**iTunes Search**

Draft: Test Plan for Search API

Version 1.0

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**Revision History**

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**1. INTRODUCTION**

**1.1. Overview**

To aim of this project is to implement new components for iTune Search and modify the existing functionalities of the iTune Search that will enable the following functionalities:

* Prospective user should be able to use searching service of iTune through URL.
* User can create search field passes a fully-qualified URL content request to the iTunes Store, parse the JavaScript Object Notation (JSON) format returned from the search, and display the results in your website.

**1.2. Purpose of this Document**

The purpose of this document is to describe what major functionality will be tested and

provide enough information required for testing search music component of iTune.

**1.3. Formal Reviewing**

There will be several formal reviews before and during test. This is a vital

element in achieving a quality product.

1. Requirement Documents

2. Testing Strategy

3. Use Cases

4. Test Cases

5. Test Progress

6. Defects

**1.4 Software Quality Assurance involvement**

The responsibility for testing iTune Search API will be as follows:

* Unit Test is the responsibility of the iTune Search API Recruiting Development Team.
* Search Testing is the responsibility of QA Team.
* User Acceptance Testing (UAT) is the responsibility of QA team.
* iTune Search API configuration and support team is the responsibility of support and data base.

**2. SCOPE AND OBJECTIVES**

**2.1. Scope of Test Approach**

**2.1.1. Inclusions**

The iTune Search API will include the following functionalities:

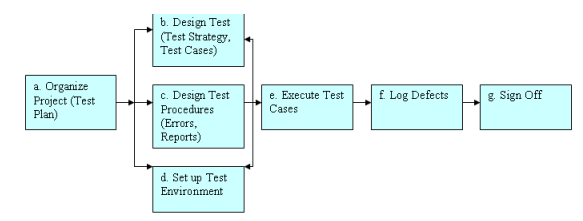
* Prospective user should be able to use searching service of iTune through URL.
* User can create search field passes a fully-qualified URL content request to the iTunes Store, parse the JavaScript Object Notation (JSON) format returned from the search, and display the results in your website.

**2.1.2. Exclusions**

When the scope of each Phase has been agreed and signed off, no further inclusions will be considered for inclusion in this release, except:

* Where there is permission and agreement of the Project Manager and Business Analyst.
* Where the changes/inclusions will not require significant effort on behalf of the test team (i.e. requiring extra preparation - new test conditions etc.) and will not adversely affect the test schedule.

**2.2. Testing Process**



The diagram above outlines the Test Process approach that will be followed.

1. Organize Project involves creating a Test Plan, Schedule & Test Approach, and requesting/assigning resources.
2. Design/Build Test involves identifying Test Cycles, Test Cases, Entrance & Exit Criteria, Expected Results, etc. In general, test conditions/expected results will be identified by the Test Team in conjunction with the Project Business Analyst or Business Expert. The Test Team will then identify Test Cases and the Data required. The test conditions are derived from the Use Cases and the Requirements Documents.
3. Design/Build Test Procedures includes setting up procedures such as Error Management systems in JIRA/HPALM and Status reporting, and setting up the data.
4. Build Test Environment includes requesting/building hardware, software and data set-ups.
5. Execute Test Cases – Test scenarios (Test Cases) will be executed to ensure the quality.
6. Log Defects – Log defects as they are found from executing Test Cases.
7. Sign off - Signoff happens when all pre-defined exit criteria have been achieved.

**2.3. Testing Scope**

**2.3.1. Functional Testing**

The objective of this test is to ensure that each element of the application meets the

functional requirements of the business as outlined in the:

* Uses Case
* Data Catalog
* Other functional documents produced during the course of the project i.e. resolution to issues/change requests/feedback and requirement documents.

**2.3.1. Usability Testing**

Test the API if it is easy to work with.

**2.3.1. Reliability Testing**

Test the API if it can be consistently connected to and lead to consistent results.

**2.3.1. Load Testing**

The objective of this test is to reliability and performance when requesting a huge amount of call.

This stage will also include **Validation Testing** - which is intensive testing of the request and response of Searching service; valid, invalid and limit API operations.

**2.3.1. Security Testing**

The objective of this test is to ensure the security requirements including authentication, permission, and access controls are valid or invalid to the prospective users.

**2.3.1. API documentation Testing**

This is the discovery testing to validate the API user guide is read easily or not.

**2.3.2. User Acceptance Test (UAT)**

After Beta testing is completed, QA team will create a User Acceptance

testing environment (the UAT site). The UAT site will be created within the production

network environment. The UAT site will be on the production hardware, and will have all the security features of our standard production environment. Redundancy will be added before going live.

Performance will be identical to that in production. The UAT site is intended to verify the final configuration of the site and the data, and will be the basis for the production environment.

This test, which is planned and executed by the QA Representative(s), BA, and product owner ensures that the operates in the manner expected, and any supporting material such as procedures, forms etc. are accurate and suitable for the purpose intended. It is a high level testing, ensuring that there are no gaps in functionality.

**2.4. Test Entrance/Exit Criteria**

**2.4.1. Entrance Criteria**

The Entrance Criteria described in the Test Strategy, should be fulfilled before API

Test can commence. In the event that any criterion has not been achieved, the iTune

API commence if Business Team and Test Manager are in full agreement that the risk is manageable.

* All developed code must be unit tested. Unit testing must be completed and signed off by development team.
* API Test plans must be signed off by Business Analyst and Test Manager.
* All human resources must be assigned and in place.
* All test hardware and environments must be in place, and free for test use.
* The Acceptance Tests must be completed, with a pass rate of not less than 95%.

**User Acceptance Tests (UAT):**

A reasonable number of test cases will be executed for the acceptance tests. To achieve

the acceptance criteria, a pass rate of 95% must be achieved before the software will be

accepted. However, the acceptance criteria will be determined by the management level.

**2.4.2. Exit Criteria**

The Exit Criteria detailed below must be:

* All Critical and High Priority errors from Search API Test must be fixed and tested.
* If any medium or low-priority errors are outstanding - the implementation risk must be signed off as acceptable by Business Analyst and Management representative.
* User Acceptance Test must be signed off by Business Expert.

**3. TEST SCHEDULE**

iTune Searching API Testing begins December 1, 2016 to December 31, 2016.

|  |  |  |  |
| --- | --- | --- | --- |
| Milestone | Planned End Date | Actual End Date | Resource |
| Test Planning | 12/01/16 | 12/02/16 | Jacky Yu |
| Review Requirements documents |  |  |  |
| Create initial test estimates |  |  |  |
| Staff and train new test resources |  |  |  |
| First deploy to QA test environment |  |  |  |
| Functional testing – Iteration 1 |  |  |  |
| Iteration 2 deploy to QA test environment |  |  |  |
| Regression testing |  |  |  |
| UAT |  |  |  |
| Resolution of final defects and final build testing |  |  |  |
| Deploy to Staging environment |  |  |  |
| Performance testing |  |  |  |
| Release to Production |  |  |  |

**4. RESOURCES**

The resource available from support team should be enough for testing.

**5. ROLES AND RESPONSIBILITIES**

1. Ffff: Llll: Director of Product Development, Phone: (xxx)xxx-xxxx

2. Ffff Llll: Technical Lead, Phone: (xxx)xxx-xxxx

3. Jacky Yu: Sr. QA Test Engineer, Phone: (xxx)xxx-xxxx

**6. STATUS REPORTING**

Test preparation and testing progress will be formally reported during a weekly Status

Meeting to the Director of Product Development. A status report will be prepared by

the Test Manager to facilitate this meeting. This report will contain the following

information:

1. Current Status vs. Plan (Ahead/Behind/On Schedule)

2. Progress of tasks planned for previous week

3. Tasks planned for next week including tasks carried from previous week

4. Error Statistics from Error Measurement system in JIRA/HPALM

5. Issues/Risks

6. AOB (Any Other Business)

**7. ISSUES, RISKS and ASSUMPTIONS**

**7.1. Issues/Risks**

1. No further changes or inclusions will be considered for inclusion in the release except
2. Where there is permission and agreement of the Business Analyst and the Test Manager.
3. Where the changes/inclusions will not require significant effort on behalf of the test team and will not adversely affect the test schedule. This is a potentially serious issue, as any major changes to design will entail additional time to re-plan testing and to create or amend test conditions.

**Responsible:** Director of Product Development

**Final list of inclusions to be signed off.**

1. The design of the software must be final, and design documentation must be complete, informative and signed off by all parties prior to iTune Search API proper commences.

**7.2. Assumptions**

* Software will be delivered on time.
* Software is of the required quality.
* All "Show-Stopper" bugs receive immediate attention from the development team.
* All bugs found in a version of the software will be fixed and unit tested by the development team before the next version is released.
* Functionality is delivered to schedule.
* Required resources are available.
* All documentation will be up to date and delivered to the test team.
* Functional and technical specifications will be signed off by the business.
* The Intranet will be fully functional prior to project commencement.

**8. FORMAL SIGNOFF**

This document must be formally approved before test can commence. The

following people will be required to sign off:

Signed Off by: Jacky Yu, Sr. QA Test Engineer

Date: