# Coffee Base
# Software Development Plan
### Version <1.4>

# Revision History

| Date | Version | Description | Author |
|---|---|---|---|
| 8/11/25 | <1.4> | Edit 1. | Quang |
| 4/11/25 | <1.3> | Edit 1. | Phát |
| 3/11/225 | <1.2> | Done 2. and 4.3 (except 4.3.3) | Thanh |
| 3/11/25 | <1.1> | Finish 3. | Quang Vũ |
| 31/10/25 | <1.0> | Initial software development plan | Quang Vũ |

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# Table of Contents

# Software Development Plan (Small Project)

## 1. Introduction

This Software Development Plan establishes the formal guidelines, methodology, and resource allocation for the development of the Coffee Base software system.

### 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 <project name> project, including deployment of the product. 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.

## 2. Project Overview

### 2.1 Project Purpose, Scope, and Objectives

The purpose of this project is to create a simple coffee shop website that helps customers view the menu, customize their drinks, and order online easily. The system also includes an admin page to manage products, users, and orders.

The project scope focuses on basic web features such as user registration, online ordering, and order management. It does not include complex delivery or payment gateway systems.

The main objectives are:

- Build a working and user-friendly coffee shop website.

- Support both customers and admin functions.

- Practice and improve the team's web development skills.

The final deliverables are the working website, source code, and project documentation.

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## 2.2      Assumptions and Constraints

**Assumptions:**

- All team members have the necessary equipment such as laptops and stable internet connections.

- All members are available to attend one team meeting per week.

**Constraints:**

- The total project budget is limited to **under 300,000 VND**.

- Each member can spend a maximum of **18 hours per week** on the project.

- The project team consists of **5 members** in total.

## 2.3      Project Deliverables

This project will produce several deliverables that demonstrate the progress and results of the coffee shop website development. The deliverables include both documentation and the final working system.

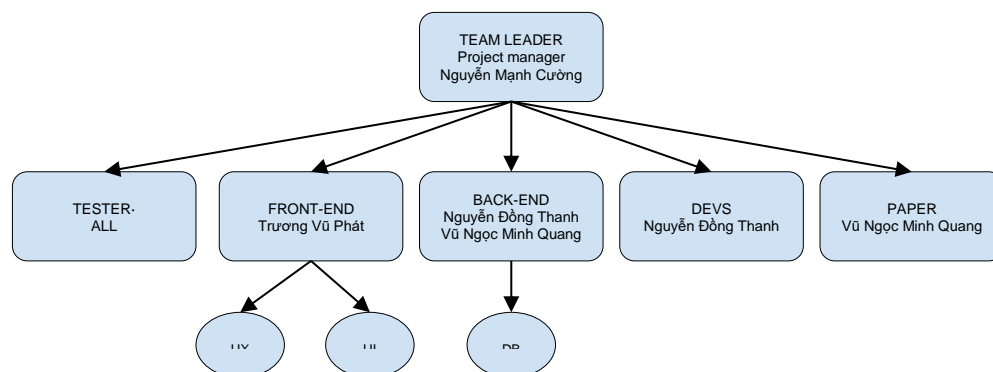Each two weeks, the team will submit the required documents and reports as specified in section **4.2 Project Plan**.

**Main deliverables include:**

- Project proposal and requirement specification documents.

- System design document with database and interface design.

- Source code of the customer and admin websites.

- Testing report with test cases and results.

- Final project report.

All deliverables will be submitted according to the timeline defined in the section 4.2 Project Plan.

# 3.      Project Organization

## 3.1      Organizational Structure



## 3.2      Roles and Responsibilities

| Person | Role | Duty |
| --- | --- | --- |
| Manh Cuong (23127034) | Project Manager, DevOps | Planning/scheduling activities, and assisting the Change Control Manager role in controlling changes to artifacts. May also provide assistance to other roles as necessary. |
| Minh Quang (23127110) | Back-end Developer, Secretary, | Designing Database, API |
| Vu Phat (23127450) | Front-end Developer, DevOps | Designing Web, |
| Dong Thanh (23127538) | Back-end Developer, DevOps | Designing Database, API |
| Viet…. | | |

# 4. Management Process

## 4.1 Project Estimates

- **Cost Estimation:**
  - The project will strictly adhere to set the constraint to budget to under 300 000 VND.
  - This budget is allocated exclusively as back-up for emergency factors during operation (such as cloud fee, experimental chatbot tokens, website hosting, etc.)
  - No costs are allocated for labouring as the essence of the project being educational and non-commercial.
  - The remaining budget after operation end would be returned equally upon agreement between team members.
- **Schedule Estimation:**
  - The project is estimated to take 11 weeks to complete but due to the time constraints of this course, the project is expected to be completed within 9 weeks with basic functionalities.
  - A high-level schedule is detailed in section 4.2.4
- **Re-estimation:**
  - The formal re-estimation of the project will be assessed near the end of each event (weekly meeting, project milestones, etc.)
  - Re-estimation will also be triggered if a "High" rank risk (as defined in 4.3.3) occurs or any change request approved via the requirements management process (4.3.1) significantly impacts the scope.

## 4.2 Project Plan

This section outlines the schedule, phases, and resources for the project.

### 4.2.1 Phase Plan

- The project will be developed using a phased approach, with key milestones marking the completion of each phase.

| Phase | Inception | |
|---|---|---|
| **Week** | 1 | 2 |
| **Milestones** | Plan Approval | Requirements finalized<br>System Architecture Defined |
| **Criteria** | Software Development Plan is finalized. | Vision document and basic requirements are agreed upon by the team. Technology stack (e.g., framework, DB, UI) is chosen. |

| Phase | Elaborate | | |
|---|---|---|---|
| **Week** | 3 | 4 | 5 |
| **Milestones** | Design Finalized | Iteration 1 Complete | |
| **Criteria** | Database schema and high-fidelity UI/UX mockups are completed and approved. | Core features are functional | |

| Phase | Construction | | | |
|---|---|---|---|---|
| **Week** | 6 | 7 | 8 | 9 |
| **Milestones** | Iteration 2 Complete | | Iteration 3 Complete | |
| **Criteria** | Customer features (Menu, Credits, Cart, etc) are functional | | Implement the full flow of a shopping instance | |

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### 4.2.2 Iteration Objectives

- The Construction phase is divided into three main iterations, each with a clear set of objectives:
  - **Iteration 1**: Core & Admin foundations:
    - Implementation of user registration, and log-in functionalities.
    - Develop an Admin Dashboard
    - Implement Admin functionalities
  - **Iteration 2**: Users Experience:
    - Deploy user website interfaces
    - Implement shopping cart
    - Implement virtual credits system
  - **Iteration 3**:
    - Implement the full flow of a shopping instance: from Customer ordering to finished drink and leaving reviews.
    - Deploy admin statistics table
    - Fine-tune the functionalities of some finished features.
  - **Final Iteration:** All members use the website to test for bugs, errors, which were not expected before pushing the final deployment to release.

### 4.2.3 Releases

- To be deployed at the end of Week 11.

### 4.2.4 Project Schedule

| Milestones | Date (End of week) |
|---|---|
| Project Plan Approved | Week 02 |
| Design Finalized (DB & UI/UX) | Week 03 |
| Iteration 1 Complete | Week 05 |
| Iteration 2 Complete | Week 07 |
| Iteration 3 Complete | Week 09 |
| Final Iteration Complete (Testing) | Week 11 |
| Final Product Deployed (Release) | Week 11 |

| Final Report Submitted | Week 11 |
|---|---|

### 4.2.5 Project Resourcing

- Staff: Project is staffed with 5 students identified in section 3.2
- Resource Allocation:
    - **Inception & Elaboration** (Weeks 1-3): Heavy involvement from the Project Manager (planning) and all developers for design (Backend for database, Frontend for UI/UX).

    - **Construction** (Weeks 4-9): Heavy involvement from Back-end and Front-end Developers. DevOps members will set up and maintain the GitHub repository and CI/CD pipeline. The Project Manager will track progress on Jira.

    - **Transition** (Weeks 10-11): All members will participate in testing. DevOps will handle final deployment. The Project Manager and Secretary will compile the final report and documentation.

## 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

Meet once a week, and the procedures, meeting methods, and meeting contents will strictly follow the requirements in the file GoogleDriveFolderStructureRequirement.pdf

The measurement indicators are based on the tracking metrics on Jira.

### 4.3.3 Risk Management

Risks will be identified in the 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 |
|---|---|---|
| | | |

### 4.3.4 Configuration Management

- **Google Drive:** to store and share documents. Name the folders, the files according to the instructor's requirements in the file GoogleDriveFolderStructureRequirement.pdf
- **Jira:** for tasks and timeline management for the whole team using Scrum model
- **Figma:** used for UI/UX
- **Github:** for collaboration, version control, cloud-based code storage
- **Messenger:** to communicate with team members
- **Discord:**
    - for discussion with the teachers and TAs
    - for weekly meeting to report and plan for the next stage
    - to communicate with team members

○ to store and share important links

### 4.3.5 Project close - out

After completing the product, the whole team will meet to evaluate the level of completion and discuss preparations for the final oral defense.