Football Tournament Management Website Software Development Plan (Small Project)
Version <2.0>

Revision History

Date	Version	Description	Author
<27/10/2023>	<1.0>	• Đình Bảo: Write part 1 and 2 of the project plan document. • Minh Huy: Write part 3 of the project plan document. • Thiên Ân: Write part 4 of the project plan document.	Code of Duty
<16/11/2023>	<2.0>	• Thiên Ân: Update the PA2's assignments of the project plan (section 4.2.2.1).	Code of Duty

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Software Development Plan (Small Project)

1. Introduction

1.1 Purpose

The objective of this Software Development Plan is to define the initial plan of the Football Management Software Project. This project plan will give the supposed activities in detail from the beginning to the end of our subject project. Also, it provides all information necessary to control the project and is used by managers to direct the development effort.

The following people use the Software Development Plan:

Nguyễn Tuấn Đạt (Project Manager) uses it to plan the project schedule and resource needs, and to track progress against the schedule.

Nguyễn Đình Ánh (Business Analyst) and Triệu Hoàng Thiên Ân, Lê Minh Huy, Bùi Đình Bảo (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 Group 11 - Intro to SE - 21/3 - FIT@HCMUS for developing the Football Management Software.

The details of the individual iterations will be described in the Iteration Plans.

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.

Project Plan - includes all phases with their iteration and release plannings. It also contains the resourcing, training strategies, financial fulfillments and a high level schedule for the project.

Project Monitoring and Control: consists of the requirements management and the risk management for the project.

2. Project Overview

2.1 Project Purpose, Scope, and Objectives

Nowadays, soccer is an indispensable spiritual food for most of us Vietnamese. The success of Vietnamese soccer in recent times has created a wave of excitement, attracting the attention of fans. Along with that is the demand for accessing information about tournaments, as well as buying tickets to stadiums to watch the players they admire increasing.

Moreover, in Vietnam today, it is estimated that there are about 1 million soccer teams with more than 50,000 tournaments at all levels and online soccer (games) held annually. However, managing soccer tournaments in a traditional way including books, papers, MS Excel has caused many difficulties. For example:

Difficulty in storing, searching.

Difficulty in reporting, statistics, … on finance, comparing match indicators.

Waste of time, cost of scheduling, calling, emailing, meeting to schedule, organize.

Therefore, to solve two big problems, which are meeting the needs of fans and optimizing the management of soccer tournaments, team 11 - Code of Duty decided to choose the topic: "Website for managing soccer tournaments" for this course project.

2.2 Assumptions and Constraints

This software product is intended to be a helpful website for everyone to update the general information about the football tournaments and clubs. Also, the biggest motivation of this product not only stops at completing the subject and getting high scores but also improves technical skills as well as maintains the idea of developing soccer management for the near future. According to the required deadlines of the project given by teachers, the product must be fully available by that day.

The list of constraints below is mainly about the necessary budget for each feature of the project.

Feature	Main human resource	Duration	Estimated budget
Announce the tournament rules and schedules	Lê Minh Huy	4 hours	10*4=40$
The league table and format	Triệu Hoàng Thiên Ân	5 hours	10*5=50$
Assign referees	Lê Minh Huy	3 hours	10*3=30$
Update match indicators	Lê Minh Huy	1 hour	10*1=10$
Update penalties for players	Triệu Hoàng Thiên Ân	2 hours	10*2=20$
Register the squad	Triệu Hoàng Thiên Ân	3 hours	10*3=30$
Update team information	Triệu Hoàng Thiên Ân	1 hour	10*1=10$
View match information	Lê Minh Huy	2 hours	10*2=20$
Buy tickets, book tickets	Triệu Hoàng Thiên Ân	6 hours	10*6=60$
Vote for outstanding players	Lê Minh Huy	3 hours	10*3=30$
General function	Lê Minh Huy	2 hours	10*2=20$

2.3 Project Deliverables

The following artifacts will be produced during the project, and delivered to the maintenance organization.

The product: the link of the website

End-Use Support Material (including Release Notes)

Source Code (Implementation Elements)

Test Suites

Software Architecture Document

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Project-Specific Design and Implementation Guidelines
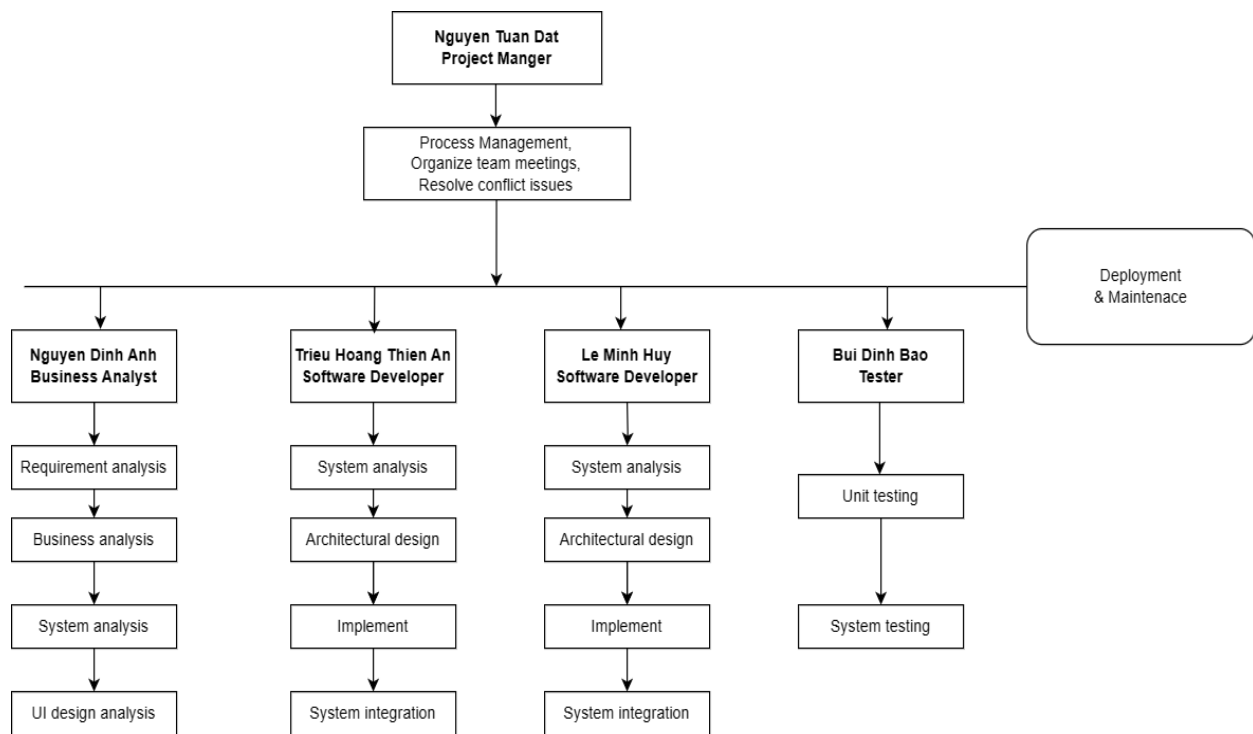
Use Cases

Supplementary Specification

Glossary

Vision

Other artifacts will be produced, as described in the project development case, but are not intended to be delivered to the maintenance organization.

3. Project Organization

3.1 Organizational Structure

3.2 Roles and Responsibilities

Person	Role
Nguyen Tuan Dat, Project Manager	Responsible for managing progression of project, scheduling and organizing team meetings, resolving any conflicts that arise during the work process.
Nguyen Dinh Anh, Business Analyst	Responsible for researching business model and requirements definition, analyzing system design and UI design.
Trieu Hoang Thien An, Software Developer	Tasked with performing system analysis, designing the architecture, and implementing and integrating the system to ensure application working as requirement definition.

Le Minh Huy, Software Developer	Tasked with performing system analysis, designing the architecture, and implementing and integrating the system to ensure application working as requirement definition.
Bui Dinh Bao, Project Tester	Responsible for conducting unit tests and system tests to ensure the optimal performance and error-free operation of the application.

4. Management Process

4.1 Project Estimates

None.

4.2 Project Plan

4.2.1 Phase 1: Inception

1. *Sprint 0: PA0*
- Start time: 23/09/2023.
- End time: 07/10/2023.
- Task list:
  - Write a description document about the team's project, including: Introduction, Target users & Environment, Key features.
  - Using tools that are required by TAs and supposed to be helpful in organizing project, such as: Moodle, Facebook group, Jira , Slack, Github.
  - Team assignment:
    - Create project's environments using the above tools and get all members joined.
    - Have a meeting on 05/010/23 to write down the description document together.
- Deliverables:
  - Description document about the team's project.
  - Project's environment for members to develop and manage project progress, materials by tools.


2. *Sprint 1: PA1*
- Start time: 07/10/2023.
- End time: 28/10/2023.
- Task list:
  - Write a project plan document based on the template provided on Moodle, including: Introduction, Project Overview, Project Organization, Project Plan, Project Monitoring and Control.
  - Write a vision document based on another template provided on Moodle, including: Introduction, Positioning, Stakeholder and User Description, Product overview, Product Feature, Other Product Requirements (Non-Functional Requirements).
  - Set up plan meeting, weekly meetings and review meeting. Each meeting has a report describing discussed contents, assignment,...
  - Create training assignments for all members about developing web software application and testing techniques, frameworks, …
- Team assignment:
  - Tuấn Đạt: Write part 1, 2 and 3 of the vision document (Introduction, Positioning, Stakeholder and User Description); prepare training tasks and assign them to members; have training assignments for front-end and back-end.
  - Đình Ánh: Write part 4, 5 and 6 of the vision document (Product overview, Product Feature, Other Product Requirements); write down the report of every meeting; have training assignments for front-end and back-end.
  - Thiên Ân: Write part 4 of the project plan document; have training assignments for front-end and

back-end.
- ● Minh Huy: Write part 3 of the project plan document; have training assignments for front-end and back-end.
- ● Đình Bảo: Write part 1 and 2 of the project plan document; have training assignments for testing a web application.
- Gantt chart shows assignment:
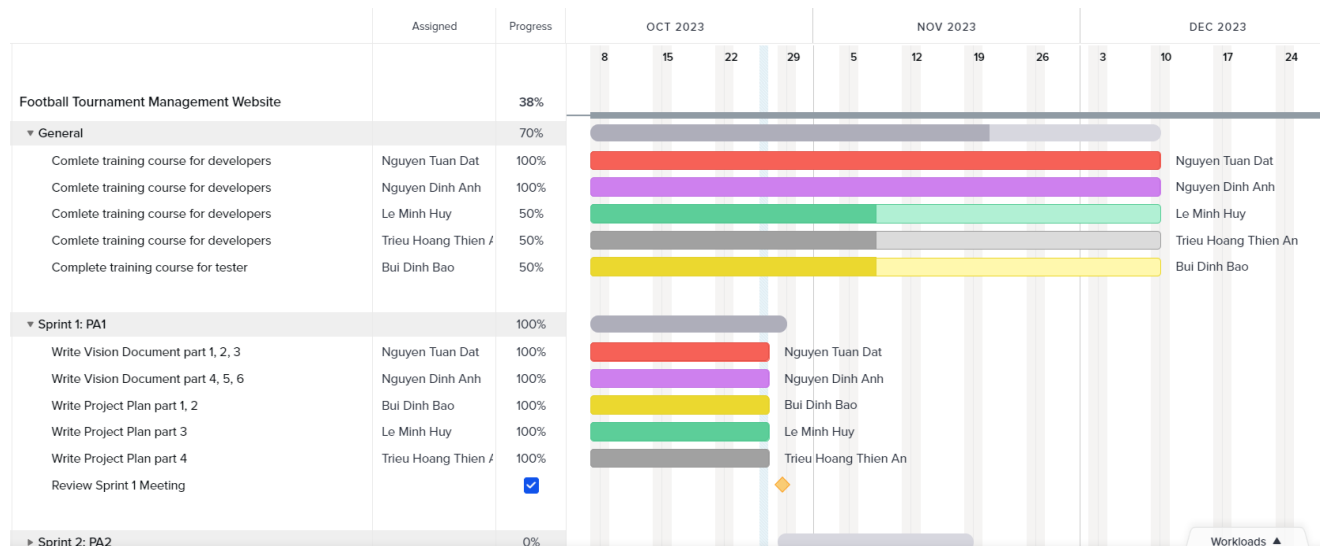
- Deliverables:
  - ● Project Plan Document (still updated).
  - ● Vision Document (still updated).
  - ● Meeting reports.

### 4.2.2 Phase 2: Elaboration
   1. *Sprint 2: PA2*
- Start time: 28/10/2023.
- End time: 18/11/2023.
- Task list:
  - ● Update Project plan document (written from PA1) to fix issues if any and to make it clearer and more detailed. This time the Project plan document is required to be fully completed.
  - ● Detail the Vision document (written from PA1) with functional and non-functional requirements, also with competitors, alternatives and user environments. It must also be fully completed by the time the team submits it.
  - ● Model use-cases system by use-cases diagrams (one or several). Each diagram includes: use-cases, actors and relationships among them.
  - ● Use-case specification document: Detail all diagrams by filling the use-case properties, such as: use-case name, flow of events (basic / alternative flows), special requirements, pre-conditions, post-conditions and extension points. This document can follow the template provided along with the PA2's assignment on Moodle.
  - ● Set up plan meeting, weekly meetings and review meeting. Each meeting has a report describing discussed contents, assignment,...
  - ● Continue training assignments for all members about developing web software application and testing techniques, frameworks, …
- Team assignment for overall 28 use cases:
  - ● Tuấn Đạt: Detail the Vision Document; Write the following use cases specification: *Sign up, Login, Logout, Tournament Details, Tournament's Report Generating, Access*

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Statistics.

- ● Đinh Ánh: Draw the Use-case Model; Write down the report of every meeting; Write the following use cases specification: *Read the announcement, Tournament Creation, Match details adjustment, Team details adjustment, Match result handling*.
- ● Thiên Ân: Update the Project Plan; Write the following use cases specification: *Player Roster Management, Team Profiles, Team Statistics, Spectator Authentication, Ticket Sales, and Purchased Tickets*.
- ● Minh Huy: Write the following use cases specification: *Tickets statistics, Team Registration, Add players, Update players, Remove players, Best Player Selection*.
- ● Đinh Bảo: Write the following use cases specification: *Write announcement, Winner Announcement, Create Tickets, Remove Tickets, Modify Tickets*.
- Gantt chart shows assignment:
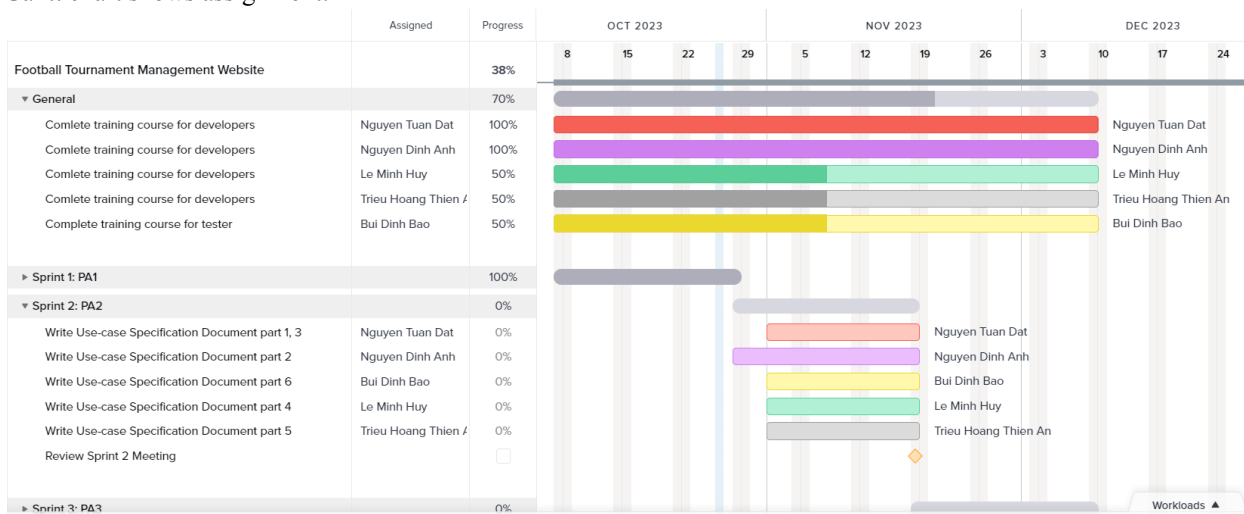
- Deliverables:
    - ● Updated Project plan document.
    - ● Detailed Vision document.
    - ● Use-case specification document.
    - ● Meeting reports.

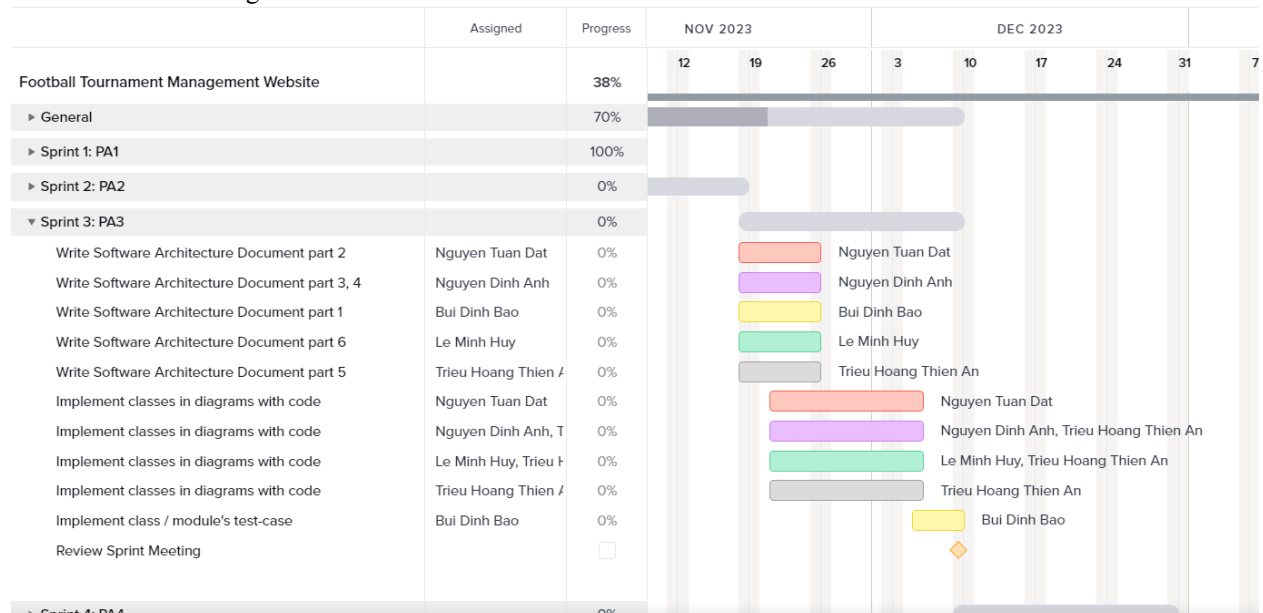   *2.* *Sprint 3: PA3*
- Start time: 18/11/2023.
- End time: 09/12/2023.
- Task list:
    - ● Revise Use-case Specification document (written from PA2) according to TA's feedback, new information or changes of requirements. This document is supposed to be more complete (details and use cases) and more consistent than the previous versions in PA2.
    - ● Draft a software architecture document, filling the required sections using template provided along with PA3's assignment. The sections are: Introduction, Architecture Goal and Constraints, Use-Case Model, Logical View, Deployment and Implementation View.
    - ● Model Class diagrams for each of key components defined in the software architecture document. The section 4.x (Logical View) has to be updated with diagrams and descriptions of key classes. Each class diagram includes: class name, main attributes, operations and relationship among these classes. Detail the class diagram with all available information that the team has right now.
    - ● Set up plan meeting, weekly meetings and review meeting. Each meeting has a report describing discussed contents, assignment,...
    - ● Implement classes in model class diagrams and try to interact among them..

● Test for each class and function.
- Team assignment:
  ● Tuấn Đạt: Write part 2 of the Software architecture document (Architecture Goal and Constraints).
  ● Đình Ánh: Write part 3 and 4 of the Software architecture document, including: Use-case Model and Logical View;Write down the report of every meeting.
  ● Thiên Ẩn: Write part 5 of the Software architecture document (Deployment).
  ● Minh Huy: .Write part 6 of the Software architecture document (Implementation View).
  ● Đình Bảo: Write part 1 of the Software architecture document (Introduction).
- Gantt chart shows assignment:

- Deliverables:
  ● Updated Use-case Specification document.
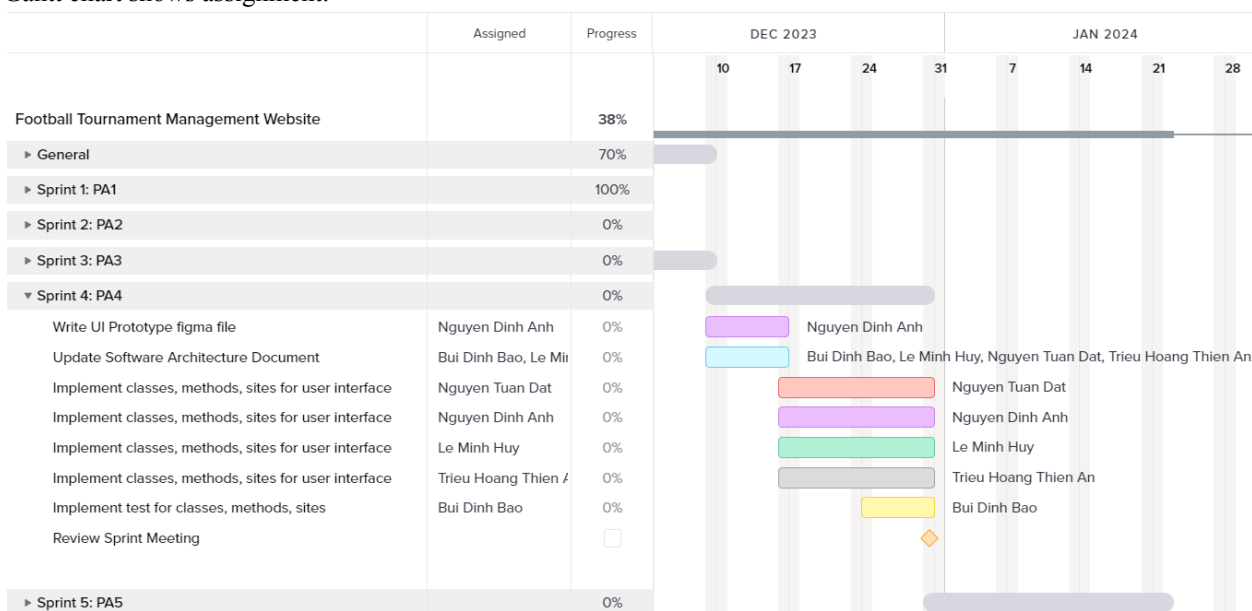 ● Software Architecture Document, including class diagrams.
  ● Meeting reports.

4.2.3   *Phase 3: Construction*
  1.   *Sprint 4: PA4*
- Start time: 09/12/2023.
- End time: 30/12/2023.
- Task list:
  ● Revise the Software Architecture Document (written from PA3), including: update section 1 - 4 (Introduction, Architecture Goal and Constraints, Use-Case Model, Logical View) and fill content of section 5 and 6 (Deployment and Implementation View) based on TA's feedback and new information the team has. Section 5 has to be fulfilled with deployment diagrams using UML and describe briefly each node. Section 6 has to be updated with structures of folders that store the team's code and assets (just focus on main folders).
  ● UI Prototype: Sketch the user interface for the system of the project. Team can use Figma, Microsoft Visio or other tools to design the UI. The prototype has at least 2 screens for the key scenarios followed by the use-case specifications document, each screen needing describing its purpose, what it shows and how to use it.
  ● Set up plan meeting, weekly meetings and review meeting. Each meeting has a report describing discussed contents, assignment,...
- Team assignment:
  ● Tuấn Đạt: Implement web classes/methods/interfaces for users in code.

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- ● Đình Ánh: Write the figma file of the UI Prototype of the project; Revise the Software architecture document; Write down the report of every meeting.
  - ● Thiên Ân: Implement web classes/methods/interfaces for users in code.
  - ● Minh Huy: Implement web classes/methods/interfaces for users in code.
  - ● Đình Bảo: Implement web classes/methods/interfaces for users in code.
- Gantt chart shows assignment:

- Deliverables:
  - ● Updated Software Architecture Document.
  - ● A document describing the UI for the system of the team's project.
  - ● Meeting reports.
  - ● A release of the software project.

    2. Sprint 5: PA5
- Start time: 30/012/23.
- End time: To be announced.
- Task list:
  - ● Write the test plan document, followed by the template provided along with PA5, including: Introduction, Target Test Items, Environmental Needs and Responsibility, Staffing and Training Needs. The team is required to perform functional testing, by writing at least 5 test-cases for each of 5 features you have selected for testing. To sum up, the team has to write at least 25 test cases in total, along with the status (Pass / Fail) for each test case. Writing a test report, which lists all defects found, at least 1 defect is linked with a failed test case. In the test summary report sheet, the team is supposed to include numbers of functions to be tested, number of test cases, number of passed / failed test cases of a function.
  - ● Prepare for the presentation: each member of the team is required to have at least 5-minute talk to sell the team's work to teaching and peers. The content includes: problem statement, product position statement, market, project management, use-case model, non-functional requirements, architecture and technologies used, test environments, test plan, test results, demo of scenario of the software, … The presentation has to be graded based on correction, logic and comprehension of each member, also about organization, transition, English, clarity and persuasiveness of the presentation.

- Team assignment:

- ● Tuấn Đạt: Assist tester to implement test-cases; fix bugs if any.
- ● Đình Ánh: Assist tester to implement test-cases; fix bugs if any; Write the test plan document.
- ● Thiên Ân: Assist tester to implement test-cases; fix bugs if any.
- ● Minh Huy: Assist tester to implement test-cases; fix bugs if any.
- ● Đình Bảo: Implement test-cases for key components and functions required; Write the test report.
- Gantt chart shows assignment (*Please note that the time of the presentation has not been determined, so the presentation time in the chart below is only a prediction*):
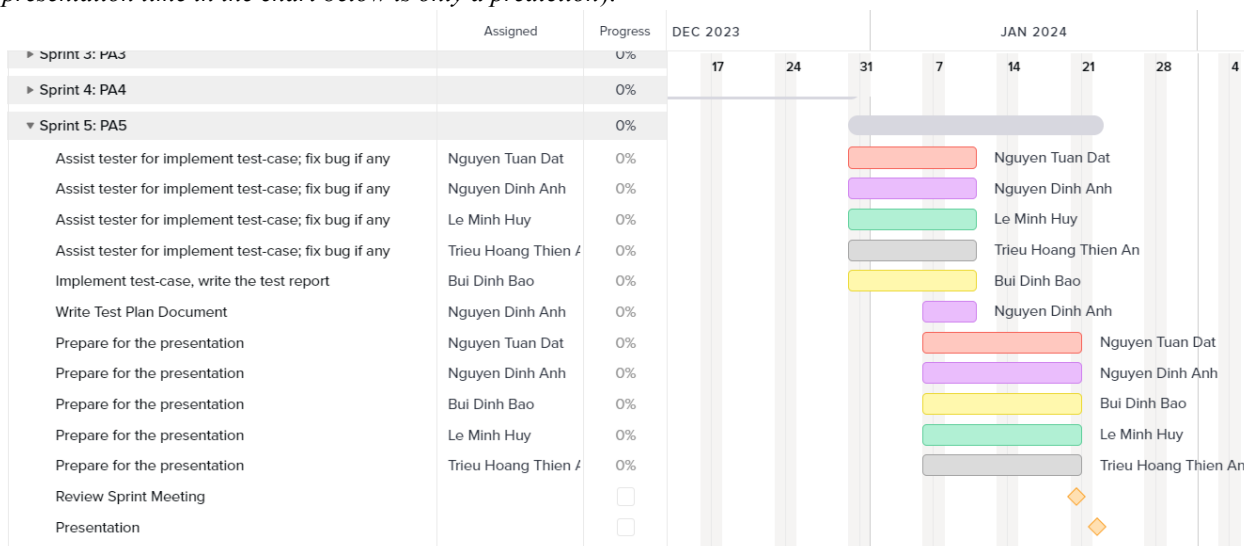
- - Deliverables:
    - ● Test plan document and test report.
    - ● Final release of the software project.

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

Risks will be identified in Inception Phase using the steps identified in the RUP for Small Projects activity "Identify and Assess Risks". Project risk is evaluated at least once per iteration and documented in this table. The risks of the greatest magnitude are listed first in the table.

Risk Ranking (High, Medium, Low)	Risk Description and Impact	Mitigation Strategy and/or Contingency Plan
High	Members who have not cooperated before face difficulties in the common	During meetings, members' working status is often mentioned, having active communication and being friendly with other members.

	development process, uneven progress causes planning deviations.	
High	The team's software development skills are not enough to ensure successful completion of the project, and technical errors are often encountered.	Organize training sessions for members with specifically set deadlines.
High	The team choose an inappropriate software process model to carry out the entire project, which took a long time to define the new model and resolve the problems caused by the model transition.	The team must carefully discuss how to develop the project right from the first meetings, thereby determining the most suitable model. In case changes are still needed, priority should be given to reusing existing resources to serve the development process.
Medium	The team's software project management skills are not so good, which can cause failure to complete on schedule.	Use Jira and Google Drive, Github regularly to track team progress, members who complete progress can assist the remaining members.
Medium	Maybe a member is having health problems and cannot continue to complete unfinished work, leading to a progress lock.	As mentioned before, the team will have several meetings which create a friendly but professional environment for everyone to share their thoughts and problems, so the task will be handled by the backup person or someone else to ensure the progress.
Medium	One member unexpectedly cancel the course, causing damage to part or more of the project and also taking time to rearrange the tasks of all the remaining people.	Every job and task must be undertaken by two or more members, at least one main person and one backup person for other risks.
Medium	The team receives many feedbacks from the TA that the entire project had many logical gaps and did not meet the proposed business, so it is necessary to organize major changes to restructure the entire project.	Clearly define the purpose and specification of the project's requirements to determine the correct construction direction for the components. When receiving feedback from the TA, the team needs to hold a meeting to discuss ways to reimplement these components to improve the performance of the software.
Medium	Third-party service applications no longer support project functions, causing difficulties during project construction and maintenance.	After PA0's assignment, the team has to figure out what supporting software needs to be used, and notice the newest update information. In case a chosen software doesn't support further, the person in charge of that function needs to notify the team to consider other alternative applications.
Medium	Testing phase is probably a hard period of time for the team due to lack of experience in testing web software.	Every member, not just the tester, should take the web software testing training to make the process as smooth as possible.

4.3.4   Configuration Management

None.