

**E-commerce Web Application
Software Development Plan (Small Project)
Version <2.0>**

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Software Development Plan (Small Project)	Date: 22/11/2020
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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

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Software Development Plan (Small Project)

1. Introduction

1.1 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.

1.2 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*.

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.

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

2. Project Overview

2.1 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 satisfy their needs effectively and conveniently through an interface on internet without wasting their time to go to the shop.

2.2 Assumptions and Constraints

- Staff: team with 5 members
- Final product must be releases before final review (around 27/12)

2.3 Project Deliverables

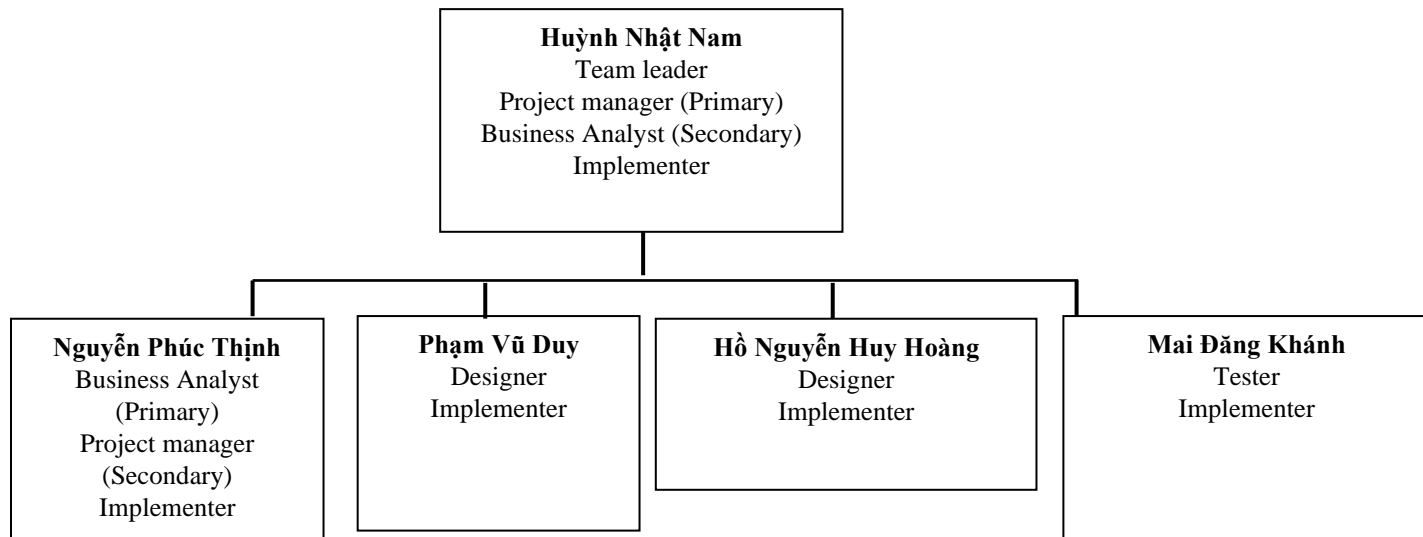
- Project development plan
- Vision document
- Use-case model and description
- Design document (class diagrams, software architecture,...)

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- Test plan
- Test cases
- Releases

3. Project Organization

3.1 Organizational Structure



3.2 Roles and Responsibilities

- All team members are implementers

Person	Role
Huỳnh Nhật Nam Team leader/Project Manager (primary) Business Analyst (secondary)	<ul style="list-style-type: none"> - 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)	<ul style="list-style-type: none"> - Document requirements (interview customers, etc.) - Communicate with team members about the requirements - Coordinate to review requirements
Phạm Vũ Duy, Designer	<ul style="list-style-type: none"> - Design the system (components, classes, databases, etc.) - Design user interface - Create Software Architecture Document
Hồ Nguyễn Huy Hoàng, Designer	<ul style="list-style-type: none"> - Design the system (components, classes, databases, etc.) - Design user interface - Create Software Architecture Document
Mai Đăng Khánh, Tester	<ul style="list-style-type: none"> - Write test plan and test cases - Perform system test
All team members, implementers	<ul style="list-style-type: none"> - Write source code

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	- Perform unit test - Review source code
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4. Management Process

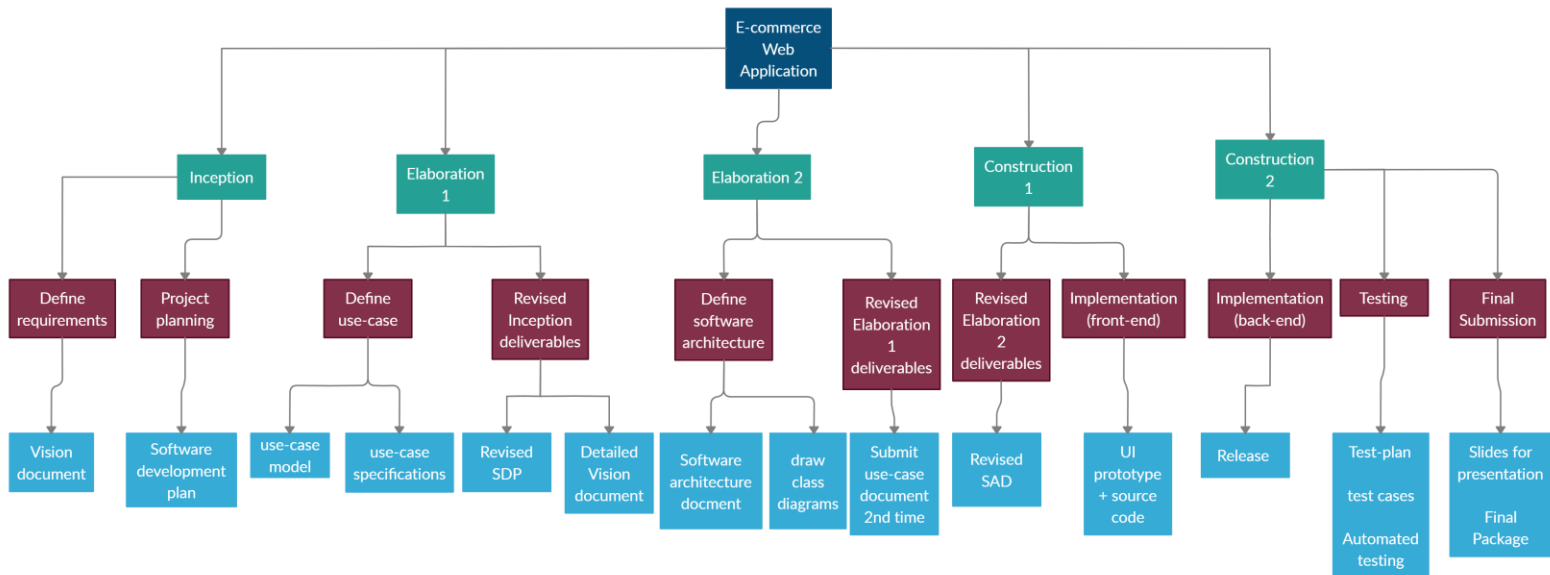
4.1 Project Estimates

- Time:
 - + 2 Months, 10 Weeks
 - + 2/11 – 3/1
- Effort: 10PM
- Cost: 0
- Staff: 5 People

4.2 Project Plan

4.2.1 Phase Plan

* Work Breakdown Structure:



* Notes: Time line may be 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

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4.2.2 Iteration Objectives

Phase	Iterations 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 2 nd time. - Defines software 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

4.2.3 Releases

- Time: 7/12/2020 – 22/12/2020
- + First release: End of PA4
- + Second release: End of PA5

4.2.4 Project Schedule

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

Phases	Iteration 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	

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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	- 2 nd 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	

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		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	All team members	28/12/2020	30/12/2020
		- Presentation			
		Submit PA5	Huỳnh Nhật	Before 10 PM 30/12/2020	

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4.2.5 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.

4.3 Project Monitoring and Control

4.3.1 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.

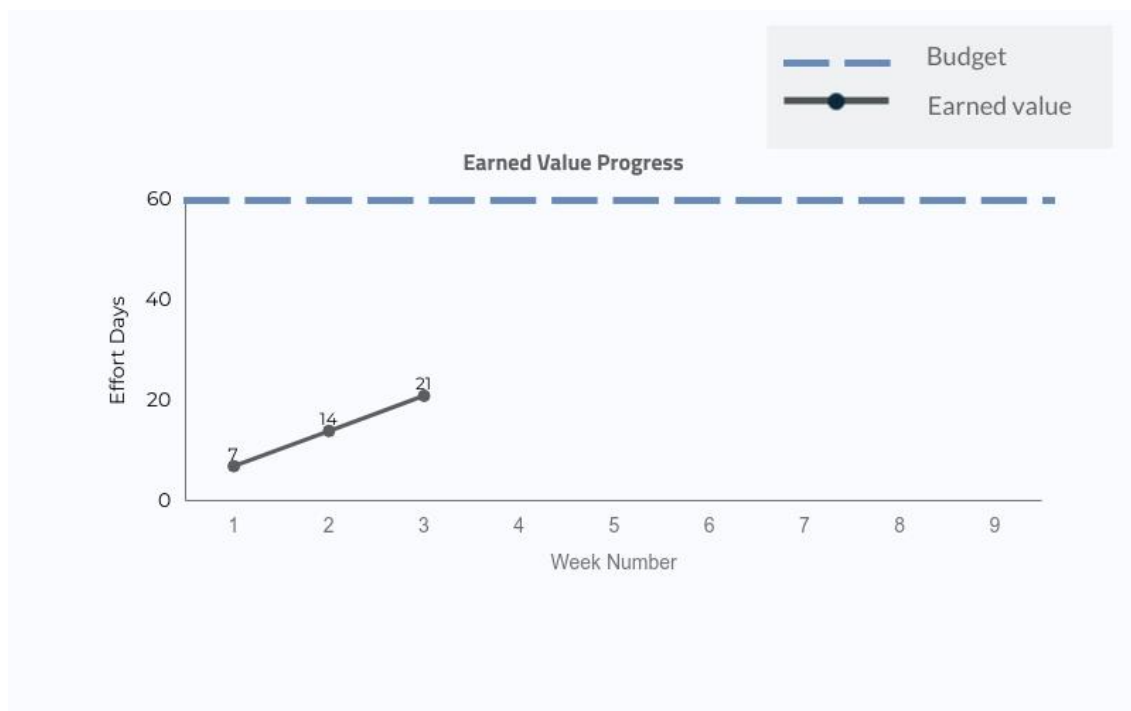
All meetings for changes in requirements will be held via Discord voice chat and Slack (or Facebook messenger)

4.3.2 Reporting and Measurement

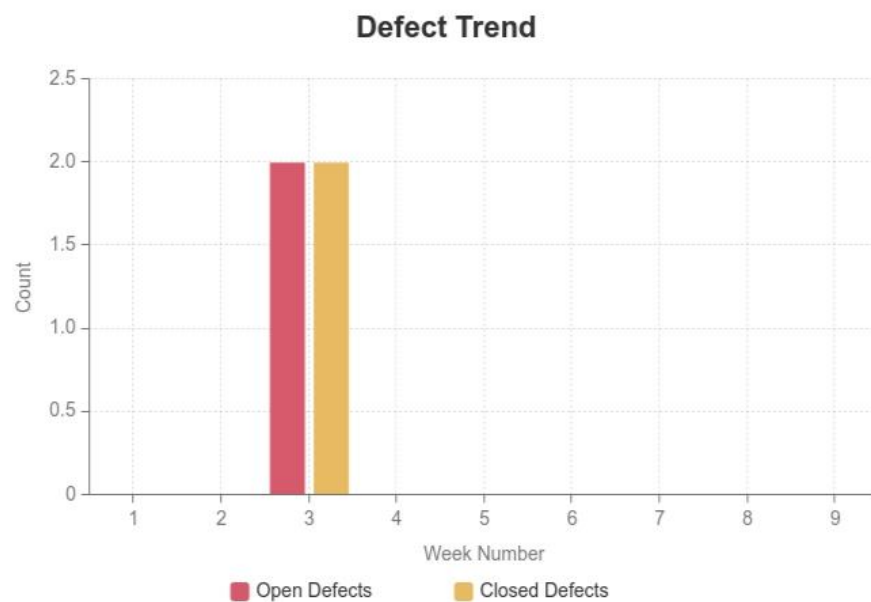
Every Friday night at 9 PM, a scrum will be held.

*** Earned Value Progress:**

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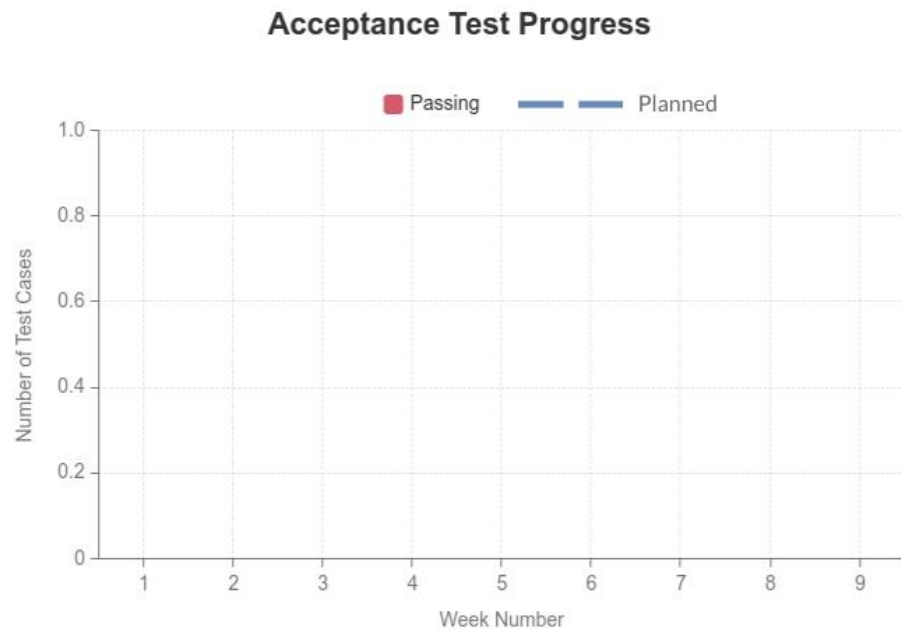


*** Defect Trend:**



*** Acceptance Test Progress:**

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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	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. Contingency 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. Contingency 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. Contingency Plan: - Have another team member to help with the task. - assign other team member to the task

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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. Contingency 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 Contingency 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 Contingency 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	Contingency Plan: - Inform TA as soon as possible. - assign that team member tasks to others

4.3.4 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,...)