**UniversitySouvenirApplication**

**System Test Plan**

**Release Version S-000-001-00**

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# Purpose

This document describes the implementation of the system verification and validation according to the strategy outlined and defined in the validation section of ISS M.tech class teaching material. It includes all the information necessary to plan and control the test effort for the given system.

# Scope

This test plan relates to the following System (i.e. object under test):

|  |  |
| --- | --- |
| **System Name** | UniversitySouvenirApplication |
| **System Version** | S-000-001-00 |
| **Test Cycle** | 3 |

# System Description

UniversitySouvenirApplication is an implementation of POS for automating the University Souvenir Store. The system operated by the storekeeper, is able to provide facilities to make payment, replenish stock, check inventory, member registration.

It is GUI based, and with flat files to store data.

# Acceptance Criteria

In general, a test case is "PASSED" when the real outcome corresponds to the expected outcome, otherwise the test case is marked as “FAILED”. Expected outcomes are defined separately in each test case.

* a 100% test coverage is required (i.e. all implemented changes need to be tested at least once)
* no critical defects are tolerated
* Defect level is defined below:
  + Danger – Cause system shutdown or hangup
  + Severe – Affect behavior of other class or data corrupte
  + Intermediate – Change self-owned attribute unpredicted
  + Slight – Format error, data floating issue, bad language or graphic expression

# Test Procedure Overall Strategy and Approach

## Testing Strategy

UniversitySouvenirAPP System Testing will include testing of all functionalities that are in scope (Refer Functional Scope Section) identified. System testing activities will include the testing of new functionalities, modified functionalities, screen level validations, work flows, functionality access, testing of internal & external interfaces. -According to the test cases, a specific test set is defined for this test run.

-At least 100% of failed test cases will be retested.

-In addition to the system validation, GUI is validated in an individual process.

-In addition to the system validation, flat data is validated in an individual process.

## Testing Types

### Usability Testing

User interface attributes, arranging and content will be tested for accuracy and general usability. The goal of Usability Testing is to ensure that the User Interface is comfortable to use and provides the user with consistent and appropriate access and navigation through the functions of the application (e.g., access keys, consistent tab order, readable fonts etc.)

### Functional Testing

The objective of this test is to ensure that each element of the component meets the functional requirements of the business as outlined in the:

* Functional Requirements
* Business rules or conditions

## Suspension Criteria and Resumption Requirements

This section will specify the criteria that will be used to suspend all or a portion of the testing activities on the items associated with this test plan.

### Suspension Criteria

Testing will be suspended if the incidents found will not allow further testing of the system/application under-test. If testing is halted, and changes are made to the hardware, software or database, it is up to the Testing Manager to determine whether the test plan will be re-executed or part of the plan will be re-executed.

### Resumption Requirements

Resumption of testing will be possible when the functionality that caused the suspension of testing has been retested successfully.

## Test Data

Test data requirements are drawn up based on the functional requirements that are due for testing. The testing team will identify test cases that can be grouped into test scenarios and detail the data required to complete the testing activities.

## Test Intensity

The criticality of any test case is rated, documented and printed with each test case document.

A 100% requirement coverage is needed, that means that there is in minimum one test case per specification.

| **Test Intensity** | **Test Case Types applied** |
| --- | --- |
| Extended | * Valid Input Tests (generate at least 1 possible output or event using valid inputs)   Plus one or more of the following approaches:   * Verifying boundary values for each parameter;   + Entering an invalid value for each parameter;   + Special input values: 0, negative numbers, wrong format, accented characters, empty fields, extremely high or low values; * Try as much as possible not allowed user actions or events * Interfering/Interrupting events or user actions outside the specified behavior, such as removing cables, closing browser window, pushing buttons several times, removing instrument during data transfer, time-outs, etc. |
| Standard | * Valid Input Tests (generate at least 1 possible output or event using valid inputs) |

# Resources

| **Role** | **Responsibility** | **Persons** |
| --- | --- | --- |
| Test Manager | * coordination of design verification & validation * management of resources for validation | Chou Ying |
| Test Designer | * definition of test cases * supervision of the testing and validation activities | Chou Ying |
| Group of Testers | * execution of test cases * reporting of test results | Jithesh Edakkattaparambil Prabhakaran  Naveen Kumar Kumar  Rinu Sharma  Ashok Anurudh Surali Pandian  Manu Agarwal  Puneet Raman Dewan  Samir Kumar  Chou Ying |

# Test Environment

In order to successfully and reproducibly conduct the technical validation the following provisions and preconditions have to be established:

## Computer Systems

|  |  |  |  |
| --- | --- | --- | --- |
| ***Test computer systems*** | **Test Bench 1** | **Test Bench 2** | **Test Bench 3** |
| Operation System | Windows7 Home Premium |  |  |
| Java IDE | Eclipse |  |  |
| Note | Test manager’s laptop | Configuration manager’s laptop | Workstation in ISS |

# Test Case List

Test Cases are designed according to the document “DetailedDesign\_SouvenirApp.” It anticipates reasonable response of the system and gives the appropriate acceptance criteria. Relevant test case list is provided to the test person assigned to carry out the tests. This document is then used to carry out the results and record the specific system test.

The table below lists the entire System Test Case Definitions documents approved and used for system testing.

| **Test Def. ID** | **Test Case Document** | **Remark** |
| --- | --- | --- |
| U-000-001-0 | User Interface test case overview |  |
| F-000-001-0 | Functionality test case overview |  |
| C-000-001-0 | Domain class test case overview |  |
| D-000-001-0 | Data test case overview |  |
| I-000-001-0 | Integration test case overview |  |
| N-000-001-0 | Non-functional requirement test overview |  |

*Test Def. ID: “Test Approach”-“Branch”-“Precedent”-“Version”*

# References

|  |  |  |  |
| --- | --- | --- | --- |
| **Ref.** | **Title** | **ID-Number** | **Version** |
| 1 | Introduction to Object Oriented Programming |  |  |
| 2 | Introduction to OO Programming CA instruction |  |  |
| 3 | DetailedDesign\_SouvenirApp.docx |  |  |
|  |  |  |  |
|  |  |  |  |

# Working sheets

Working sheet is provided as well as test cases to testers. System test requires these working sheet to evaluate the result of system testing.

## Domain class test working sheets

|  |  |
| --- | --- |
| **Domain Class Test Working sheet** C-999-001-0 | |
| Programmer’s Name |  |
| Program Version |  |
| Tester’s Name |  |
| Testing date |  |
| Code Standard | YES/NO |
| TDD provided | YES/NO |
| C-000-001-0 Pass | YES/NO |
| Other class test Passed | C-  C- |
| Tester Comment | Defect, if any:  Danger  Severe  Intermediate  Slight |
| Delivarable location |  |

## User Interface class test working sheets

|  |  |
| --- | --- |
| **User Interface Class Test Working sheet** U-999-001-0 | |
| Programmer’s Name |  |
| Program Version |  |
| Tester’s Name |  |
| Testing date |  |
| Code Standard | YES/NO |
| TDD provided | YES/NO |
| U-000-001-0 Pass | YES/NO |
| Other class test Passed | U-  U- |
| Tester Comment | Defect, if any:  Danger  Severe  Intermediate  Slight |
| Delivarable location |  |

## Handler class (Functionality) test working sheets

|  |  |
| --- | --- |
| **Handler class Test Working sheet** F-999-001-0 | |
| Programmer’s Name |  |
| Program Version |  |
| Tester’s Name |  |
| Testing date |  |
| Code Standard | YES/NO |
| TDD provided | YES/NO |
| F-000-001-0 Pass | YES/NO |
| Other class test Passed | F-  F- |
| Tester Comment | Defect, if any:  Danger  Severe  Intermediate  Slight |
| Delivarable location |  |

## QC Integration test check sheets

|  |  |
| --- | --- |
| **Integration Test Working sheet** I-999-001-0 | |
| Integration classes |  |
|  |  |
|  |  |
| Tester’s Name |  |
| Testing date |  |
| I-000-001-0 Pass | YES/NO |
| Other class test Passed | I-  I- |
| Tester Comment | Defect, if any:  Danger  Severe  Intermediate  Slight |