Capstone Project 2
CMU-SE 451

Test Plan Document
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Craft Village Pollution Monitor System

Submitted by
Ca, Van Cong Le
Huy, Bui Duc
Phuc, Hua Hoang
Trung, Nguyen Thanh

Approved by
Ph.D. Nguyen Thanh Binh

Proposal Review Panel Representative:

_____
Name   Signature   Date

Capstone Project 2 - Mentor:

_____
Name   Signature   Date

PROJECT INFORMATION

Project acronym	CVPMS		
Project Title	Craft Village Pollution Monitor System		
Start Date	01/03/2023	**End Date**	15/05/2023
Lead Institution	International School, Duy Tan University		
Project Mentor	Ph.D. Thanh Binh, Nguyen		
Scrum master / Project Leader & contact details	Ca, Van Cong Le *Email:* cascabusiness@gmail.com *Tel:* 0352707895		
Partner Organization			
Project Web URL	*https://github.com/Casca113s2/craft-village-pollution-monitor-system*		
Team members	**Name**	**Email**	**Tel**
25211207666	Ca, Van Cong Le	cascabusiness@gmail.com	0352707895
25211215894	Huy, Bui Duc	duchuyltt122@gmail.com	0818648090
25211204084	Phuc, Hua Hoang	phuchuho0402@gmail.com	0905639682
25211215133	Trung, Nguyen Thanh	nguyenttrung2601@gmail.com	0774496838
25211203702	Nhan, Huynh Ba	nhanhuynh1409@gmail.com	0935430785

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Author(s)	Van Cong Le Ca Hua Hoang Phuc Nguyen Thanh Trung		
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REVISION HISTORY

Version	Date	Comments	Author	Approval
2.0	01/03/2023	Create Test Plan Document	Huynh Ba Nhan Hua Hoang Phuc Nguyen Thanh Trung	
2.1	15/03/2023	Update Test Plan for Sprint 2	Huynh Ba Nhan Hua Hoang Phuc Nguyen Thanh Trung	
2.2	30/03/2023	Update Test Plan for Sprint 3	Van Cong Le Ca Hua Hoang Phuc Nguyen Thanh Trung	
2.3	14/04/2023	Update Test Plan for Sprint 4	Huynh Ba Nhan Hua Hoang Phuc Nguyen Thanh Trung	
2.4	29/04/2023	Update Test Plan for Sprint 5	Huynh Ba Nhan Hua Hoang Phuc Bui Duc Huy	

**Approve Document:** Sign in to approve the document

Mentor	Binh, Nguyen Thanh	Date	13/05/2023
		Sign	
Scrum Master	Ca, Van Cong Le	Date	13/05/2023
		Sign	
Scrum Member	Huy, Bui Duc	Date	13/05/2023
		Sign	
Scrum Member	Phuc, Hua Hoang	Date	13/05/2023
		Sign	
Scrum Member	Trung, Nguyen Thanh	Date	13/05/2023
		Sign	
Scrum Member	Nhan, Huynh Ba	Date	13/05/2023
		Sign	

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1. Introduction

A test plan is a detailed software verification document that provides specifics on how the validate will test all aspects of software design. Test plans are test specifications used as guides for writing test case suites for design validation in both the software engineering fields. This test plan document contains a description of product functionality, a description of test cases to be written for each function, and a description of the testing platform to be used.

1.1. Purpose

The purpose of the Test Plan is to define, schedule and monitor the test execution. It supports the following objectives:

➢ Provide a high-level list of the major target test functions.

➢ List the Requirements for testing.

➢ Describe the testing strategies to be employed on each target test functions.

➢ Identify the required resources and schedule the Test execution.

1.2. Scope

This Test Plan is for release test plan for CVPMS system. The Test Plan defines the unit, integration and system testing approach. The test scope includes the following:

➢ Testing of all functions.

➢ Application performance.

➢ Use cases requirements listed in the Product Backlog and User Stories document.

1.3. Out Of Scope

The following is considered out of scope for Craft Village Pollution Monitor System Test Plan and testing scope: Performance testing for Craft Village Pollution Monitor System.

1.4. Reference

Table 1. *Reference documents*

No	Document references	Document Information
01	Proposal document	C2SE.01_CVPMS_Project-Proposal-Document_v2.2.docx
02	Product Backlog and User Story document	C2SE.01_CVPMS_ProductBacklog-Userstory-SprintBacklog.xlsx
03	Project Plan Document	C2SE.01_CVPMS_Project-Plan_v2.1.docx

1.5. Risk List

Table 2. *Risk List*

Risk	Mitigation Strategy	Responsibility	Contingency (Risk is realized)
External Risks	Get fewer projects but will definitely succeed or have a high success rate	Not under control of the Project Team or Project Steering Group	Do your part, recognize and eliminate risks as soon as possible
Project Management	Agree on all the standards before starting the project	Leader	It is mandatory to revise the whole project to the original standard if it is not correct
Tester	Sick, busy or crash cannot do it	Team tester	self-supplementing undo their assigned work, the way other members are supposed to support
Technology	Technology analysis before starting each project	Tester	Exchange learning in groups
Tester Skill	Train, or recruit experienced people	Tester, Team leader	Train technology professionals or invite professors to help with the project
Estimate Plan	Calculate carefully and accurately when taking requests and analyzing, apply good models and	Request Collectors, Request Analyst	Enlist the product delivery time or overtime for timely delivery

Risk	Mitigation Strategy	Responsibility	Contingency (Risk is realized)
	methods for estimation		
Automation Tool Risks	Choose the right tools and quality, check the tools before starting the project	Tester, Team leader	Exchange in groups, change new tools and remove inconsistent tools
Out of system scope	Analyze and find solutions to test all testable areas	Tester	

2. Test Specification

2.1. Test Items

Table 3. *Test Items*

* The following list describes the features that will be tested

** Team acronym – F: Function

ID	Function	A part of	Priority	Type Test case	Note
FE01	Login	PB11	M	User interface, Functionality, Usability	
FE02	Register	PB10	M	User interface, Functionality, Usability	
FE03	Forgot Password	PB12	L	User interface, Functionality, Usability	
FE04	Change Password	PB19	L	User interface, Functionality, Usability	
FE05	Add New Authority	PB03	H	User interface, Functionality, Usability	
FE06	Report Form	PB01	L	User interface, Functionality, Usability	
FE07	Accept Decline New Village	PB22	H	User interface, Functionality, Usability	

ID	Function	A part of	Priority	Type Test case	Note
FE08	Declare Household Survey	PB02	H	User interface, Functionality, Usability	
FE09	Declare Household Survey Form	PB02 PB03	H	User interface, Functionality, Usability	
FE10	Dashboard	PB03	H	User interface, Functionality, Usability	
FE11	Edit Village	PB05	H	User interface, Functionality, Usability	
FE12	Change Language	PB17	L	User interface, Functionality, Usability	

2.2. Test Deliverables

➢ Test Plan Document.

➢ Test Case Document.

➢ Test Summary Report.

2.3. Test Strategy

Table 4. *Test Strategy*

Test Types	Test Stages		
	Unit	Integration	Acceptance
Functional Tests	X	X	X
User Interface	X	X	X
Reliability ➢ Integrity ➢ Structure	X	X	

2.4. Tools

Table 5. *Tools*

Purpose	Tool	Vendor	Version
Microsoft Excel is used to write Test Plan and Test Cases.	Microsoft Excel	Microsoft	2016
Katalon Platform is an automation testing software tool developed by Katalon, Inc. The software is built on top of the open-source automation frameworks Selenium, Appium with a specialized IDE interface for web, API, mobile and desktop application testing.	Katalon	Katalon Studio	8.5.2

2.5. Resource

Table 6. *Resources*

The role	Resource	Specific responsibilities
Tester	All members	Executes the tests. Responsibilities include: ➢ Execute test suites ➢ Log results ➢ Analyze and recover from test failures ➢ Document incidents
Testing System	All members	Ensures test environments are managed and maintained. Responsibilities include: ➢ Administer test management system. ➢ Install and support access to, and recovery of, test environment configurations and test labs.

3. Test Cycle and Exit Criteria

3.1. Entry Criteria

➢ All test hardware platforms must have been successfully installed, configured, and functioning properly.

➢ All the necessary documentation, design, and requirements information should be available that will allow testers to operate the system and judge the correct behavior.

➢ Proper test case is available.

➢ The test environment such as, lab, hardware, software, and system administration support should be ready.

3.2. Exit Criteria

➢ All test cases have been run.

➢ A certain level of requirements coverage has been achieved.

➢ No high priority or severe bugs are left outstanding.

➢ All high-risk areas have been fully tested, with only minor residual risks left outstanding.

➢ The schedule has been achieved.

➢ Not over the allowed project budget

4. Test Milestones

Table 7. *Test milestones*

Milestone Task	Name	Date Start	Date Finish
Test Plan	Test Plan Document	01/03/2023	13/05/2023
Test plan and test case for Sprint 1	Test plan and test case for Sprint 1	01/03/2023	14/03/2023
Test plan and test case for Sprint 2	Test plan and test case for Sprint 2	15/03/2023	29/03/2023
Test plan and test case for Sprint 3	Test plan and test case for Sprint 3	30/03/2023	13/04/2023
Test plan and test case for Sprint 4	Test plan and test case for Sprint 4	14/04/2023	28/04/2023
Test plan and test case for Sprint 5	Test plan and test case for Sprint 5	29/04/2023	13/05/2023