HuanLe Noodles Pte. Ltd Inventory Management System

Test Plan

By

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# Introduction

## Summary

This document outlines the test plan for the Inventory Management System. The plan covers the scope of testing, test strategy, execution strategy, and environment requirements. The goal is to ensure the system meets the specified requirements and functions as intended.

## Test Objectives

* Verify the functionality of each operation.
* Ensure data integrity and consistency.
* Test for user input validation and error handling.
* Identify and document any defects or issues.

# Scope

## In-Scope

*The testing scope will include all features and functionalities of the Inventory Manager class, including:*

* Add Product
* Remove Product
* Update Product
* List Products
* Get Total Value
* Name
* Quantity in Stock
* Price

# Testing Strategy

## Test Assumptions

* The test environment is reliable and steady.
* The resources and equipment required for testing are at accessible.
* Any flaws found will be promptly fixed by the development team.

## Test Data

A set of test data will be created covering various scenarios, including:

* Valid product data (positive testing)
* Invalid product data (negative testing)
* Boundary values for quantity and price
* Empty inventory scenarios

## Level of Testing

|  |  |  |
| --- | --- | --- |
| **Test Type** | **Description** | **Responsible Parties** |
| **Unit Testing** | Testing individual components or modules within the Inventory Management System. | **TESTER 1** |
| Integration Testing | Testing interactions between different modules or components. | TESTER 1 |
| E2E / System Testing | Testing the entire system flow from start to finish. | TESTER 1 |

## Unit Testing

* AddProduct() method
* RemoveProduct() method
* UpdateProduct() method
* CalculateTotalValue() method
* GetListProducts() method
* EnterHere() method

**Demonstration of Testing:**

A screenshot of a computer

Description automatically generatedA screenshot of a computer

Description automatically generatedA screenshot of a computer

Description automatically generatedA screenshot of a computer

Description automatically generatedA screenshot of a computer

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Description automatically generatedHere are some of the tests I made during the unit testing. Other proofs are in a separate folder.

Participants:

|  |  |  |
| --- | --- | --- |
| **Tester’s Name** | **Department/ Area** | **Role** |
| Rovic Jake Hiwatig | NA | Tester 1 |
|  |  |  |

## Integration Testing

* Integration between AddProduct() and UpdateProduct () methods.
* Integration between AddProduct() and GetListProducts () methods.
* Integration between AddProduct() and GetTotalValue () methods.
* Integration between AddProduct() and RemoveProduc() methods.
* Integration between UpdateProduct() and GetListProducts() methods.
* Integration between RemoveProduct() and GetListProducts() methods.
* Integration between RemoveProduct () and GetTotalValue () methods.

**Demonstration of Testing:** Please refer to the Integration Testing Folder(Proof of testing->Integration Testing). Videos cannot be uploaded here, so I made a different Folder that contains the proof of testing.

Participants:

|  |  |  |
| --- | --- | --- |
| Tester’s Name | Department/ Area | Role |
| Rovic Jake Hiwatig | NA | Tester 1 |
|  |  |  |

## End to End Testing

* Adding a new product, updating its quantity, verifying the updated value in the inventory, Removing a product, and checking if it is no longer displayed in the product list.

**Demonstration of Testing:** Please refer to the E2E Folder(Proof of testing-> E2E Testing). Videos cannot be uploaded here, so I made a different Folder that contains the proof of testing.

Participants:

|  |  |  |
| --- | --- | --- |
| **Tester’s Name** | **Department/ Area** | **Role** |
| Rovic Jake Hiwatig | NA | Tester 1 |
|  |  | Test Lead |

# Execution Strategy

## Entry Criteria

|  |  |  |  |
| --- | --- | --- | --- |
| **Entry Criteria** | **Test Team** | **Technical Team** | **Notes** |
| *Test environment(s) is available* | C:\Users\arxp\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.IE5\7F9Z3IW4\MC900441310[1].png | C:\Users\arxp\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.IE5\7F9Z3IW4\MC900441310[1].png |  |
| *Test data is available* | C:\Users\arxp\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.IE5\7F9Z3IW4\MC900441310[1].png | C:\Users\arxp\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.IE5\7F9Z3IW4\MC900441310[1].png |  |
| *Code has been merged successfully* | C:\Users\arxp\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.IE5\7F9Z3IW4\MC900441310[1].png | C:\Users\arxp\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.IE5\7F9Z3IW4\MC900441310[1].png |  |

## Exit criteria

|  |  |  |  |
| --- | --- | --- | --- |
| **Exit Criteria** | **Test Team** | **Technical Team** | **Notes** |
| *100% Test Cases executed* | C:\Users\arxp\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.IE5\7F9Z3IW4\MC900441310[1].png | C:\Users\arxp\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.IE5\7F9Z3IW4\MC900441310[1].png |  |
| *No open Critical and High severity defects* | C:\Users\arxp\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.IE5\7F9Z3IW4\MC900441310[1].png | C:\Users\arxp\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.IE5\7F9Z3IW4\MC900441310[1].png |  |
| *All expected and actual results are captured and documented* | C:\Users\arxp\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.IE5\7F9Z3IW4\MC900441310[1].png | C:\Users\arxp\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.IE5\7F9Z3IW4\MC900441310[1].png |  |
| *All defects logged in Defect Tracker/Spreadsheet* | C:\Users\arxp\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.IE5\7F9Z3IW4\MC900441310[1].png | C:\Users\arxp\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.IE5\7F9Z3IW4\MC900441310[1].png |  |
| *Test environment cleanup completed* | C:\Users\arxp\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.IE5\7F9Z3IW4\MC900441310[1].png | C:\Users\arxp\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.IE5\7F9Z3IW4\MC900441310[1].png |  |
| *100% Test Scripts executed* | C:\Users\arxp\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.IE5\7F9Z3IW4\MC900441310[1].png | C:\Users\arxp\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.IE5\7F9Z3IW4\MC900441310[1].png |  |
| *90% pass rate of Test Scripts* | C:\Users\arxp\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.IE5\7F9Z3IW4\MC900441310[1].png | C:\Users\arxp\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.IE5\7F9Z3IW4\MC900441310[1].png |  |

## Validation and Defect Management

* Test cases will be validated by:
  + Test cases will be validated by comparing the actual results against the expected results documented in the test cases.
  + Test results will be documented in the test log, including screenshots or videos where applicable.
  + A separate column in the test case template will be used to record the test result (Pass/Fail)
* Defects will be managed by:
  + The defects will be tracked through Defect Tracker or Spreadsheet.
  + It is the responsibility of the tester to open the defects, retest and close the defect.

Defects found during the Testing should be categorized as below:

|  |  |
| --- | --- |
| **Severity** | **Impact** |
| *1 (Critical)* | * *Functionality is blocked and no testing can proceed* * *Application/program/feature is unusable in the current state* |
| *2 (High)* | * *Functionality is not usable and there is no workaround but testing can proceed* |
| *3 (Medium)* | * *Functionality issues but there is workaround for achieving the desired functionality* |
| *4 (Low)* | * *Unclear error message or cosmetic error which has minimum impact on product use.* |

# Environment Requirements

## Test Environments

* **Hardware:** Any machine with .NET installed and Visual Studio 2022.
* **Software:** Visual Studio 2022, .NET 8.0 or higher.