**Test Plan – SOAP ISBN10 Validation API**

**Created by Dubbaka Lipi Goud – Test Plan (SOAP Request)**

**Objective**

The objective of this SOAP API test plan is to validate the ISBN10 number using the IsValidISBN10 API. The service accepts a 10-digit ISBN number via XML POST request and returns a Boolean response — true if the ISBN is valid, otherwise false.

**Scope**

Scope of Test Plan for the ISBN10 Validation SOAP API:

1. **Functional Testing**
   * Validate correctness of API response for different types of ISBN numbers.
   * Ensure the response adheres to expected XML schema and data types.
2. **Data Validation Testing**
   * Validate the ISBN input constraints and formats.
   * Test correct and incorrect ISBN values (e.g., length, invalid characters).
3. **Error Handling Testing**
   * Validate error messages for malformed or missing parameters.
   * Ensure API responds with correct HTTP status codes.
4. **Security Testing**
   * Verify secure access if authentication is needed.
   * Check for input-based vulnerabilities.

1. **Integration Testing**
   * Test end-to-end flow where this API integrates with other systems.
2. **Compatibility Testing**
   * Validate API calls on different platforms/tools (Postman, SOAP UI, etc.).
3. **Documentation Review**
   * Ensure API documentation aligns with actual behaviour.

**Inclusions**

* Send SOAP POST requests to the API endpoint using different test ISBN values.
* Validate API's ability to differentiate valid and invalid ISBN numbers.
* Include edge case, boundary, and malformed input testing.

**Examples Covered:**

* Valid ISBN (e.g., 9992158107)
* ISBN ending in X (e.g., 0306406152)
* Invalid ISBNs (e.g., short, long, alphanumeric, blank)
* Boundary & special character testing

**Test Environments**

|  |  |
| --- | --- |
| **Component** | **Description** |
| API URL | http://webservices.daehosting.com/services/isbnservice.wso |
| OS | Windows 10, macOS |
| Browsers | Chrome, Firefox, Edge, Safari |
| Devices | Desktop, Mobile (for SOAP Tools) |
| Tools Used | SOAP UI, Postman, XML Editor |
| Protocol | SOAP 1.1 |
| Response Format | XML |

**Defect Reporting Procedure**

* **Tool**: JIRA
* **Template**: Include title, steps to reproduce, expected vs actual, screenshots, logs
* **POCs**:
  + Frontend: N/A
  + Backend: Web Service Dev
  + QA Lead: Dubbaka Lipi Goud
* **Severity & Priority** defined during triage meetings

**Test Strategy**

1. **Test Case Design**
   * Use Equivalence Partitioning & Boundary Value Analysis.
   * Include both positive and negative test scenarios.
2. **Execution Flow**
   * Smoke test API endpoint for availability.
   * Proceed with functional, negative, and exploratory tests.
3. **Types of Testing**
   * Functional, Regression, Usability (Developer Ease), Exploratory
4. **Best Practices**
   * Context-Driven & Shift-Left Testing
   * End-to-End Flow Validation with Sample Requests

**Test Schedule**

|  |  |
| --- | --- |
| **Task** | **Duration** |
| Test Plan Creation | Day 1 |
| Test Case Preparation | Day 2 |
| Execution & Defects | Day 3 – Day 4 |
| Summary Report | Day 5 |
| Sprint Duration | 1 Week Total |

**Test Deliverables**

* Test Plan Document
* Test Case Document (Spreadsheet or Tool-Based)
* Execution Logs & Screenshots
* Defect Reports
* Final Summary Report

**Entry and Exit Criteria**

**Requirement Analysis**

* **Entry**: Access to API WSDL & basic endpoint details
* **Exit**: All requirements understood and documented

**Test Execution**

* **Entry**: Test Cases Approved, API Reachable
* **Exit**: Test Logs & Defect Reports submitted

**Test Closure**

* **Entry**: Final Test Results Compiled
* **Exit**: Test Summary Report Shared

**Tools**

* JIRA (Bug Tracking)
* SOAP UI / Postman (Test Execution)
* Excel / Google Sheets (Test Case Documentation)
* Snipping Tool / Screenshot Tool

**Risks and Mitigations**

|  |  |
| --- | --- |
| **Risk** | **Mitigation** |
| API Service Down | Use Mock Server or retry mechanism |
| Lack of Test Data | Generate synthetic ISBN data |
| Limited Access | Communicate with service owner early |

**Approvals**

Team will send below documents for client or stakeholder approval:

* Test Plan
* Test Scenarios & Cases
* Execution Reports
* Final Summary

Testing will proceed to next phase **only after approval**.

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