**Cadger**
**Software Development Plan (Small Project)**
**Version 1.0**

# Revision History

| Date | Version | Description | Author |
|---|---|---|---|
| 10/11/2022 | 1.0 | | Group 07 |
| | | | |
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| | | | |

# Table of Contents

# Software Development Plan (Small Project)

## 1. Introduction

### 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 Cadger project, including 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

Description: Cadger creates a platform where people can share items. Sometimes, people do not want to buy something they will only use once. On Cadger, users can find and borrow any kind of items without wasting money. On the other hand, people who have stuff that they don't plan to use anymore can post their items on Cadger so that someone else in need of those might ask to borrow.

- Cadger gives users a way to try new electronic appliances, equipment, tools,... before deciding to buy the item or not
- Cadger allows users to borrow niche tools that might only be used once, so they don't have to actually buy the item
- Cadger helps users find a chance to lend good but redundant items to other people that need them

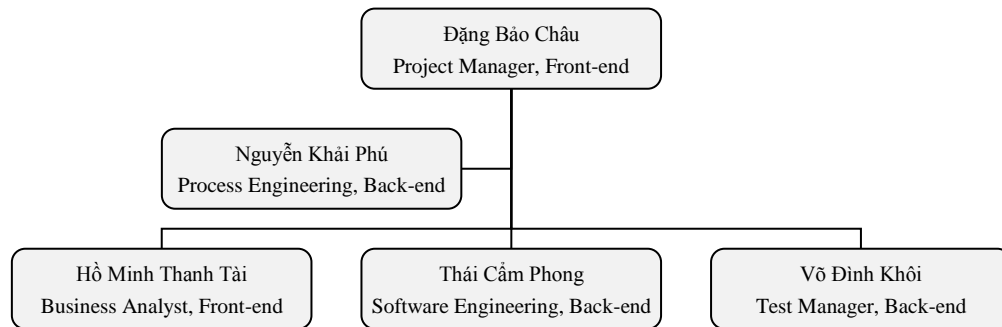### 2.2 Assumptions and Constraints

TBD

### 2.3 Project Deliverables

Deliverables: mobile app on Android.

Deliverables for each project phase are indentified in the Developmennt Case. 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

Đặng Bảo Châu
Project Manager, Front-end

Nguyễn Khải Phú
Process Engineering, Back-end

Hồ Minh Thanh Tài
Business Analyst, Front-end

Thái Cẩm Phong
Software Engineering, Back-end

Võ Đình Khôi
Test Manager, Back-end

### 3.2 Roles and Responsibilities

| Person | Role |
|---|---|
| Đặng Bảo Châu | Project Manager, Front-end. |
| Nguyễn Khải Phú | Process Engineering, Back-end. |
| Hồ Minh Thanh Tài | Business Analyst, Front-end. |
| Thái Cẩm Phong | Software Engineering, Back-end. |
| Võ Đình Khôi | Test Manager, Back-end. |

## 4. Management Process

### 4.1 Project Estimates

Project budget: TBD

Project starts on: 17/10/2022

Project ends on:

If the customers'requirement are updated, the project budget will be reestimated.

### 4.2 Project Plan

Sprint 1 – PA1

Start at: 31/10/2022

End at: 12/11/2022

Task:

+ Revise PA0 document and fix it: Phong

+ Watch TA's guidance video of Project Plan Document and write it: Tài, Châu.

+ Watch TA's guidance video of Vision Document and write it: Phú, Khôi.

+ Weekly report: Phú.

+ Github repository setup: Châu.

Deliverables after Sprint 1: document of Project Plan and Vision.

| SPRINT 1 | 31-Oct | 1-Nov | 2-Nov | 3-Nov | 4-Nov | 5-Nov | 6-Nov | 7-Nov | 8-Nov | 9-Nov | 10-Nov | 11-Nov | 12-Nov | 13-Nov |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Revise PA0 | ▨ | ▨ | ▨ | ▨ | | | | | | | | | | |
| Project Plan Document | | | ▨ | ▨ | ▨ | ▨ | ▨ | ▨ | ▨ | ▨ | ▨ | | | |
| Vision Document | | | ▨ | ▨ | ▨ | ▨ | ▨ | ▨ | ▨ | ▨ | ▨ | | | |
| Weekly report | | | | | | | | | | | | ▨ | ▨ | |
| Self-training | ▨ | ▨ | ▨ | ▨ | ▨ | ▨ | ▨ | ▨ | ▨ | ▨ | ▨ | ▨ | ▨ | |

Sprint 2 – PA2

Start at: 14/11/2022

End at: 26/11/2022

Task:

+ Revise Project plan and fix it: Tài, Châu.

+ Details Vision document and fix it:

 + Details product functional and non-functional requirements: Phú.

 + Details alternatives and competitors, user environments: Phong.

+ Use-case model and design the use-case diagram: Khôi, Phong, Phú.

+ Use-case specification – filling the use-case specification document: Khôi, Châu, Tài.

+ Weekly report: Phong.

Deliverables after Sprint 2: model use-cases of the system in forms of use-case diagrams and the document of use-case specification.

| SPRINT 2 | 14-Nov | 15-Nov | 16-Nov | 17-Nov | 18-Nov | 19-Nov | 20-Nov | 21-Nov | 22-Nov | 23-Nov | 24-Nov | 25-Nov | 26-Nov | 27-Nov |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Revise Project plan | ▨ | ▨ | ▨ | ▨ | | | | | | | | | | |
| Details Vision document | ▨ | ▨ | ▨ | ▨ | | | | | | | | | | |
| Design the use-case diagram | | | | ▨ | ▨ | ▨ | ▨ | ▨ | ▨ | ▨ | ▨ | ▨ | ▨ | |
| Use-case specification document | | | | ▨ | ▨ | ▨ | ▨ | ▨ | ▨ | ▨ | ▨ | ▨ | ▨ | |
| Weekly report | | | | | | | | | | | | ▨ | ▨ | |
| Self-training | ▨ | ▨ | ▨ | ▨ | ▨ | ▨ | ▨ | ▨ | ▨ | ▨ | ▨ | ▨ | ▨ | |

Sprint 3 – PA3

Start at: 28/11/2022

End at: 9/12/2022

Task:

+ Revise use-case specification and fix it: Châu, Khôi.

+ Filling the required sections in the SAD (Software Architecture Document): Phú, Khôi.

+ Model class diagrams for each of the key components: Phú, Tài, Phong.

+ Weekly report: Châu.

Deliverables after Sprint 3: the Software Architecture Document (SAD) and model class diagrams.

| SPRINT 3 | 28-Nov | 29-Nov | 30-Nov | 1-Dec | 2-Dec | 3-Dec | 4-Dec | 5-Dec | 6-Dec | 7-Dec | 8-Dec | 9-Dec | 10-Dec | 11-Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Revise use-case specification | ███ | ███ | ███ | ███ | | | | | | | | | | |
| Filling the SAD | | | ███ | ███ | ███ | ███ | ███ | ███ | ███ | ███ | ███ | ███ | ███ | |
| Model class diagrams | | | | | ███ | ███ | ███ | ███ | ███ | ███ | ███ | ███ | ███ | |
| Weekly report | | | | | | | | | | | | ███ | ███ | |
| Self-training | ███ | ███ | ███ | ███ | ███ | ███ | ███ | ███ | ███ | ███ | ███ | ███ | ███ | |
| Seup coding environment | | | | | | | ███ | ███ | ███ | ███ | ███ | ███ | ███ | |

Sprint 4 – PA4

Start at: 12/12/2022

End at: 26/12/2022

Task:

+ Revise SAD and fix it: Phong, Phú, Khôi.

    + Update Sections 1-4: Khôi

    + Section 5 – Draw a deployment diagram(s) using UML and describe briefly: Phú.

    + Section 6 – Provide structures for folders that store codes and supporting files: Phong

+ UI prototype: Tài, Châu, Khôi

    + Main screen: Châu.

    + Key scenarios: Tài, Khôi.

    + Copy all screens to MS Word and provide the description below each screen: Khôi.

+ Weekly report: Phú.

Deliverables after Sprint 4: revise software architecture document (SAD), UI prototype.

| Sprint 4 | 12-Dec | 13-Dec | 14-Dec | 15-Dec | 16-Dec | 17-Dec | 18-Dec | 19-Dec | 20-Dec | 21-Dec | 22-Dec | 23-Dec | 24-Dec | 25-Dec | 26-Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Revise SAD: Filling sections 1-4 | ▓ | ▓ | ▓ | | | | | | | | | | MERRY CHRISTMAS | | |
| Revise SAD: Section 5 (Draw a deployment diagram(s) using UML ) | ▓ | ▓ | ▓ | ▓ | ▓ | | | | | | | | | | |
| Revise SAD: Section 6 (Provide structures that store codes and files) | ▓ | ▓ | ▓ | | | | | | | | | | | | |
| UI prototype: main screen | | | ▓ | ▓ | ▓ | ▓ | ▓ | ▓ | ▓ | ▓ | | | | | |
| UI prototype: Key scenarios | | | ▓ | ▓ | ▓ | ▓ | ▓ | ▓ | ▓ | ▓ | | | | | |
| UI prototype: provide the description below each screen | | | | | | | | ▓ | ▓ | ▓ | ▓ | ▓ | | | |
| Weekly report | | | | | | | | | | | | | | ▓ | ▓ |
| Self-training | ▓ | ▓ | ▓ | ▓ | ▓ | ▓ | ▓ | ▓ | ▓ | ▓ | ▓ | ▓ | | ▓ | ▓ |
| Implementation | ▓ | ▓ | ▓ | ▓ | ▓ | ▓ | ▓ | ▓ | ▓ | ▓ | ▓ | ▓ | | ▓ | ▓ |

Sprint 5 – PA5

Start at: 26/12/2022

End at: 08/01/2023

Task:

+ Test plan and test case:

    + Planning: Phú, Châu.

    + Coding: Khôi, Phong, Phú.

    + Report: Tài, Châu.

+ Project presentation:

    + Each member prepares script and material (screenshot image, code,…) for presentation:

      + Problem statement, product position statement (Vision document), users/market: Tài.

      + Project management: team structure and responsibilities of team members: Châu.

      + Software requirements: use-case model, non-functional requirements: Phong.

+ Analysis and design: architecture and technologies used: Khôi

+ Software testing: test environments, test plan, and test results: Khôi

+ Demo: demo a key scenario of the software: Phú.

+ Aggregate and turn it into Presentation Slides (PowerPoint): Tài, Châu

Deliverables after Sprint 5: test plan and test cases, project presentation, final submission.

| Sprint 5 | 26-Dec | 27-Dec | 28-Dec | 29-Dec | 30-Dec | 31-Dec | 1-Jan | 2-Jan | 3-Jan | 4-Jan | 5-Jan | 6-Jan | 7-Jan | 8-Jan |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Test planning | � | ▓ | ▓ | | | | | | | | | | | |
| Test coding | | | | ▓ | ▓ | ▓ | HAPPY NEW YEAR | ▓ | ▓ | ▓ | | | | |
| Test report | | | | | | | | ▓ | ▓ | ▓ | ▓ | ▓ | | |
| Each member prepares script and material (screenshot image, code,…) for presentation | | | | | | | | ▓ | ▓ | ▓ | ▓ | ▓ | | |
| Aggregate and turn it into Presentation Slides | | | | | | | | | | | ▓ | ▓ | ▓ | ▓ |

### 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 |
| --- | --- | --- |
| Unfamilliar with the process of software engineering and working as a team | Deadline delaying, poor staff morale | Preparation and better requirement specification |
| Ignorant of new technology | Inefficiency, no quality | Everyone should actively study and do more research on this project |
| Missed deadlines and turnovers | Affect the whole team's efficiency | More overlap of work so members understand each other's tasks |

### 4.3.4 Configuration Management

Appropriate tools will be selected which provide a database of Change Requests and a controlled versioned repository of project artifacts.

All source code, test scripts, and data files are included in baselines. Documentation related to the source code is also included in the baseline, such as design documentation. All customer deliverable artifacts are included in the final baseline of the iteration, including executables.