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## Objective

The goal of this test plan is to ensure the quality, functionality, and reliability of the SOAP API operation IsValidISBN10 hosted at <http://webservices.daehosting.com/services/isbnservice.wso>. The API is designed to validate ISBN-10 codes based on checksum logic.

## Scope

Scope of Test Plan for IsValidISBN10 SOAP API:

### 1. Functional Testing:

- Verify the correctness and functionality of the IsValidISBN10 operation.
- Test various scenarios for valid and invalid ISBN-10 inputs.
- Validate SOAP 1.1 and SOAP 1.2 compliance.

### 2. Data Validation Testing:

- Ensure that the API correctly validates input ISBN-10 formats.
- Test boundary values for input length and content.
- Validate the boolean response accuracy.

### 3. Error Handling Testing:

- Verify error codes and messages for invalid requests.
- Check API behavior on malformed SOAP requests.

### 4. Performance Testing:

- Assess the API's response time under normal and peak loads.
- Measure throughput and scalability.

### 5. Security Testing:

- Validate secure data transmission practices (e.g., HTTPS if applicable).
- Check for proper access control (assumed public for this service).

### 6. Integration Testing:

- Verify interactions with client systems consuming the API.

### 7. Compatibility Testing:

- Test the API on different SOAP clients and versions.

### 8. Documentation Review:

- Assess the clarity, completeness, and accuracy of the API documentation.

## 9. Load Testing:

- Evaluate the API's behavior under high concurrent user loads.

### Inclusions

- Valid and invalid ISBN-10 inputs.
- Boundary testing with minimum and maximum input length.
- Empty and null input values.
- Invalid content-type header handling.
- SOAP 1.1 and SOAP 1.2 compliance checks.
- JSON response validation where applicable.

### Test Environments

Name	Env URL
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QA	http://webservices.daehosting.com/services/isbnservice.ws o
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### Operating Systems:

- Windows 10 – Chrome, Firefox, Edge
- Mac OS – Safari
- Android – Chrome
- iPhone – Safari

### Defect Reporting Procedure

- Defects identified as deviations from the expected API behavior.
- Defects reported in JIRA with reproduction steps and request/response samples.
- Severity and priority assigned.
- Regular triage and status updates.
- Defect metrics tracked through JIRA reports.

### Defect Process POC:

- Backend: Sonal
- Dev Ops: Prajeeth

**Tools:** JIRA

### Test Strategy

- Test scenarios and test cases created using:
  - Equivalence Class Partition
  - Boundary Value Analysis
  - Error Guessing
  - Exploratory Testing

- Smoke testing performed before deeper functional testing.
- Testing across multiple environments simultaneously.
- Types of testing:
  - Smoke Testing
  - Regression Testing
  - Usability Testing
  - Functional Testing
  - UI Testing (if applicable)

#### **Best Practices:**

- Context Driven Testing
- Shift Left Testing
- Exploratory Testing
- End-to-End Flow Testing

#### **Test Schedule**

Task	Dates
Creating Test Plan	
Test Case Creation	
Test Case Execution	
Summary Reports Submission	

#### **Test Deliverables**

- Test Plan
- Test Scenarios
- Test Cases
- Test Execution Report
- Defect Report
- Test Summary Report

#### **Entry and Exit Criteria**

##### **Requirement Analysis**

##### **Entry Criteria:**

- Requirements received. **Exit Criteria:**
- Requirements explored and understood.

## **Test Execution**

### **Entry Criteria:**

- Signed-off test scenarios and test cases.
- Application ready for testing. **Exit Criteria:**
- Test Case Reports and Defect Reports ready.

## **Test Closure**

### **Entry Criteria:**

- Test Case Reports and Defect Reports ready. **Exit Criteria:**
- Test Summary Reports prepared.

## **Tools**

- JIRA Bug Tracking Tool
- Mind Map Tool
- Screenshot Tool
- Word and Excel

## **Risks and Mitigations**

- Non-Availability of Resource: Backup planning.
- Build URL not working: Work on other tasks.
- Less time for Testing: Dynamic resource ramp-up.

## **Approvals**

- Test Plan
- Test Scenarios
- Test Cases
- Reports Testing continues only after approvals.