Test Strategy for Search functionality

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# **Introduction**

This document provides the Testing Strategy for the Search functionality.

# **Testing Strategy Overview**

The Search functionality Testing Strategy determines the project’s approach to testing. The strategy looks at the characteristics of the system to be built, the project time line and budget, and plans the breadth and depth of the testing effort. The Testing Strategy will influence tasks related to test planning, test types, test script development, and test execution.

## **Objectives**

The key objectives are as follows:

* Determine the significance, or critical nature, of the application system to the business.
* Determine the types of tests required by each testing task.
* Identify the need for converted data from legacy systems or other sources.
* Determine the need for a systems integration test by identifying key system interfaces.
* Identify performance assurance requirements.

# **Test Approach**

* 1. Search functionality feature testing occurs throughout each sprint.
  2. sprint planning meeting, a sprint test plan should be created and reviewed.
  3. As the testing is done in each sprint, publish TSR in each sprint it should be tracked along with which features have been successfully tested and which ones have defects.
  4. Raise defects/improvement/Change requirement stories and it should added to the product backlog and prioritise the stories during sprint planning.

# **Testing Types**

Different type of testing involves at different agile phases.

1. **Stage 1: -**

In this stage, Testing type QA and DEV will be focus on the

1. Pair Development
2. Unit Testing - Automatic test on code level run every night or after new code is added. Bugs found are fixed immediately
3. Component/Integration Testing
4. **Stage 2:-**

This stage involves feature test the

– Feature tests(QA)

• Performed when a feature is finished implemented. Errors found are logged in main project in bug system and

prioritized during next sprint planning. After all prioritized bugs are fixed, the feature is ready for System Test at the end of the project

1. **Functional testing – Manually/Automation or Stories testing-**
2. **UI Testing stories -** Check whether the search box length, the supported characters, and the length of the query are as per the specification
3. **Functionality Testing stories**
4. **Stage 3:-**  The test cases can be used as the basis to perform automation testing.
   * 1. 1. Usability Testing
     2. 2. Exploratory Testing
     3. 3. Pair testing with customers
     4. 4. Collaborative testing
     5. 5. User acceptance testing
     6. Regression Testing
5. **Stage 4:-**  **This quadrant concentrates** on the non-functional requirements such as performance and load testing.

## **Done Criteria**

Once all the above activities are completed and no issues found, the story is **Done!**

**• In Each Sprint**

– Participate in sprint planning

– Estimate tasks(QA input)

– Write test cases using stories(QA) and perform different types of testings(as mentioned above)

– Unit/ Integration tests(Dev)

– Pair tests(Dev + QA)

• Performed when a part of a feature is finished implemented. Bugs found are fixed immediately

– Reviews (stories, req, test cases with customer, programmer)

• Increase collaboration and communications

# **Test automation Strategy**

* 1. Scope of test automation and test automation approach **– assuming its already decided.**
  2. **Automation Feasibility Analysis** – Create POC using supporting tools and select final tool for future test automation.

**Assumption- Tool finalised**

* 1. **Framework design –**

**Assumption- Framework is ready**

* 1. **Automation Test Environment Set Up**
  2. Test Script Development
  3. Test Case Execution
  4. Test Result Generation and Analysis

As part of the Search functionality,

1. Identify new functional test cases for automation.
2. Run automated regression tests
3. Perform non-functional testing (load, security, usability etc)
   * + 1. Demo to the stakeholders

# **Testing Environments**

**ST/SIT/Pre-Prod environment ()**

# **Release**

**Define Exit criteria**

Testing activities (bug severity, open bugs, coverage levels, metrics etc)

# **Testing progress metrics**

* 1. Burn down charts
  2. Estimated vs. Actual time for tasks

**Defect metrics**

* 1. Root cause analysis
  2. Results from defect tracking system

**Traceability metrics**

* 1. Test coverage (story vs. test cases)
  2. Code coverage