E-commerce Web Application

Software Development Plan (Small Project)

Version <2.1>

Revision History

|  |  |  |  |
| --- | --- | --- | --- |
| **Date** | **Version** | **Description** | **Author** |
| 06/11/2020 | 1.0 |  | Huỳnh Nhật Nam |
| 22/11/2020 | 2.0 | Add WBS, risk management, reporting and measurement | Huỳnh Nhật Nam |
| 1/12/2020 | 2.1 | Update EVP | Huỳnh Nhật Nam |
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Software Development Plan (Small Project)

# 

# Introduction

## Purpose

This document presents the activities needed for developing a e-commerce web application.

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,what are their roles and what other activities they are dependent upon.

## Scope

This *Software Development Plan* describes the overall plan to be used by the e-commerce web application 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*.

## 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.

Management process — describes the project’s management, plan and schedule.

# Project Overview

## Project Purpose, Scope, and Objectives

This project will implement a e-commerce web application for small shops. They can advertise and selling their product online to increase their reputation and profit. Customers can buy products to sastify their needs effectively and conveniently through an interface on internet without wasting their time to go to the shop.

## Assumptions and Constraints

- Staff: team with 5 members

- Final product must be releases before final review (around 27/12)

## Project Deliverables

- Project development plan

- Vision document

- Use-case model and description

- Design document (class diagrams, software architecture,…)

- Test plan

- Test cases

- Releases

# Project Organization

## Organizational Structure

**Huỳnh Nhật Nam**

Team leader

Project manager (Primary)

Business Analyst (Secondary)

Implementer

**Nguyễn Phúc Thịnh**

Business Analyst (Primary)

Project manager (Secondary)

Implementer

**Phạm Vũ Duy**

Designer

Implementer

**Hồ Nguyễn Huy Hoàng**

Designer

Implementer

**Mai Đăng Khánh**

Tester

Implementer

## Roles and Responsibilities

**- All team members are implementers**

|  |  |
| --- | --- |
| **Person** | **Role** |
| **Huỳnh Nhật Nam**  **Team leader/Project Manager (primary)**  **Business Analyst (secondary)** | - Write project plan (including assign tasks)  - Monitor and report status (weekly report)  - Coordinate meetings  - Contact point for the project |
| **Nguyễn Phúc Thịnh**  **Business Analyst (primary)**  **Project Manager (secondary)** | - Document requirements (interview customers, etc.)  - Communicate with team members about the requirements  - Coordinate to review requirements |
| **Phạm Vũ Duy, Designer** | - Design the system (components, classes, databases, etc.)  - Design user interface  - Create Software Architecture Document |
| **Hồ Nguyễn Huy Hoàng, Designer** | - Design the system (components, classes, databases, etc.)  - Design user interface  - Create Software Architecture Document |
| **Mai Đăng Khánh, Tester** | - Write test plan and test cases  - Perform system test |
| **All team members, implementers** | - Write source code  - Perform unit test  - Review source code |

# Management Process

## Project Estimates

- Time:

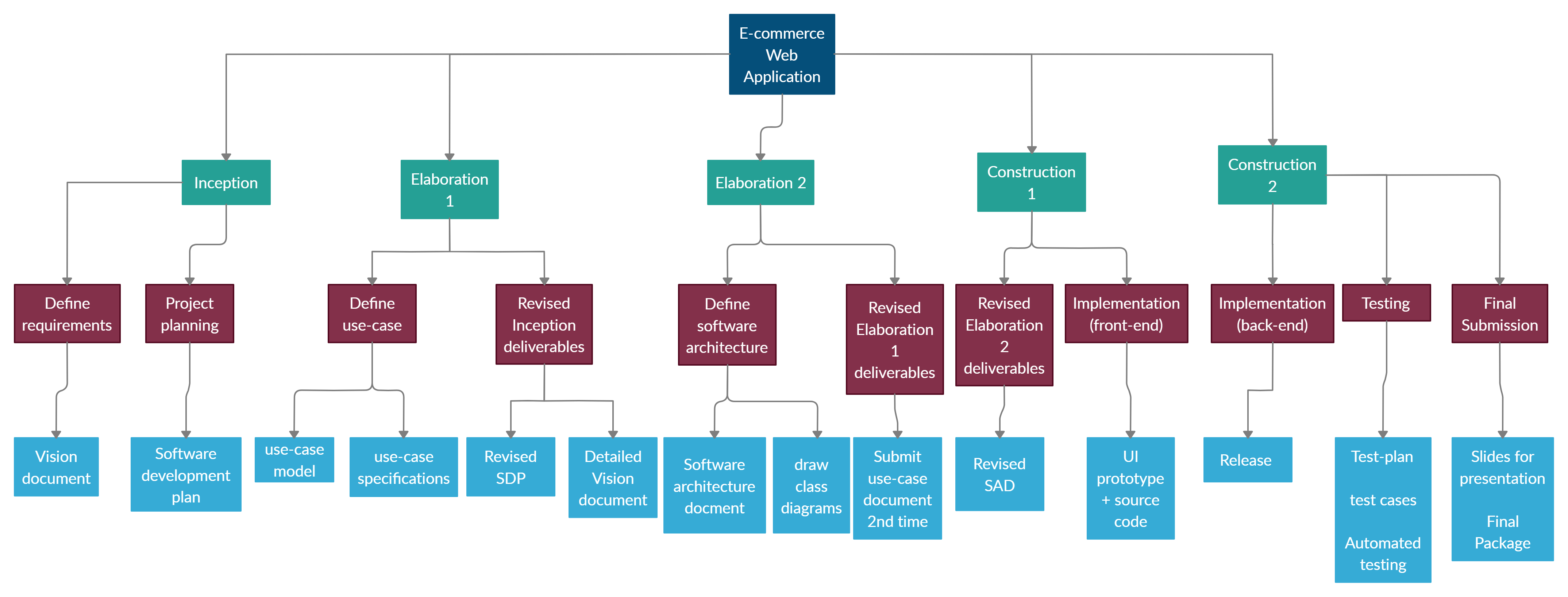
+ 2 Months, 10 Weeks

+ 2/11 – 3/1

- Effort: 10PM

- Cost: 0

- Staff: 5 People



## Project Plan

### Phase Plan

\* Work Breakdown Structure:

**\* Notes: Time line may bee updated due to their deadlines**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Phase** | **Number of Iterations** | **Project Assignments** | **Start** | **End** |
| Inception | 1 | PA1 | 2/11/2020 | 11/11/2020 |
| Elaboration | 2 | PA2, PA3 | 12/11/2020 | 6/12/2020 |
| Construction | 2 | PA4, PA5, PA6 | 7/12/2020 | 30/12/2020 |

### Iteration Objectives

|  |  |  |  |
| --- | --- | --- | --- |
| **Phase** | **Interations No.** | **Project Assignments** | **Objective to be accomplished** |
| Inception | 1 | PA1 | - Vision document  - Project plan |
| Elaboration | 1 | PA2 | - Revised project plan  - Detailed vision document  - Defines use-case model and use-case specification |
| 2 | PA3 | - Submits use-case specification 2nd time.  - Defines sofware architecture (writes SAD) and class diagrams  - UI prototype |
| Construction | 1 | PA4 | - Revised software architecture document  - Implementation (front-end + back-end) |
| 2 | PA5 | - Testing (test plan, test cases, automated testing) |
| PA6 | - Presentation (PP Slides)  - Final submission |

### Releases

- Time: 7/12/2020 – 22/12/2020

+ First release: End of PA4

+ Second release: End of PA5

### Project Schedule

**\* Notes: Time line may be updated bases on PA deadlines**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Phases** | **Interation No.** | **Tasks and Artifacts** | **Assignee** | **Start Date** | **End Date** |
| Inception | 1 | - Vision document | Nguyễn Phúc Thịnh | 1/11/2020 | 11/11/2020 |
| - Project plan | Huỳnh Nhật Nam |
| - Weekly scrum + report  (Only 1 in Inception) | All team members | 9 PM 9/11/2020 | |
| - Submit PA1 | Huỳnh Nhật Nam | Before 10PM 15/11/2020 | |
| Elaboration | 1 | - Revised project plan | Huỳnh Nhật Nam | 12/11/2020 | 22/11/2020 |
| - Detailed vision document | Nguyễn Phúc Thịnh |
| - Use-case model, use-case specification | Huỳnh Nhật Nam, Nguyễn Phúc Thịnh |
| - Weekly scrum + report  (Elaboration, Iteration No.1, Week 01) | All team members | 9 PM 13/11/2020 | |
| - Weekly scrum + report  (Elaboration, Iteration No.1, Week 02) | All team members | 9 PM 20/11/2020 | |
| - Learning HTML, CSS, Javascript | All team members | 12/11/2020 – 22/11/2020 | |
| - Submit PA2 | Huỳnh Nhật Nam | Before 10 PM 25/11/2020 | |
| 2 | - 2nd submission use-case document | Huỳnh Nhật Nam, Nguyễn Phúc Thịnh | 23/11/2020 | 6/12/2020 |
| - Defines software architecture | Phạm Vũ Duy, Hồ Nguyễn Huy Hoàng |
| - Class diagrams | Phạm Vũ Duy, Hồ Nguyễn Huy Hoàng |
| - UI prototype | Phạm Vũ Duy, Hồ Nguyễn Huy Hoàng |
| - Weekly scrum + report  (Elaboration, Iteration No.2, Week 01) | All team members | 9 PM 27/11/2020 | |
| - Weekly scrum + report  (Elaboration, Iteration No.2, Week 02) | All team members | 9 PM 4/12/2020 | |
| - Learning Javascript | All team members | 23/11/2020 – 6/12/2020 | |
| Submit PA3 | Huỳnh Nhật Nam | Before 10 PM 9/12/2020 | |
| Construction | 1 | - Revised SAD | Phạm Vũ Duy, Hồ Nguyễn Huy Hoàng | 7/12/2020 | 13/12/2020 |
| - Implementation (Source code) | All team members | 7/12/2020 | 20/12/2020 |
| - Test-plan | Mai Đăng Khánh |
| - Release (See 4.2.3 for better details) | Hồ Nguyễn Huy Hoàng | 14/12/2020 | 20/12/2020 |
| - Weekly scrum + report  (Construction, Iteration No.1, Week 01) | All team members | 9 PM 11/12/2020 | |
| - Weekly scrum + report  (Construction, Iteration No.1, Week 02) | All team members | 9 PM 18/12/2020 | |
| Submit PA4 | Huỳnh Nhật Nam | Before 10 PM 16/12/2020 | |
| 2 | - Testing | Mai Đăng Khánh | 21/12/2020 | 27/12/2020 |
| - Prepares presentation slides (PP) | Hồ Nguyễn Huy Hoàng, Huỳnh Nhật Nam, Phạm Vũ Duy, Nguyễn Phúc Thịnh |
| - Fix errors and release | All team members | 21/12/2020 | 30/12/2020 |
| - Weekly scrum + report  (Construction, Iteration No.2, Week 01) | All team members | 9 PM 25/12/2020 | |
| - Weekly scrum + report  (Construction, Iteration No.2, Week 02) | All team members | 9 PM 28/12/2021 | |
| - Final Submission  - Presentation | All team members | 28/12/2020 | 30/12/2020 |
| Submit PA5 | Huỳnh Nhật Nam | Before 10 PM 30/12/2020 | |

### Project Resourcing

- Staff: 5 people:

+ 2 Project manager

+ 2 Business Analyst

+ 2 Designer

+ 1 Tester

+ 5 implementers : HTML/CSS/Javascripts skills

- Training: self-training, self-studying, studying in class.

## Project Monitoring and Control

### Requirements Management

The requirements for this system are captured in Vision document.

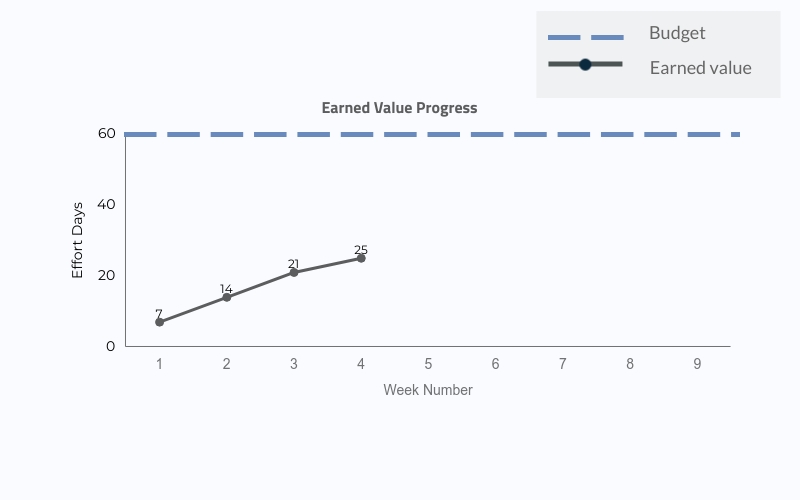
Changes to requirements will be captured and new requirements will be reviewed as soon as possible and will be documented.

All meetings for changes in requirements will be held via Discord voice chat and Slack (or Facebook messenger)

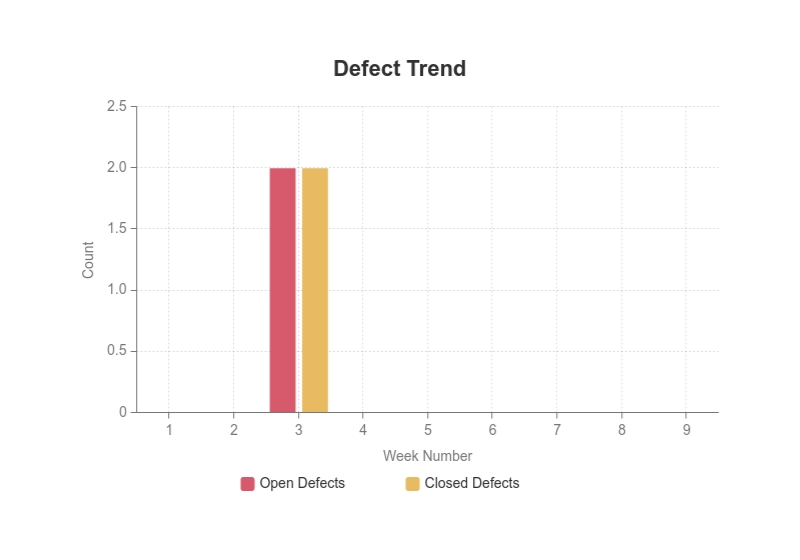
### Reporting and Measurement

Every Friday night at 9 PM, a scrum will be held.

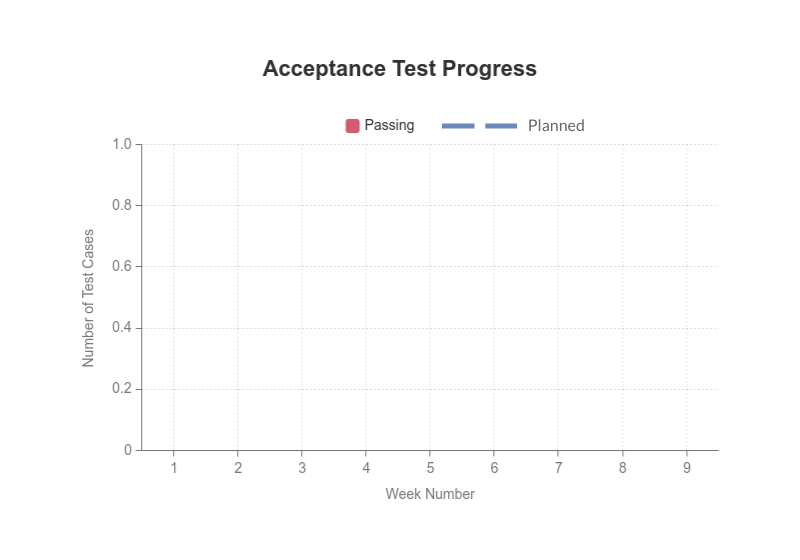
**\* Earned Value Progress:**



**\* Defect Trend:**



**\* Acceptance Test Progress:**



### 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 | Team member is sick or busy.  Impact: Slow down project’s progress, can’t finish tasks in time | Mitigation Strategy:  - All members need to know what others are doing.  Contigency Plan:  - Have a backup member |
| High | Failure to delivery artifacts in time.  Impact: Team member’s grade for that artifact is lost. Slow down project’s progress | Mitigation Strategy:  - Schedule deadlines is 3 days ahead of actual PA deadlines.  - Always check on the progress.  - Scrums are held every week  - Re-estimate the project occasionally ,cut off some none-essential requirements and reschedule taks.  Contigency Plan:  - Adding more team members to help to fisish the task. |
| Medium | Team members don’t have skills to finish task  Impact: Slow down project’s progress | Mitigation Strategy:  - Team members have to learn the skills needed beforehand.  Contigency Plan:  - Have another team member to help with the task.  - assign other team member to the task |
| Medium | Team members misunderstood tasks and requirements  Impact: wasting time to re-do task | Mitigation Strategy:  - Report progress every scrum  - All requirements and tasks are documented.  Contigency Plan:  - Have more people to work on that task |
| medium | Some technology does not work properly  Impact: project’s schedule and progress | Mitigation Strategy:  - have a backup technology that is similar to the old one.  - Check technology’s availability  Contigency Plan:  - Switch to similar techonogy |
| Medium | Team members don’t cooperate  Impact: Make team’s atmotsphere become negative. | Mitigation Strategy:  - Strengthen team’s relationship by communication  Contigency Plan:  - Assign uncooperative team member to fewer tasks.  - Inform TA about uncooperative team members at soon as possible |
| Low | Team members leave team  Impact: task per member increases.  Slow down project’s progress | Contigency Plan:  - Inform TA as soon as possible.  - assign that team member tasks to others |

### Configuration Management

\* Tools:

- Github: storing source code and documents

- Trello: managing project

- Slack, Facebook Messenger: chatting and discussing

- Discord: Weekly scrum, meetings

- Visme: draw charts

\* Rules for naming documents:

- “ktpm1\_Group06\_document\_name\_v\*” (\* is version name. Ex: 1, 2,…)