A Real Time and Interactive Dashboard in Tourism Industry

Test Plan

By

Junyu Zhou 592115508

Yawei Li 592115518

Department of Software Engineering,

College of Arts, Media and Technology,

ChiangMai University

Project Advisor



### Table of Contents

[1. Document History 4](#_Toc14875887)

[1. Introduction 5](#_Toc14875888)

[1.1 Objectives 5](#_Toc14875889)

[1.2 Scope 5](#_Toc14875890)

[1.3 Acronyms and Definitions 5](#_Toc14875891)

[1.3.1 Acronyms 5](#_Toc14875892)

[2. Test Plan and Test Procedure 8](#_Toc14875893)

[2.1 Scope of testing 8](#_Toc14875894)

[2.2 Test Duration 8](#_Toc14875895)

[2.4 Test Strategy 9](#_Toc14875896)

[2.5 Result of Testing 10](#_Toc14875897)

[2.6 Test Environment 10](#_Toc14875898)

[3. Unit Testing 11](#_Toc14875899)

[3.1 Spring Application 11](#_Toc14875900)

### Table of Test Case

# 1. Document History

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| History | Status | Date | Viewable | Editable | Responsible |
| Test plan | Draft | 23 July, 2019 | ZJY, LYW,  AJP | ZJY, LYW | ZJY, LYW |
|  |  |  |  |  |  |

ZJY = Junyu Zhou

LYW = Yawei Li

AJP = Dr. Pree Thiengburanathum

# 1. Introduction

### 1.1 Objectives

The objective of the test plan of A Real Time and Interactive Dashboard in Tourism Industry is to establish test plan of the unit testing and system testing and make sure that the bugs or the defects are discovered and fixed. The unit testing covers all of implemented method in the A Real Time and Interactive Dashboard in Tourism Industry system. The system testing covers the user requirements.

### 1.2 Scope

This test plan describes the white box-testing and black-box testing are activities to defect the defects in the system and describes the system testing activities for testing a completely integrated system to verify that it meets the user requirements.

### 1.3 Acronyms and Definitions

### 1.3.1 Acronyms

URS = User Requirement Specification

UTC = Unit Test Case

STC = System Test Case

**1.3.2 Definitions**

|  |  |
| --- | --- |
| Name | Definition |
| Feature | Transformation of input parameters to output parameters based on a specified algorithm. It describes the functionality of the product in the language of the product. Used for requirements analysis, design, coding, testing or maintenance. [1] |
| Design | The period in the software life cycle during which the designs for architecture, software components, interfaces, and data are created, documented, and verified to satisfy requirements. [2] |
| IEEE | Institute for Electrical and Electronics Engineers. Biggest global interest group for engineers of different branches and computer scientists. [3] |
| Requirement | (1) A condition or capability needed by the user to solve a problem or achieve an objective.  (2) A condition or capability that must be met or possessed by a system or system component to satisfy a contract, standard, specification, or other formally imposed document. (3) A documented representation of a condition or capability as in definition (1) or (2). [4] |
| Specification | Precise description of an activity or work product that serves as the basis or input for further activities or work product. A specification can comprise requirements to a Product and how they will be solved. Different parts of a specification (e.g. what is to be done, how it will be done) must not be mixed. [5] |
| Unit testing | A level of the software testing process where individual units/components of a software/system are tested. The purpose is to validate that each unit of the software performs as designed [6] |
| System testing | A level of the software testing process where a complete, integrated system/software is tested. The purpose of this test is to evaluate the system’s compliance with the specified requirements. [7] |

# 2. Test Plan and Test Procedure

### 2.1 Scope of testing

A Real Time and Interactive Dashboard in Tourism Industry will be tested by white-box and black-box testing techniques that are unit testing and system testing and record the test result in the test record.

### 2.2 Test Duration

|  |  |
| --- | --- |
| Progress | Data and Duration |
| Progress Report III | Perform date:  Duration: |

**2.3 Test Responsibility**

|  |  |
| --- | --- |
| Item | Responsibility |
| Unit test of web application | ZJY, LYW |
| Record unit test of web application | ZJY, LYW |
| System test of web application | ZJY, LYW |
| Record system test of web application | ZJY, LYW |

### 2.4 Test Strategy

A Real Time and Interactive Dashboard in Tourism Industry test strategy will be following:  
1. Design test case for each feature.  
2. Prepare test data for each feature.  
3. Determine expected results.  
4. Perform testing on individual features.  
5. Result of testing will be a record.  
6. All test files will be store in the project repository.

### 2.5 Result of Testing

In the test record the test result will separate into two parts, which are:  
1. Actual output: The actual outputs that are performed by each test case. 2. Pass/Fail criteria:

2.1 Pass: the result of the actual result is same as expected result. 2.2 Fail: the result of the actual result is not same as expected result.

### 2.6 Test Environment

**2.6.1 Hardware**

**Computer:**

MacBook Pro (Retina, 15-inch, Mid 2015)

Processor: 2.2 GHz Intel Core i7

Memory: 16 GB 1600 MHz DDR3

OS: macOS Catalina 0.15 Beta (19A501i)

Dell (Inspiron15-7557)

Processor: Intel Core i7-4720HQ

Memory: 8 GB

OS: Windows 10

MacBook Pro (Retina, 15inch, 2019)

Processor: 2.3 GHz Intel Core i9

Memory: 32 GB 32 GB 2400 MHz DDR4

OS: macOS Mojave 10.14.5

**2.6.2 Software**

- Chrome version 44.0 or later

# 3. Unit Testing

### 3.1 Spring Application

**UTC-01:**

Description: This method will validate input format

Test Data: 24 July 2019

Test Case:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| ID | Description | Input | Expect Result | Result |
| 1 | Input empty username | Username= | Alert “Username cannot be empty!” |  |
| 2 | Input username more than 10 characters | Username=admin000000 | Alert “Username is too long!” |  |
| 3 | Input username with special characters | Username= admin;’] | Alert “Username cannot contain special characters!” |  |
| 4 | Input username within 10 characters | Username= admin001 | Format correct |  |
| 5 | Input password less than 6 digits | Password= 12345 | Alert “Password must be more than 6 digits!” |  |
| 6 | Input password with 6 digits | Password= admin001 | Format correct |  |
| 7 | Input empty password | Password= | Alert “Password cannot be empty!” |  |

# 4. System Testing