Spotify API Test Plan

Test Identifier

SPOTIFY-API-TP-001

Introduction

This test plan outlines the strategy, scope, and approach for testing the Spotify API using Rest Assured. The purpose is to ensure that all endpoints are functioning as expected, meet performance requirements, and handle error scenarios correctly.

Objectives

- Validate API functionality for all supported endpoints.
- Ensure compliance with Spotify API documentation and expected response formats.
- Test authentication mechanisms and token management.
- Verify data integrity and accuracy in responses.
- Handle and validate edge cases and error scenarios.

Scope

- User Profile
- Playlists (CRUD operations)
- Tracks (CRUD operations)
- Library management
- Albums, Artists, and Search functionalities

Test Items

- Spotify REST API endpoints
- Request and response handling (status codes, headers, payload)

Risks

- **Rate Limiting**: Too many requests may temporarily block access.
  Mitigation: Implement wait times and adhere to API rate limits.
- **API Changes**: Updates to endpoints may break existing tests.
  Mitigation: Monitor API change logs regularly.

Test Approach

1. Test Tools
- **Rest Assured**: API testing framework.
- **Java**: Programming language for scripting.
- **TestNG**: Test execution framework.
- **Allure**: Reporting tool.

2. Types of testing
   - **Functional Testing**: Verify the correctness of API endpoints.
   - **Boundary Testing**: Test APIs with edge-case inputs.
   - ⍰ **Error Handling Testing**: Ensure proper error messages and codes.
3. Execution Plan
   - Automate test scripts for core API functionalities.
   - Use data-driven testing to test multiple scenarios efficiently.
   - Validate API responses against expected results.

Entry/Exit Criteria

Entry Criteria

- API documentation is available.
- API endpoints are functional and accessible.
- Test data (e.g., valid tokens, IDs) is prepared.

Exit Criteria

- All test cases have been executed.
- Test reports have been reviewed and shared.

Deliverables

- Automated test scripts.
- Test execution report (pass/fail status, response validation).
- Logs for errors and failures.

- Summary of defects found during testing.

Resources

- **Team**: QA Engineer (Rest Assured expertise), Test Lead
- **Environment**: Local environment with API access
- **Tools**: Java, Rest Assured, TestNG, Allure, IDE (e.g., IntelliJ IDEA)

Test Schedule

Test	Duration	Responsible
Test Planning	1 day	Test Lead
Environment setup	2 day	QA Engineer
Test case scripting	3 day	QA Engineer
Test Execution	3 day	QA Engineer
Reporting	1 day	QA Engineer

Test Case Outline

ID	Test Scenario	Priority	Expected results
TC001	Fetch user profile	High	User details are retrieved successfully.
TC002	Search item	Medium	Tracks are retrieved
TC003	Create Playlist	High	Playlist is created with given details.
TC004	Category filtering	Medium	A paged set of categories
TC005	Playback queue	Medium	Command received