
Test Plan – SOAP ISBN10 Validation API

Created by Dubbaka Lipi Goud – Test Plan (SOAP API)

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.
- 5. Integration Testing**
 - Test end-to-end flow where this API integrates with other systems.
- 6. Compatibility Testing**
 - Validate API calls on different platforms/tools (Postman, SOAP UI, etc.).
- 7. 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)
 - Empty string input
 - Special characters in ISBN
 - Whitespace-trimmed inputs
 - Inputs exceeding 13 characters or less than 13
 - Non-numeric input: ABCDEFGHIJKLM
 - Malformed XML in SOAP request
 - Boundary & special character testing etc.
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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
 - **Include:** Request payload, response, timestamps, environment, and screenshots.
 - Prioritize by severity and reproducibility.
 - Defects reviewed by Test Lead and assigned accordingly.
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- **Severity & Priority** defined during triage meetings
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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 → Load & Negative Testing → Regression → Closure.
 3. **Types of Testing**
 - Smoke, Sanity, Functional, Regression, Usability (Developer Ease), Exploratory
 4. **Best Practices**
 - Context-Driven & Shift-Left Testing
 - End-to-End Flow Validation with Sample Requests
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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
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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
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Tools

- JIRA (Bug Tracking)
- SOAP UI / Postman (Test Execution)
- Word/Excel (Test Case Documentation)
- Snipping Tool / Screenshot Tool

Risks and Mitigations

Risk	Mitigation
API Service Down / Endpoint downtime	Notify dev team, test on staging
Unexpected input format behaviour	Add comprehensive validation
Limited Access	Communicate with service owner early
Tight timelines	Prioritize high-risk tests first

Approvals

Team will send below documents for client or stakeholder approval:

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