**Test Plan: SOAP API - Number to Words Conversion**

**1. Overview**

This document outlines the test plan for a SOAP API that takes a numerical input and returns the corresponding word representation.

**2. Objectives**

* Validate request and response formats.
* Ensure correct number-to-word conversion.
* Test for edge cases, invalid inputs, and performance.
* Verify API security and robustness.

**3. Test Environment**

* **API Endpoint**: https://www.dataaccess.com/webservicesserver/NumberConversion.wso
* **Request Format**: SOAP XML
* **Testing Tools**: SOAP UI, Postman, Curl, custom scripts

**4. Test Scenarios**

**4.1 Functional Tests**

1. Verify conversion of single-digit numbers.
2. Test double- and triple-digit numbers.
3. Validate conversion for large numbers.
4. Check the response for zero and negative numbers.
5. Test decimal number conversion.

**4.2 Boundary Tests**

1. Minimum acceptable value.
2. Maximum acceptable value.
3. Out-of-range values.

**4.3 Negative Tests**

1. Inputting non-numeric values (alphabets, special characters).
2. Sending an empty request.
3. Providing extremely large numbers beyond API capacity.

**4.4 Performance Tests**

1. Measure response time for various inputs.
2. Load test with concurrent requests.

**4.5 Security Tests**

1. Validate against SQL/ XML Injection.
2. Ensure error messages do not expose sensitive information.

**5. Test Execution Plan**

* Execute functional, boundary, negative, and performance tests.
* Validate expected output against actual API responses.
* Log issues, report defects, and retest as needed.

**6. Example API Request (CURL Format)**

curl --location 'https://www.dataaccess.com/webservicesserver/NumberConversion.wso' \

--header 'Content-Type: application/soap+xml; charset=utf-8' \

--data '<?xml version="1.0" encoding="utf-8"?>

<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/">

<soap:Body>

<NumberToWords xmlns="http://www.dataaccess.com/webservicesserver/">

<ubiNum>275</ubiNum>

</NumberToWords>

</soap:Body>

</soap:Envelope>'

**7. Conclusion**

This test plan ensures that the SOAP API correctly processes numerical inputs, maintains reliability, and performs under various conditions. Continuous monitoring is recommended to ensure long-term stability.