**T-2HAND**

<Iteration/ Master> Test Plan

**(Small Project)**

Version <1.0>

Revision History

| **Date** | **Version** | **Description** | **Author** |
| --- | --- | --- | --- |
| 07/12/2024 | 1.0 | Complete version of the document | Trần Đan Huy |
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**<Iteration/ Master> Test Plan**

# Introduction

## 1.1 Purpose

The purpose of this Test Plan is to provide a detailed roadmap for testing the T-2HAND application, ensuring its readiness for release by meeting all functional and non-functional requirements. This document defines the strategies, resources, and responsibilities necessary to validate the quality of the application and resolve any potential issues before deployment.

## 1.2 Objectives

* Validating that all core functionalities of the application perform as expected according to the defined requirements.
* Ensuring the application offers a user-friendly, intuitive, and efficient experience for end-users.
* Verifying compatibility across multiple devices, operating systems, and browsers to ensure consistent performance.
* Assessing the application’s performance under different conditions, including load, stress, and scalability tests.
* Detecting and addressing defects to meet the highest quality standards.

## 1.3 Key Features

* A description of the features and functionalities to be tested.
* Clear definitions of testing methodologies, including functional, usability, compatibility, and performance testing.
* Environmental requirements such as hardware, software, and productivity tools.
* Defined roles and responsibilities for all stakeholders involved in the testing process.
* A structured approach for identifying and resolving issues during testing.

# Target Test Items

## 2.1 Features

We will list the 6 following functionalities of the T-2HAND will be subjected to testing:

| **Tester** | **Features** |
| --- | --- |
| Lâm Sỹ Tân | Login |
| Trần Đan Huy | Upload product |
| Võ Hoàng Đức | Approve Product  Manage Users |
| Trần Thị Cát Tường | Leave Feedback & Rate Sellers |
| Ôn Gia Bảo | Contact with admins |

## 2.2 Areas

### 2.2.1 Functional Testing

* **Objective:** Ensure that all application features operate correctly according to the specified requirements.
* **Scope:** Covers testing all the core functionalities listed above.
* **Method:** Test cases will be designed for each feature to verify that the inputs produce the expected outputs. Both positive and negative scenarios will be tested.

### 2.2.2 Usability Testing

* **Objective:** Assess the user experience to confirm that the application is intuitive, user-friendly, and easy to navigate.
* **Scope:** Involves evaluation by actual users or testers who will determine the application’s ease of use, efficiency, and overall satisfaction.
* **Method:** Usability testing will include observing users as they interact with the application, collecting feedback, and suggesting improvements.

### 2.2.3 Compatibility Testing

* **Objective:** Confirm that the application performs as expected across various environments, including devices, operating systems, and browsers.
* **Scope:** Includes testing on multiple platforms like desktops and tablets, as well as browsers such as Chrome, Firefox, Safari, and Edge.
* **Method:** Compatibility testing will verify consistent functionality and appearance across all targeted environments.

### 2.2.4 Performance Testing

* **Objective:** Evaluate the application's performance under different conditions, such as load, stress, and scalability.
* **Scope:** Includes testing the system's behavior under peak loads, execution time for tasks, and scalability.
* **Method:** Performance tests will simulate multiple users interacting with the application to measure response times, throughput, and resource utilization.

## 2.3 Techniques

### 2.3.1 Defect Testing

* Purpose: To detect instances where the software exhibits unexpected behavior, generates erroneous output, or fails to meet the functional and non-functional criteria outlined in the system specifications.
* Application: This technique will be systematically applied to all aspects of the testing process to ensure that the software adheres to the defined quality standards and is free from defects.

### 2.3.2 Verification Testing

* Purpose: To certify that the software satisfies the predefined acceptance criteria and conforms to the established design principles.
* Application: Utilized during functional testing to validate the conformance of each feature to the design specifications and to ensure that it meets the established quality standards.

### 2.3.3 Dynamic Verification

* Purpose: To monitor and assess system behavior under test conditions.
* Application: Utilized in functional, usability, and performance testing to evaluate the software's operational characteristics in real-time to verify its adherence to the specified functional, non-functional, and usability requirements

### 2.3.4 Partition Testing

* Purpose: To group inputs with similar processing requirements.
* Application: Employed in functional testing to optimize test case design using input partitioning

### 2.3.5 Equivalence Partitioning

* Purpose: To divide the input domain into distinct subsets, each containing inputs that are expected to produce the same output or behavior, thereby reducing the number of test cases required while ensuring that all relevant input conditions are adequately covered.
* Application: Employed during functional testing to systematically partition the input domain into equivalence classes to create a focused and efficient set of test cases.

# Environmental Needs

## 3.1 Hardware Requirements

| **Requirements** | **Minimum specification** |
| --- | --- |
| Processor | Intel Core i3 (or equivalent) or higher with a minimum of 2GHz |
| RAM | 4GB minimum, 8GB or more is recommended for better performance |
| Storage | At least 10GB of free space |
| Display | Recommended: 1920\*1080 |

## 3.2 Software for the Test Environment

The following base software elements are required in the test environment for this Test Plan.

| **Software Name** | **Purpose** | **Version Recommended** | **Type and Other Notes** |
| --- | --- | --- | --- |
| Windows 11, 64 bits | For general use | - | Operating System |
| Visual Studio Code | For development | 1.92.2 | Code Editor |
| Google Chrome | For testing | 127.0.6533.120 | Internet Browser |
| Microsoft Edge | For testing | 128.0.2739.42 | Internet Browser |
| Firefox | For testing | 129.0.2 | Internet Browser |
| Safari | For testing | 17.5.1 | Internet Browser |

## 3.3 Productivity and Support Tools

The following tools will be employed to support the test process for this Test Plan.

| **Tool Category or Type** | **Tool Brand Name** | **Vendor or In-House** | **Version** |
| --- | --- | --- | --- |
| Version Control | GitHub | GitHub | Web-version 2024 |
| Version Control Client | GitHub Desktop | GitHub | 3.4.3 |
| Word Processing | Microsoft Word | Microsoft | 2407 |
| Spreadsheet | Google Sheets | Google | Web-version 2024 |

# Responsibilities, Staffing, and Training Needs

## People and Roles

This table shows the staffing assumptions for the test effort.

| **Human Resources** | | |
| --- | --- | --- |
| **Role** | **Minimum Resources Recommended**  **(number of full-time roles allocated)** | **Specific Responsibilities or Comments** |
| Test Manager | Trần Thị Cát Tường | Test manager provides management oversight.  Responsibilities include:   * Planning and Logistics * Mission Agreement * Motivators Identifications * Resources Acquisition * Present Management Reporting * Advocacy for Testing * Effectiveness of Test Effort Evaluation |
| Tester | Lâm Sỹ Tân  Ôn Gia Bảo  Võ Hoàng Đức  Trần Đan Huy  Trần Thị Cát Tường | Testers implement and execute the tests.  Responsibilities include:   * Test Implementation * Test Execution * Results Logging * Test Failures Analysis and Recovery * Incidents Documentation |