo Nhật	Project Manager	100%
	Business Analyst	75%
	Front-end Developer	50%
Nguyễn Thiện Hoàng Trí	Database Administrator	100%
	Back-end Developer	50%
	Tester/QA Engineer	50%
Ninh Trần Hoàng Quân	Software Architect	100%
	Back-end Developer	50%
	Tester/QA Engineer	50%

3.2 Roles and Responsibilities

Role	Responsibility
Project Manager	- Responsible for managing the overall Project Management - Establishing a set of practices that ensure the integrity and quality of project artifacts - Ensuring stakeholder satisfaction which means minimizing uncertainty, avoiding any unwanted surprises, and involving their clients in the project. - Organizing and motivating a project team. - Ensuring all members submitting their works on time.
System Analyst	- Maintaining and upgrading existing systems as required - Designing new computer systems and frameworks - Troubleshooting technical issues - Creating system guidelines and manuals for the organization. - Structuring and prioritizing business requirements and communicating plans with stakeholders for review and approval
Business Analyst	- Identifying and prioritizing the organization's functional and technical needs and requirements - Understanding business strategies, goals, and requirements - Planning enterprise architecture (the structure of a business) - Forecasting, budgeting, and performing both variance analysis and financial analysis
Software Architect	- Establishing the overall structure for each architectural view: the decomposition of the view, the grouping of elements, and the interfaces between these major groupings - Evaluating, identifying and developing software solutions - Planning, tracking and scheduling software deliverables - Locating and directing solutions for critical challenges involving software and hardware interface
Database Administrator	- Working with database software to find ways to store, organize and manage data - Keeping databases up to date and managing database access - Helping with database design and development - Ensuring that databases meet user requirements - Testing and modifying databases to ensure that they operate reliably
Front-end Developer	- Determining the structure and design of web pages. - Developing features to enhance the user experience. - Optimizing web pages for maximum speed and scalability. - Striking a balance between functional and aesthetic design. - Building reusable code for future use.
Back-end Developer	- Compile and analyze data, processes, and codes to troubleshoot problems and identify areas for improvement. - Developing ideas for new programs, products, or features by monitoring industry developments and trends. - Participating in continuing education and training to remain current on best practices, learn new programming languages, and better assist other team members.
Test Designer	- Preparing test strategies, test cases for each part of the requirement and also doing the

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	testing - Testing plan creation and executing test scripts - Working with software developers and project support teams and identifying business requirements and mapping to test cases
Tester/QA Engineer	- Responsible for executing testing, including test set-up and execution, evaluation of test execution and recovery from errors, and assessing the results of test and logging identified defects.

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4. Management Process

4.1 Project Estimates

None

4.2 Project Plan

Note: Our plan can be modified in the future due to changes.

This project is divided into 6 Sprints (6 PAs)

4.2.1 Training Period

Starting date: 22/10/2022

Due date: 19/11/2022

Output: Knowledge about the technologies that our project requires.

Tasks:

1. MongoDB: Trần Minh Hiệp
2. ExpressJs: Nguyễn Thiện Hoàng Trí
3. NodeJs: Ninh Trần Hoàng Quân
4. ReactJs: Lê Hồ Bảo Nhật, Trần Minh Hiệp

4.2.2 Project Assignment 1
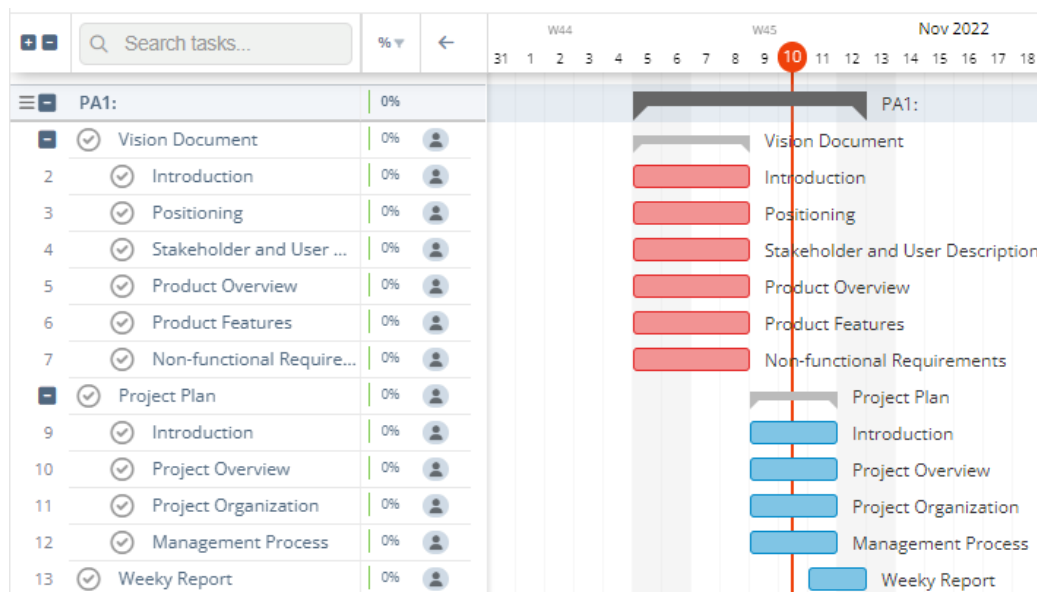
Starting date: 22/10/2022

Due date: 29/10/2022

Output: Documents about the project plan and vision document.

Tasks:

1. Project Plan:
   - Introduction: Trần Minh Hiệp
   - Project overview: Trần Minh Hiệp
   - Project Organization: Ninh Trần Hoàng Quân, Nguyễn Thiện Hoàng Trí
   - Management Process: Lê Hồ Bảo Nhật
2. Vision Document:
   - Introduction: Lê Hồ Bảo Nhật
   - Positioning: Lê Hồ Bảo Nhật
   - Stakeholder and User Description: Nguyễn Thiện Hoàng Trí
   - Product Overview: Ninh Trần Hoàng Quân
   - Product Features: Trần Minh Hiệp
   - Non-functional Requirements: Trần Minh Hiệp
3. Gantt chart:

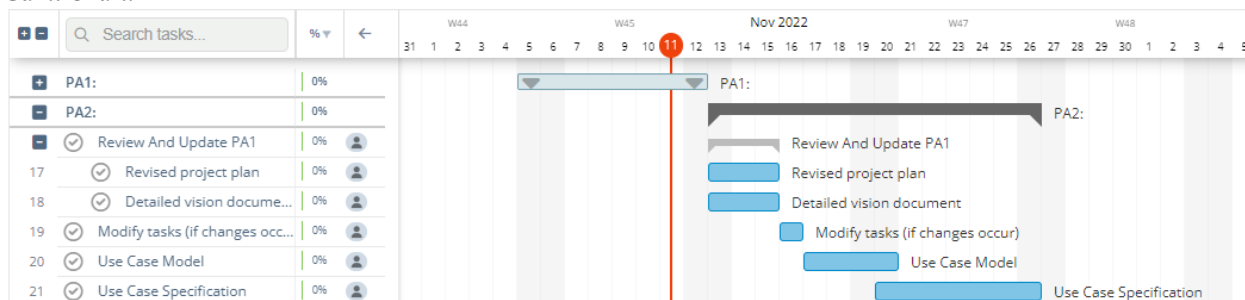| Tạp Hóa Chuối Bì To	Version: <1.0>
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4.2.3 Project Assignment 2

Starting date: 13/11/2022

Due date: 26/11/2022

Output: Updated PA1's documents, Use-case specification

Tasks:

1. Modify PA1's documents: All members
2. Use-case model: Ninh Trần Hoàng Quân, Trần Minh Hiệp
3. Use-case specification: All members
4. Gantt Chart:

4.2.4 Project Assignment 3

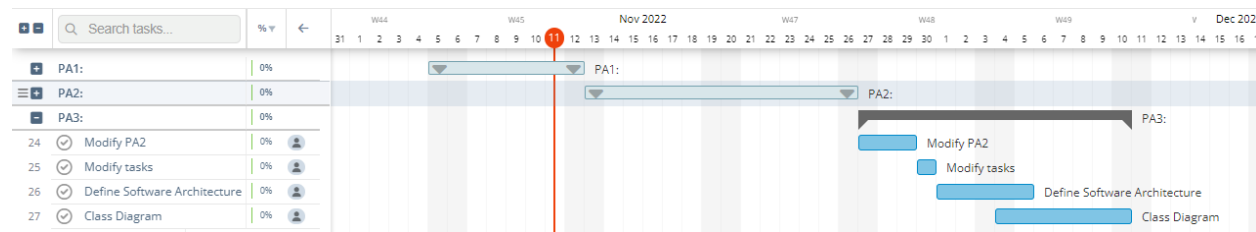Starting date: 27/11/2022

Due date: 10/12/2022

Output: Updated PA2's documents, software architecture, and class diagram documents,

Tasks:

1. Modify PA2's documents: All members
2. Define software architecture: Lê Hồ Bảo Nhật, Nguyễn Thiện Hoàng Trí, Ninh Trần Hoàng Quân
3. Class diagram: All members

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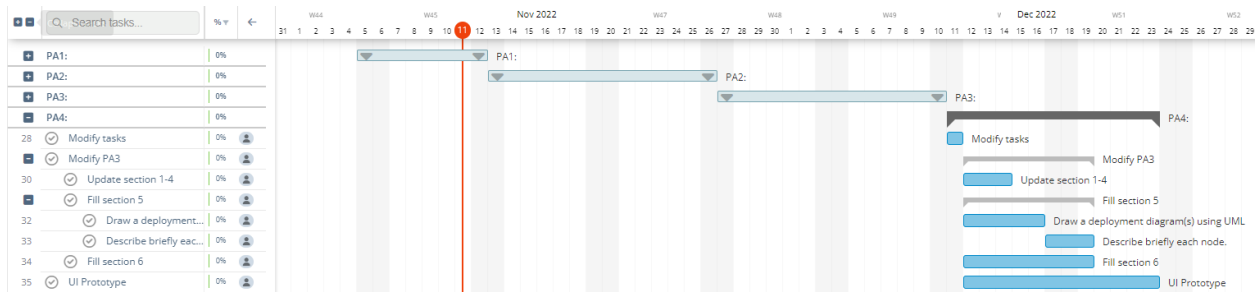4. Gantt chart:

4.2.5 Project Assignment 4

Starting date: 11/12/2022

Due date: 26/12/2022

Output: New SAD, UI prototype

Tasks:

1. Update sections 1-4: Trần Minh Hiệp
2. Fill section 5: Nguyễn Thiện Hoàng Trí
3. Fill section 6: Ninh Trần Hoàng Quân
4. UI prototype: Lê Hồ Bảo Nhật, Trần Minh Hiệp
5. Gantt chart:

4.2.6 Project Assignment 5

Starting date: 27/12/2022

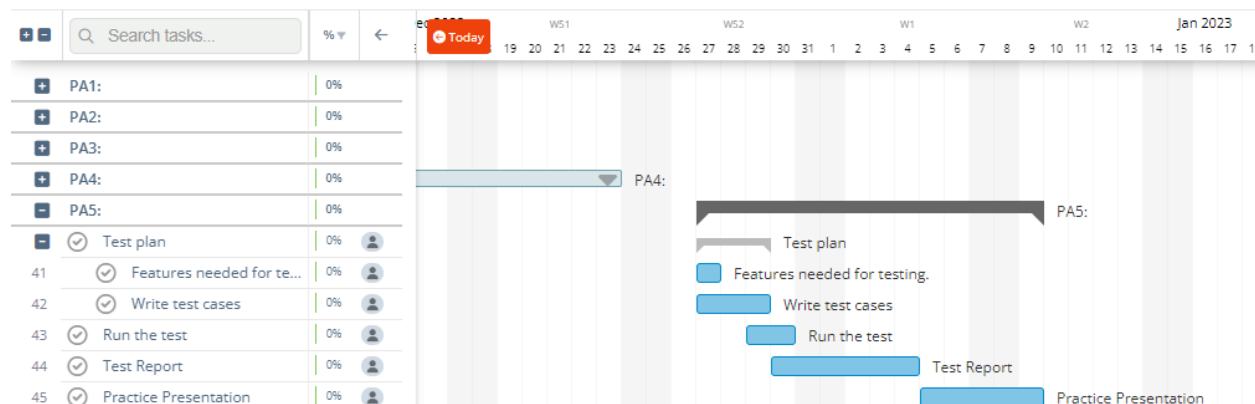Due date: 10/01/2023 || 17/01/2023 (Depending on mentors)

Output: Test Report.

Task:

1. Listing the features needed to test: All Members
2. Write test cases: All Members (Cross-testing)
3. Run the test: Trần Minh Hiệp, Nguyễn Thiện Hoàng Trí, Ninh Trần Hoàng Quân
4. Test report: All Members
5. Practice Presentation: All Members

Gantt chart:

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4.2.7 Coding Phase

Starting date: 20/11/2022

Due date: 02/01/2023
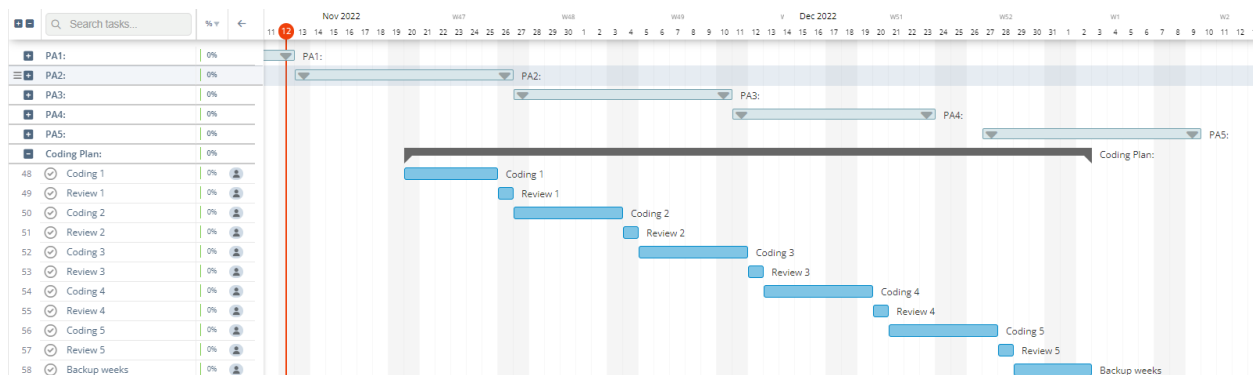
Output: Web project.

Tasks:

Front-end: Lê Hồ Bảo Nhật, Trần Minh Hiệp

Back-end: Ninh Trần Hoàng Quân, Nguyễn Thiện Hoàng Trí

MongoDB: Trần Minh Hiệp

1. Gantt chart:

4.3 Project Monitoring and Control

4.3.1 Requirements Management

The requirements for this system are captured in the Vision document. Requested changes to requirements are captured in Change Requests and are approved as part of the Configuration Management process.

4.3.2 Reporting and Measurement

None.

4.3.3 Risk Management

Risk Ranking (High, Medium, Low)	Risk Description	Impact	Mitigation Strategy and/or Contingency Plan
High	Do not have enough knowledge to code this project	Functions of the product may not meet the user's requirements	Have a month to train all the technologies needing for this project
High	Do not have experience in professional working process	The project can not be submitted on time	We choose to use the incremental development process, which allows us to upgrade and modify our works when a new PA provided
Medium	User's functions changes	Make our works delay or even have to change the previous plan or structure	Brainstorm carefully about the feasibility of each function. If changes occur, our team will have a quick meeting to tackle the situation
Medium	Underestimated the time which requires to develop our project	Project can miss some functions.	We will have a long period for coding and also backup weeks.
Medium	Member has their own problems; thus, he/she delays workflow.	Our project can not meet our expectation.	Team helps that member to get through the harsh situation. Member has to make a commitment to finish all tasks assigned on time.
Low	Member causes illnesses	His/her work can not be done	Every task will be assigned to at least 2 people (main and backup). Therefore, if any issues happen, we still have another substitute.

4.3.4 Configuration Management

None.