FOOD ORDERING SYSTEM (FOS)

### TEST DESIGN

### SPECIFICATIONS

FOOD ORDERING SYSTEM (FOS)

Independent Verification and Validation

Version: 1.0.0

Date: 21/11/2016

# Document Control

|  |  |
| --- | --- |
| **Document Name** | FOS Test Design Specification |
| **Reference Number** | FOS\_TDS |
| **Version** | 1.0.0 |
| **Project Code** | TZARIA INC.\_FOS |
| **Status** | In-Use |
| **Date Released** | 21st of Nov, 2016 |

|  |  |  |  |
| --- | --- | --- | --- |
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**Version History**

|  |  |  |  |
| --- | --- | --- | --- |
| **Version** | **Release Date** | **Section** | **Amendments** |
| 1.0.0 | 21/11/2016 | All | Original Document |

**Distribution List**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Version** | **Release Date** | **Contolled Copy No** | **Receipient Name** | **Department** | **Issue Date** | **Return Date** |
| 1.0.0 | 21/11/2016 | 01 |  | TZARIA INC. QA Dept. | 21/11/2016 |  |
| 1.0.0 | 21/11/2016 | 02 |  | TZARIA INC. Test Team | 21/11/2016 |  |
| 1.0.0 | 21/11/2016 | 03 |  | NKMM | 21/11/2016 |  |

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# 1.0 Introduction

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| 1.1 Purpose This test design specification support the following objectives:  i. To identify the test items covered  ii. To further refine the test approach from test plan  iii. To define the sources of the information used to prepare the plan  iv. To identify the general cases of test to be executed 1.2 Scope This test design specification covers Transfer features developed in FOS. |

## 1.3 References

The following IEEE standards have been referenced in preparation of this document:

i. IEEE 829-2008 Standard for Software and System Test Documentation

The following documents provide the test basis for this test design:

i. The FOS Software Requirement Specifications (FOS\_SRS\_2.0)

ii. The FOS System Design Document (FOS\_SDD\_2.0)

# 2.0 Test Design

## 2.1 Features To Be Tested

The following table contains the features to be tested based on FOS Software Requirement Specification (SRS) for this iteration. Listed together are the function ID and its corresponding function and its risk level.

|  |  |  |
| --- | --- | --- |
| **Feature ID** | **Description** | **Risk Level** |
| F004 | Payment | High |

**2.2 Approach Refinements**

Feature ID: F004

Test Technique: Decision table testing, Use case testing, State Transition Testing

Result Analysis Method:oo

**2.2.1 Decision Table Testing**

|  |  |
| --- | --- |
| Test Condition ID | Test Condition |
| TCON-04-001 | Invalid staffID |
| TCON-04-002 | Invalid password |
| TCON-04-003 | Invalid login 1-2 times |
| TCON-04-004 | Invalid login 3 times |
| TCON-04-005 | Click “View” button |
| TCON-04-006 | Click “Search” button |
| TCON-04-007 | Click “Update” button |
| TCON-04-008 | Click “Save” button |
| TCON-04-009 | Click “Delete Order” button |

**Table 2.2.1a Session Verification Decision Table Test Conditions**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Condition | T  C  O  V  -  04  -  001 | T  C  O  V  -  04  -  002 | T  C  O  V  -  04  -  003 | T  C  O  V  -  04  -  004 | T  C  O  V  -  04  -  005 | T  C  O  V  -  04  -  006 | T  C  O  V  -  04  -  007 | T  C  O  V  -  04  -  008 | T  C  O  V  -  04  -  009 | T  C  O  V  -  04  -  010 |
| Invalid staffID | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Invalid password | N | Y | N | N | N | Y | Y | Y | Y | Y |
| Invalid login 1-2 times | N | N | Y | N | N | Y | Y | Y | Y | Y |
| Invalid login 3 times | N | N | N | Y | N | Y | Y | Y | Y | Y |
| Click “Search” button | N | N | N | N | Y | Y | Y | Y | Y | Y |
| Click “Update” button | N | Y | Y | Y | Y | N | Y | Y | Y | Y |
| Click “Save” button | N | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Click “Delete Order” button | N | Y | Y | Y | Y | Y | Y | Y | Y | Y |
| Output |  | | | | | | | | | |
| Display customer receipt | Y | N | N | N | N | Y | N | N | N | N |

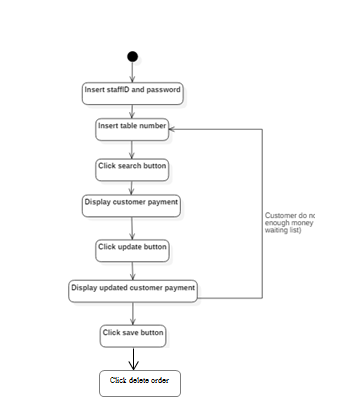
**Table 2.2.1b Session Verification Decision Table**

**2.2.2 Use Case Testing**

|  |  |  |
| --- | --- | --- |
| Use case ID | UC004 | |
| Use case | F004 Payment | |
| Purpose | To allow cashier to make payment | |
| Actor | Cashier | |
| Trigger | Cashier inserts staffID and password | |
| Precondition | Cashier enter to Homepage | |
| Scenario Name | Step | Action |
| Main Flow | 1 | Inserts staffID and password |
| 2 | Insert table number and click “search” button |
| 3 | Display customer payment |
| 4 | Click “Update” button to update customer payment |
| 5 | Display update customer payment |
| 6 | Click “Save” button |
| 7 | Click “Delete Order” to delete customer order history |
| Alternate Flow 1 (incorrect StaffID and password) | 1.1 | Cashier inputs incorrect StaffID and password |
| 1.2 | System displays error message invalid StaffID and password and request for cashier to reenter StaffID and password |
| 1.3 | Back to main flow |
| Alternate Flow 2 (Not enough money) | 5.1 | Customer do not have enough money |
| 5.2 | Cashier cannot proceed the payment |
| 5.3 | Back to main flow |

**Table 2.2.2a Session Verification Use Case**

**2.2.3 State transtition Testing**



**Figure 2.2.3 Session Verification State Transition Diagram**

The test condition for state transition testing is as follows:

1. TCON-04-014 Session Verification State Transition

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Input\**  **State** | **Click “Search”**  **(CSh)** | **Click “Update”**  **(CU)** | **Click “Save”**  **(CSe)** | **Click “Delete Order”**  **(CDO)** |
| **Display Home page (S1)** | S2/DHP  TCOV-02-011 | S1/- | S1/- | S1/- |
| **Display Customer Payment (S2)** | S2/- | S3/DCP TCOV-02-012 | S2/- | S2/- |
| **Display Updated Customer Payment (S3)** | S3/- | S3/- | S4/DUCP TCOV-02-013 | S3/- |

**Table 2.2.3a Session Verification State Table**

|  |  |
| --- | --- |
| **Test Coverage ID** | **Test Coverage** |
| TCOV-04-011 | S1 to S2 with input CSh |
| TCOV-04-012 | S2 to S3 with input CU |
| TCOV-04-013 | S3 to S4 with input CSe |
| TCOV-04-014 | S3 to S4 with input CSe |
| TCOV-04-015 | S4 to S5 with input DCR |

**Table 2.2.3b Session Verification State Coverage**

## 

## 2.3 Test Identification

This section should contain information at least as below:

|  |  |  |  |
| --- | --- | --- | --- |
| **Test Case ID** | **Description** | **Test Coverage ID** | **Test Condition ID** |
| TC-04-001 | Main flow | TCOV-04-001 | TCON-04-001 |
| TC-04-002 | Alternate Flow 1 (incorrect StaffID and password) | TCOV-04-002 | TCON-04-002 |

Test documentation:

i. test plan

ii. test design specifications

|  |  |  |  |
| --- | --- | --- | --- |
| TC-04-003 | Alternate Flow 2 (Not enough money) | TCOV-04-003 | TCON-04-003 |

**Table 2.1.3 Session Verification Test Identification**

## 2.4 Feature Pass/Fail Criteria

This section should contain information at least as below:

Each feature must satisfy the following criteria in order to pass:

i. pass all its test cases

ii. no deadlock

iii. fulfill its requirement

## 2.5 Test Deliverable

The following documents will be generated by the system test group and will be delivered after test completion.

iii. test case specification

iv. test procedure specification

vi. test logs

vii. test incident report

vii. test summary report