**LinkedIn**

**Test Plan Document**

**Version 1.0**

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**Table of Contents**

[1. INTRODUCTION 3](#_Toc486293988)

[1.1 Objective 3](#_Toc486293989)

[1.2 Scope 3](#_Toc486293990)

[1.3 Project Overview 3](#_Toc486293991)

[2. TESTING PROCESS 3](#_Toc486293992)

[2.1 Test Principles 3](#_Toc486293993)

[2.2 Test Assumptions 4](#_Toc486293994)

[2.2.1 Key Assumptions 4](#_Toc486293995)

[2.2.2 General 4](#_Toc486293996)

[2.3 Data creation for testing 5](#_Toc486293997)

[3. Bug life cycle 5](#_Toc486293998)

[4. TEST STRATERGY 7](#_Toc486293999)

[4.1 Testing types 7](#_Toc486294000)

[5. TOOLS 9](#_Toc486294001)

[6. TEST DESIGN PROCESS 9](#_Toc486294002)

[6.1 Design Phase: 9](#_Toc486294003)

[6.2 Code Complete-Infrastructure: 9](#_Toc486294004)

[6.3 Code Complete-Function: 10](#_Toc486294005)

[6.4 Feature Complete: 10](#_Toc486294006)

[6.5 Regression Test: 10](#_Toc486294007)

[6.6 Production 10](#_Toc486294008)

[7. CONTROL PROCEDURE 10](#_Toc486294009)

[7.1 Reviews: 10](#_Toc486294010)

[7.2 Bug Review Meetings: 10](#_Toc486294011)

[7.3 Change Request: 10](#_Toc486294012)

[7.4 Defect Reporting: 10](#_Toc486294013)

[8. ROLES AND RESPONSIBILITIES 11](#_Toc486294014)

[9. DELIVERABLE 11](#_Toc486294015)

[10. ENTRY CRITERIA 12](#_Toc486294016)

[11. SUSPENSION CRITERIA 12](#_Toc486294017)

[12. RESUMPTION CRITERIA 12](#_Toc486294018)

[13. EXIT CRITERIA 12](#_Toc486294019)

[14. RISK 12](#_Toc486294020)

# INTRODUCTION

This Test Plan Document will address the different standards that will apply to the entire Testing Framework of the LinkedIn application. This document will cover the testing process, Testing Strategy, Effort Estimation, Test Management and process to identify and report defects, and to fix and implement fixes.

## Objective

Objective of Test plan is to define the various Testing strategies and testing tools used for complete Testing life cycle of this project.

## Scope

The document targets the entire Web and Mobile Application Testing and validating data in report output as per Requirements Specifications provided by Client.

## Project Overview

Linkedin is a powerful website providing employees with the ability to view relevant information such as companies, jobs and updating personal information without having to depend upon job consultancies.

The functionality of this website spans through various domain, making information available anywhere, anytime. All information is subject to company’s defined security policy, where he/she can only view the information he/she is authorized to.

# TESTING PROCESS

## 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.

## 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/BUSINESS ANALYSTs appropriately.
* Test case design activities will be performed by QA Group
* Test environment and preparation activities will be owned by DevOps 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 JIRA 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.

**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 performing Testing only on LINKEDIN VERSION 1.x

**UAT**

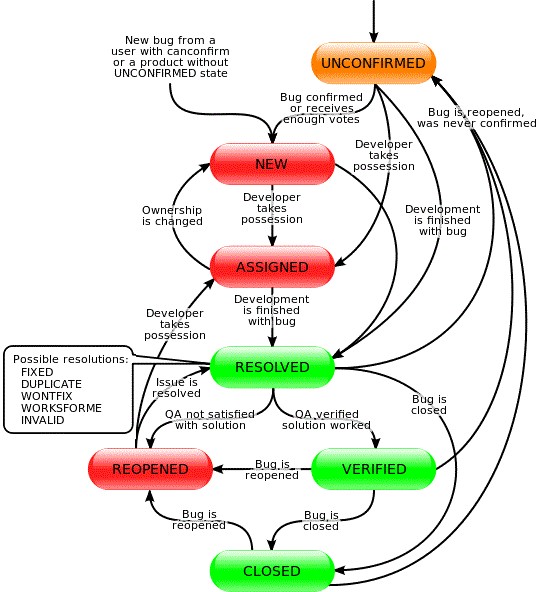
* UAT test execution will be performed by end users and QA Group will provide their support on creating UAT script.

## Data creation for testing

QA will create test data on development site for scenarios based on client’s requirements specifications.

# Bug life cycle

All the issues found while testing will be logged into JIRA bug tracker.

**Bug life cycle** for this project is as follows:

# TEST STRATERGY

## Testing types

**Functional Testing:**

Functional testing will be performed to check the features of application. The functional test is carried out by feeding the input and validates the output from the application.

**Scope:** All major modules are tested as a unit as per the functional test cases written to check if the features are working as expected. Note: The scope is high level due to changes in the requirement.

**Method:** The test will be performed per Functional scripts, which are stored in HP QC. Selenium/Appium will be used for running the automation suite.

**System Testing:**

System testing of software is testing conducted on a complete, integrated system to evaluate the system's compliance with its specified requirements.

**Scope:** All major user flows are tested as per the combination of functional test cases written to check if the flows are working as expected.

**Method:** The test will be performed per System test scripts, which are stored in HP QC. Selenium/Appium will be used for running the automation suite.

**Performance Testing:**

Performance testing will be performed to verify if there are any issues related to performance bottle necks, memory leaks, server response time, page load time, App/DB/Load Balancing Server etc. by loading the UI/Server with multiple virtual users.

**Scope:** All related performance tests are executed using LoadRunner tool, referring the SLA set during the project planning phase.

**Method:** The test will be performed per performance test scripts, which are stored in HP QC.

**Regression Testing**

Regression testing will be performed to verify if all the defects that were uncovered in the previous releases do not show up in the current release.

**Scope:** All related functional tests of the defective module as per the issues found are re-tested.

**Method:** The test will be performed per defect list from JIRA and functional test scripts, which are stored in HP QC. Selenium/Appium will be used for running the automation suite.

**Localization Testing**

Localization testing will be performed to verify if there are any issues in transforming the contents of the application into the user chosen display language. Also, the time and date is shown on all pages as per the user’s time zone.

**Scope:** All related performance tests are executed using LoadRunner tool.

**Method**: The test will be performed per performance test scripts, which are stored in HP QC.

**Cross Browser Testing**

Cross browser testing is preformed to check if the application is consistent across all browsers available on the computer and mobile OS.

**Method:** The test will be performed on all available OS, Browser and APP combinations

**Web Services/API**

Web Services/API Test will be performed to verify the APIs developed are robust. Data will be manipulated in multiple ways and send to the APIs to verify how well it handles bad data, by doing this the security aspect of the APIs and in turn the application can be evaluated.

**Scope:** All related API tests stored in HP QC are executed.

**Method:** The test will be performed per API test scripts, which are stored in HP QC, using SOAPUI tool.

**User acceptance testing:**

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 and Business Analyst’s.

# TOOLS

|  |  |
| --- | --- |
| **Tool Name** | **Version** |
| Selenium Web Driver |  |
| Appium |  |
| JIRA |  |
| Eclipse |  |
| LoadRunner |  |
| SOAPUI |  |

# TEST DESIGN PROCESS

High-level test planning activities, which include preliminary development of Master QA Plan (this document, QA schedule. At this Milestone, the high-level planning should be completed. Some of the deliverables are: Project Plan, Program function specifications.

## Design Phase:

Development and Test engineers participate actively in feature design by inspecting and reviewing the requirements and design documents. As the design documents are completed, the test engineers are encouraged to start working on the Test Plan document and test design planning.

## Code Complete-Infrastructure:

The Test Engineers should have completed or in the final stages of their preliminary Infrastructure Test Plan, test cases and other QA documents related to test execution for each feature or component such as test scenarios, expected results, data sets, test procedures, scripts and applicable testing tools.

## Code Complete-Function:

The Test Engineers should have provided Code Complete Assessment Test to

Development Engineer one week prior to Code Complete Review date. The Test Engineers should also have completed or in the final stages of their preliminary White Box Test Plan, test cases and other QA documents related to test execution for each feature or component such as test scenarios, expected results, data sets, test procedures, scripts and applicable testing tools.

## Feature Complete:

All bugs verified and QA documentation is finalized. The test Engineers should assess that Binary Tree features are ready for Beta regression and have started their preliminary Test Summary Reports.

## Regression Test:

Complete regression test execution of complete system and update Test Summary Reports for regression.

## Production

Any unfinished Testing documents should be complete.

# CONTROL PROCEDURE

## Reviews:

Reviews will be done on following documents and review report will be prepare for each work products

* + - Test cases
    - RTM(Requirement Traceability Matrix)

## Bug Review Meetings:

Bug review meeting will be held for every test cycle conducted during the following phases: -

GUI Testing

Report Output/Data Testing In case of critical / show stoppers bugs.

## Change Request:

Change request for report will be handled using following process:

* Understanding the change request and its impact on exiting report functionality
* If the change is major, test cases will be updated
* If the change is minor, test cases will may not be updated
* Retesting and regression testing will be done as per changed request

## Defect Reporting:

Bugs found during static and dynamic testing will be logged in JIRA bug tracking tool.

# ROLES AND RESPONSIBILITIES

|  |  |
| --- | --- |
| **Role** | **Responsibilities** |
| PM | 1. Acts as a primary contact for development and QA team. 2. Responsible for Project schedule and the overall success of the project. |
| QA | 1. Understand requirements 2. Writing and executing Test cases 3. Preparing RTM 4. Reviewing Test cases, RTM 5. Defect reporting and tracking 6. Retesting and regression testing 7. Bug Review meeting |

# DELIVERABLE

|  |  |
| --- | --- |
| **Deliverable** | **Responsibility** |
| Test Design Document Test plan document | a) Unit white-box test design – covers white testing criteria, methods and test cases |
|  | 1. System test design – covers system test criteria, methods, and test cases, scripts. 2. Unit black-box test design – covers black-box testing criteria, methods and test cases |
| Test report document | 1. System Test report – covers system test results, problems, summary and analysis 2. Unit white-box test report – covers unit white box test results, problems, summary and analysis 3. Unit black-box test report – covers unit black box test results, problems, summary and analysis |

# ENTRY CRITERIA

* The whole source code must be unit tested H/W and S/W should be in place
* QA resources have completely understood the requirements
* QA resources have sound knowledge of functionality in Reports
* Reviewed test scenarios, test cases and RTM

# SUSPENSION CRITERIA

* The build contains many serious defects which seriously or limit testing progress.
* Significant change in requirements suggested by client
* Software/Hardware problems
* Assigned resources are not available when needed by test team.

# RESUMPTION CRITERIA

• Resumption will only occur when the problem(s) that caused the caused the suspension have been resolved

# EXIT CRITERIA

* No defects over a period or less testing efforts
* All the high priority/severity test cases have been executed
* Deliverables are ready
* High severity/ priority bugs are fixed

# RISK

* Delay in delivery of test items might require increased night shift scheduling to meet the delivery date
* Understanding requirements
* Domain and project knowledge