Group 4

The Health and Fitness
Software Development Plan
Version 1.3

Revision History

Date	Version	Description	Author
18/10/2024	1.0	- Finish Introduction; Project Purpose, Scope, and Objectives; Assumptions and Constraints and Project Organization.	Nguyễn Huỳnh Minh Quang, Vũ Thái Thiện, Văn Diệp Bảo Duy
19/10/2024	1.1	- Finish project deliverables and Project Estimates. - Fill in some Risk Management.	Ngô Thanh Phương Dương, Trương Thuận Kiệt
21/10/2024	1.2	- Update Risk Management. - Finish draft Project plan.	Văn Diệp Bảo Duy, Nguyễn Huỳnh Minh Quang
22/10/2024	1.3	- Finish Project Monitoring and Control. - Update Roles and Responsibilities.	Vũ Thái Thiện, Trương Thuận Kiệt
24/10/2024	1.3	- Update header. - Update table of content.	Vũ Thái Thiện, Nguyễn Huỳnh Minh Quang

Table of Contents

Software Development Plan

1. Introduction

The Health and Fitness Web Application aims at helping users improve their physical well-being through personalized workout plans and diet recommendations. In today's fast-paced world, maintaining a balanced lifestyle is challenging, making it essential to provide users with accessible, practical, and tailored solutions to stay fit and healthy.

2. Project Overview

2.1 Project Purpose, Scope, and Objectives

The application will allow users to set fitness goals, track their daily activities, and follow customized diet plans aligned with their personal preferences and nutritional needs. The platform will also feature workout routines designed to target specific fitness objectives—whether it's weight loss, muscle gain, or overall wellness—combined with nutritional guidance to ensure users achieve optimal results.

2.2 Assumptions and Constraints

- Project has no budget.
- Team size is only 5 members.
- Platform will be web-only.

- Development must be completed within 12 weeks.

2.3 Project Deliverables

- Project Charter:
  - Description: Outline the project's objectives, scope and overall vision.
  - Target Delivery Date: Week 1.
- Requirements Specification:
  - Description: Contain functional and non-functional requirements for the application.
  - Target Delivery Date: Week 2.
- Wireframes and UI:
  - Description: Initial design sketches and detailed UI mockups for key pages such as the landing page, dashboard, workout plans and user profile.
  - Target Delivery Date: Week 3.
- Technical Architecture Document:
  - Description: Includes database design, APIs and overall technology stack.
  - Target Delivery Date: Week 4.
- Database Design:
  - Description: A database schema includes tables for user profiles, workout logs, nutrition plans and progress tracking.
  - Target Delivery Date: Week 5.

- Backend API Development:
  - Description: Manages user accounts, workout plans, tracking progress and integrating third party devices.
  - Target Delivery Date: Week 6 and 7.
- Frontend Development:
  - Description: Implementation of user interface and core user flows such as registration, log in and viewing workout plans.
  - Target Delivery Date: Week 8 and 9.
- Testing:
  - Description: Includes test plans, cases and automated testing scripts for functional and non-functional requirements.
  - Target Delivery Date: Week 10.

3.   Project Organization

3.1   Organizational Structure
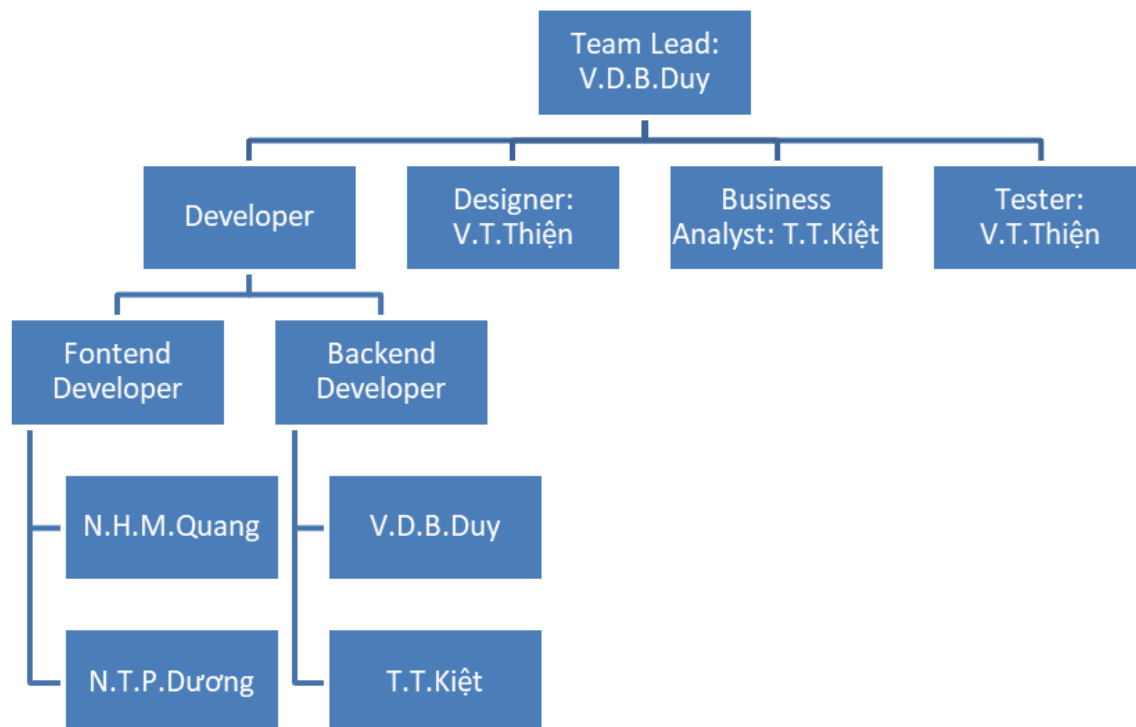
3.2 Roles and Responsibilities

Person	*Role*
Văn Diệp Bảo Duy	Team leader, Backend Developer
Trương Thuận Kiệt	Business Analyst, Backend Developer
Vũ Thái Thiện	QA Tester, Designer
Nguyễn Huỳnh Minh Quang	Frontend Developer
Ngô Thanh Phương Dương	Frontend Developer

4. Management Process

4.1 Project Estimates

No cost

4.2 Project Plan

4.2.1 Phase and Iteration Plan

- Sprint 1
  - Form team
  - Project Proposal
  - Tools Setup
  - Vision Document
  - Weekly Report
- Sprint 2
  - Define use-case model
  - Initial Design
  - Detailed Requirements
  - Setup Coding Environment
  - Database Design
- Sprint 3
  - Detailed UI/UX Design
  - Test Planning
  - Frontend Coding
  - Backend Coding
  - Database Coding
- Sprint 4
- Sprint 5

4.2.2   Releases

a. Initial Demo Release

- **Description**: A basic, non-interactive prototype that demonstrates the overall concept, design, and user journey of the application.
- **Purpose**: To gather early feedback from stakeholders and potential users.
- **Stage**: Demo.

b. Alpha Release

- **Description**: The first working version of the web app containing core functionality, such as user registration, basic workout plans, and nutrition tracking. Many features might still be incomplete, and it's primarily shared with internal testers.
- **Purpose**: To test core functionalities and identify major bugs.
- **Stage**: Alpha.

c. Closed Beta Release

- **Description**: A more polished version with essential features, such as workout tracking, diet planning, and progress visualization.
- **Purpose**: To receive feedback from a selected group of users.
- **Stage**: Closed Beta.

d. Open Beta Release

- **Description**: A nearly complete version with all primary features fully functional but may still have minor bugs.
- **Purpose**: To test scalability, gather feedback from a broader audience, and point out any final usability or performance issues.
- **Stage**: Open Beta.

e. Public Release

- **Description**: The first official version available to all users. Includes all features, such as custom meal plans, social features like community challenges, and complete workout libraries.
- **Purpose**: To launch the product publicly, promote user adoption, and begin building a user base.
- **Stage**: Production.

f. Post-Launch Updates

- **Description**: Regular updates after the public release, which may include new workout routines, added device compatibility, bug fixes, and user-requested enhancements.
- **Purpose**: To keep the user base engaged, improve user experience, and address any newly discovered bugs or performance issues.
- **Stage**: Maintenance and Iterative Releases.

4.2.3   Project Schedule
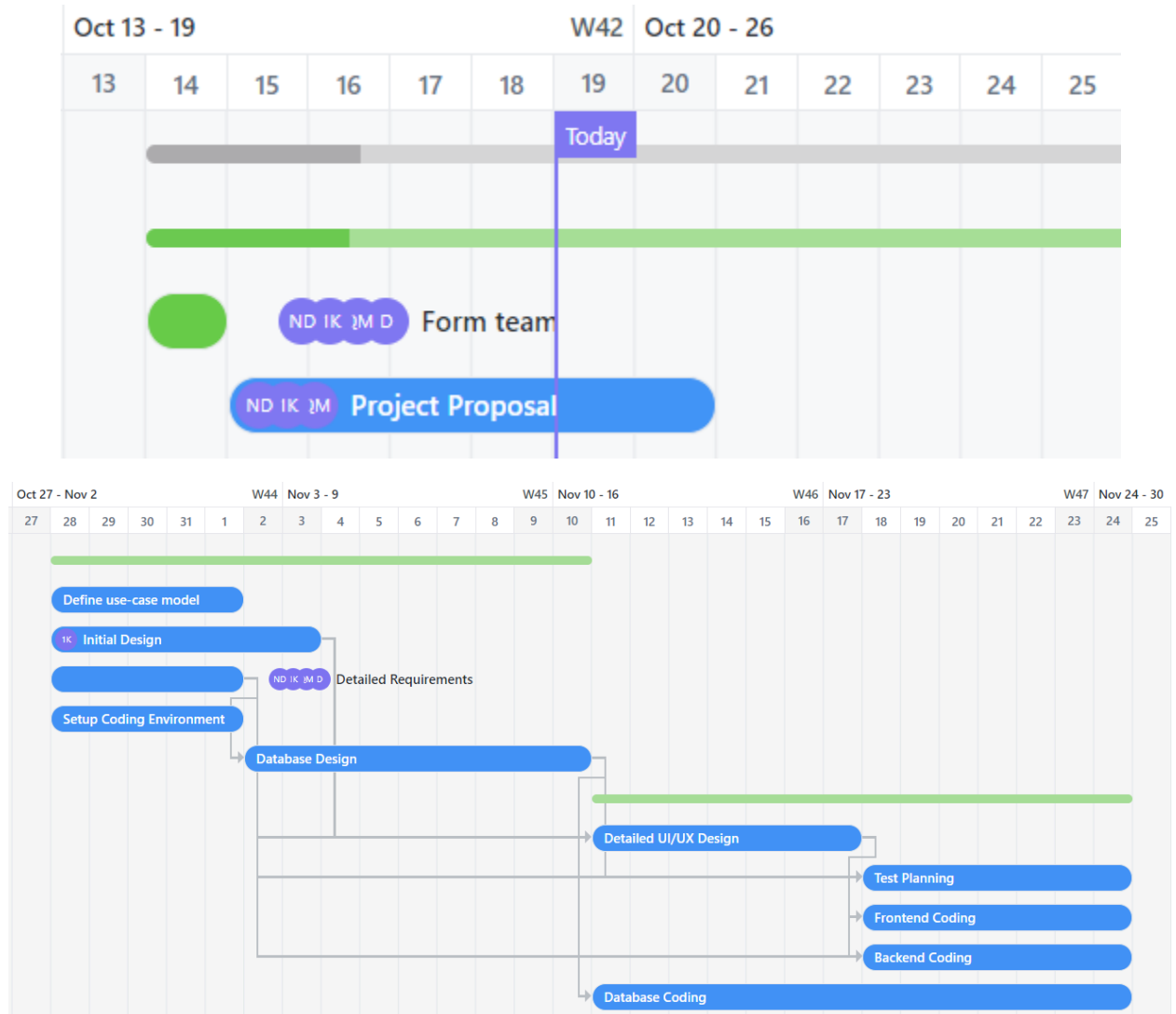
4.3   Project Monitoring and Control

4.3.1   Reporting

- Weekly meeting.
- Weekly status report.
- Informal chats.

4.3.2   Risk Management

Risk ID	Risk Description	Probability	Impact	Risk Exposure	Priority	Mitigation Strategy or Contingency Plan
1	Technical issue: Laptop or Wifi crashes	Occasional	Moderate	2500	9	Having backup devices, use a better 4G package.
2	Key staffs are ill or have personal problems at crucial times	Likely	Serious	5625	1	Assign secondary staff as backups for crucial roles.
3	Sudden change to requirements	Unlikely	Moderate	500	10	Ensure early and clear communication with team members. Allow flexibility in project timelines to accommodate changes.
4	Wrong estimation of difficulty of the technologies	Likely	Serious	5625	2	Allocate time for technology research in advance.
5	Critical bugs lead to the delay of development progress	Likely	Serious	5625	3	Implement regular testing and reviews to detect bugs early.
6	Inaccurate planning and scheduling often lead to delays in meeting deadlines	Occasional	Serious	2500	7	Improve planning accuracy, set realistic timelines, and schedule buffer periods.
7	Team members have the lack of motivation	Occasional	Moderate	2500	8	Conduct team-building activities and provide motivation incentives.
8	Poor quality control or insufficient testing	Likely	Serious	5625	4	Conduct thorough testing at each phase, ensure adequate quality control processes, and involve multiple testers.
9	Losing project files or data due to improper backup	Occasional	Moderate	2500	5	Implement regular backups of project files and ensure proper backup procedures are in place.
10	Difficulty in coordinating schedules for group meetings	Occasional	Moderate	2500	6	Use collaborative scheduling tools and ensure regular communication between team members to coordinate meeting times effectively.

4.3.3   Configuration Management

- GitHub: A platform for teams to store, share, and collaborate on code using Git. It tracks changes, allows code reviews through pull requests, and helps manage tasks with issues and project boards.
- ClickUp: A task and project management tool that helps teams organize, assign, and track tasks. It uses Kanban boards and calendars to visualize progress and includes time tracking and goal-setting features.

- Discord: A communication tool for teams, offering text, voice, and video chats. It allows for organized discussions through separate channels and supports meetings or direct conversations. Tasks notifications from ClickUp will also send to **#work-noti** channel in Discord server.