Test Plan

SQS – Technical Test – Test Plan for The Internet Web Application

1/13/2017

SQS – Technical Test – The Internet Web Application

Brian Canning

**Version:** 1.1

**Created:** 1/13/2017

**Last Updated:** 1/13/2017

**Status:** DRAFT

Table of Contents

[1. INTRODUCTION 2](#_Toc503736069)

[1.1. Purpose 2](#_Toc503736070)

[2. TEST STRATEGY 2](#_Toc503736071)

[2.1. Test Objectives 2](#_Toc503736072)

[2.2. Test Assumptions 2](#_Toc503736073)

[2.3. Test Principles 3](#_Toc503736074)

[2.4. Data Approach 3](#_Toc503736075)

[2.5. Scope and Levels of Testing 4](#_Toc503736076)

[2.5.1. Exploratory 4](#_Toc503736077)

[2.5.2. Functional Test 4](#_Toc503736078)

[Test Acceptance Criteria 4](#_Toc503736079)

[Test Deliverables 4](#_Toc503736080)

[2.5.3. User Acceptance Test (UAT) 5](#_Toc503736081)

[Test Deliverables 5](#_Toc503736082)

[3. EXECUTION STRATEGY 5](#_Toc503736083)

[3.1. Test Cycles 5](#_Toc503736084)

[3.2. Validation and Defect Management 5](#_Toc503736085)

[3.3. Test Metrics 6](#_Toc503736086)

# INTRODUCTION

## Purpose

This test plan describes the testing approach and overall framework that will drive the testing of the SQS technical Web Application – <https://the-internet.herokuapp.com/challenging_dom> site. The document introduces:

* Test Strategy: rules the test will be based on, including the givens of the project; description of the process to set up a valid test.
* Execution Strategy: describes how the test will be performed and process to identify and report defects, and to fix and implement fixes.

# TEST STRATEGY

## Test Objectives

The objective of the test is to verify that the functionality of SQS technical test – The internet Web Application works according to the specifications.

The test will execute and verify the test scripts, identify, fix and retest all high and medium severity defects per the entrance criteria, prioritize lower severity defects for future fixing via CR.

The final product of the test is twofold:

* A production-ready software;
* A set of stable test scripts that can be reused for Functional and UAT test execution.

## Test Assumptions

**Key Assumptions**

* Production like data required and be available in the system prior to start of Functional Testing
* In each testing phase, Cycle 3 will be initiated if the defect rate is high in Cycle 2.

**General**

* Exploratory Testing would be carried out once the build is ready for testing
* Performance testing is not considered for this estimation.
* All the defects would come along with a snapshot JPEG format
* The Test Team will be provided with access to Test environment via VPN connectivity
* The Test Team assumes all necessary inputs required during Test design and execution will be supported by Development appropriately.
* Test case design activities will be performed by QA Group
* Test environment and preparation activities will be owned by Dev Team
* Dev team will provide Defect fix plans based on the Defect meetings during each cycle to plan. The same will be informed to Test team prior to start of Defect fix cycles
* BUSINESS ANALYST will review and sign-off all Test cases prepared by Test Team prior to start of Test execution
* The defects will be tracked through HP ALM only. Any defect fixes planned will be shared with Test Team prior to applying the fixes on the Test environment
* Project Manager/BUSINESS ANALYST will review and sign-off all test deliverables
* The project will provide test planning, test design and test execution support
* Test team will manage the testing effort with close coordination with Project PM/BUSINESS ANALYST
* Project team has the knowledge and experience necessary, or has received adequate training in the system, the project and the testing processes.
* There is no environment downtime during test due to outages or defect fixes.
* The system will be treated as a black box; if the information shows correctly online and in the reports, it will be assumed that the database is working properly.
* Cycle 3 will be initiated if there are more defects in Cycle 2.

**Functional Testing**

* During Functional testing, testing team will use preloaded data which is available on the system at the time of execution
* The Test Team will be perform Functional testing only on SQS Technical Test – The Internet

**UAT**

* UAT test execution will be performed by end users and QA Group will provide their support on creating UAT script.

## Test Principles

* Testing will be focused on meeting the business objectives, cost efficiency, and quality.
* There will be common, consistent procedures for all teams supporting testing activities.
* Testing processes will be well defined, yet flexible, with the ability to change as needed.
* Testing activities will build upon previous stages to avoid redundancy or duplication of effort.
* Testing environment and data will emulate a production environment as much as possible.
* Testing will be a repeatable, quantifiable, and measurable activity.
* Testing will be divided into distinct phases, each with clearly defined objectives and goals.
* There will be entrance and exit criteria.

## Data Approach

* In functional testing, SQS Technical Test – The Internet will contain pre-loaded test data which is used for testing activities.

## Scope and Levels of Testing

### Exploratory

**Purpose**: the purpose of this test is to make sure critical defects are removed before the next levels of testing can start.

**Testers**: Testing team.

**Method**: this exploratory testing is carried out in the application without any test scripts and documentation

**Timing**: at the beginning of each cycle.

### Functional Test

**Purpose:**  Functional testing will be performed to check the functions of application. The functional testing is carried out by feeding the input and validates the output from the application.

**Testers**: Testing Team.

**Method**: The test will be performed according to Functional scripts, which are stored in GIT.

**Timing**: after Exploratory test is completed.

#### Test Acceptance Criteria

1. Approved Functional Specification document, Use case documents must be available prior to start of Test design phase.
2. Test cases approved and signed-off prior to start of Test execution
3. Development completed, unit tested with pass status and results shared to Testing team to avoid duplicate defects
4. Test environment with application installed, configured and ready to use state

#### Test Deliverables

|  |  |  |  |
| --- | --- | --- | --- |
| **S.No.** | **Deliverable Name** | **Author** | **Reviewer** |
| 1. | Test Plan | Test Lead | Project Manager/ Business Analyst’s |
| 2. | Functional Test Cases | Test Team | Business Analyst’s Sign off |
| 3. | Logging Defects in HP ALM | Test Team | Test Lead/ Programming Lead(Vijay) |
| 4. | Daily/weekly status report | Test Team/ Test Lead | Test Lead/ Project Manager |
| 5. | Test Closure report | Test Lead | Project Manager |

### User Acceptance Test (UAT)

**Purpose**: this test focuses on validating the business logic. It allows the end users to complete one final review of the system prior to deployment.

**Testers**: the UAT is performed by the end users.

**Method**: Since the business users are the most indicated to provide input around business needs and how the system adapts to them, it may happen that the users do some validation not contained in the scripts. Test team write the UAT test cases based on the inputs from End user.

**Timing**: After all other levels of testing are done. Only after this test is completed the product can be released to production.

#### Test Deliverables

|  |  |  |  |
| --- | --- | --- | --- |
| **S.No.** | **Deliverable Name** | **Author** | **Reviewer** |
| 1. | UAT Test Cases | Test Team | Business Analyst’s Sign off |

# EXECUTION STRATEGY

## Test Cycles

* + There will be two cycles for functional testing. Each cycle will execute all the scripts.
  + The objective of the first cycle is to identify any blocking, critical defects, and most of the high defects. It is expected to use some work-around in order to get to all the scripts.
  + The objective of the second cycle is to identify remaining high and medium defects, remove the work-around from the first cycle, correct gaps in the scripts and obtain performance results.
* UAT test will consist of one cycle.

## Validation and Defect Management

* The defects will be tracked through Bug Tracking software only. The technical team will gather information daily from Bug Tracking software, and request additional details from the Defect Coordinator. The technical team will work on fixes.
* It is the responsibility of the tester to open the defects, link them to the corresponding script, assign an initial severity and status, retest and close the defect; it is the responsibility of the Defect Manager to review the severity of the defects and facilitate with the technical team the fix and its implementation, communicate with testers when the test can continue or should be halt, request the tester to retest, and modify status as the defect progresses through the cycle; it is the responsibility of the technical team to review Bug Tracking software on a daily basis, ask for details if necessary, fix the defect, communicate to the Defect Manager the fix is done, implement the solution per the Defect Manager request.

Defects found during the Testing will be categorized according to the bug-reporting tool “Mercury HP ALM” and the categories are:

|  |  |
| --- | --- |
| **Severity** | **Impact** |
| 1 (Critical) | * This bug is critical enough to crash the system, cause file corruption, or cause potential data loss * It causes an abnormal return to the operating system (crash or a system failure message appears). * It causes the application to hang and requires re-booting the system. |
| 2 (High) | * It causes a lack of vital program functionality with workaround. |
| 3 (Medium) | * This Bug will degrade the quality of the System. However there is an intelligent workaround for achieving the desired functionality - for example through another screen. * This bug prevents other areas of the product from being tested. However other areas can be independently tested. |
| 4 (Low) | * There is an insufficient or unclear error message, which has minimum impact on product use. |
| 5(Cosmetic) | * There is an insufficient or unclear error message that has no impact on product use. |

## Test Metrics

Test metrics to measure the progress and level of success of the test will be developed and shared with the project manager for approval. The below are some of the metrics

|  |  |  |
| --- | --- | --- |
| **Report** | **Description** | **Frequency** |
| Test preparation & Execution Status | To report on % complete, %WIP, % Pass, % Fail  Defects severity wise Status – Open, closed, any other Status | Weekly / Daily (optional) |
| Daily execution  status | To report on Pass, Fail, Total defects, highlight Showstopper/ Critical defects | Daily |
| Project Weekly Status report | Project driven reporting (As requested by PM) | Weekly – If project team needs weekly update apart from daily and there is template available with project team to use. |