Test Plan – NumberToWords SOAP API

# Objective

To validate the functionality, reliability, and error-handling of the `NumberToWords` SOAP API endpoint. This service takes an integer input and returns the corresponding number in English words.

# Scope

Testing will focus on the `NumberToWords` operation of the SOAP Web Service:

🔗 https://www.dataaccess.com/webservicesserver/NumberConversion.wso?op=NumberToWords

# Tools Used

- Postman / Bruno – for sending SOAP requests and validating responses.

- SoapUI (Optional) – for comparing SOAP structure.

- JIRA – for defect tracking.

- MS Word/Excel – for documentation and reports.

# Test Types

- Functional Testing

- Input Validation Testing

- Error Handling Testing

- Integration Testing

- Compatibility Testing

\*Note: Performance Testing is excluded\*

# Inclusions

- Positive integers only (0 to 999,999,999,999,999)

- Functional test cases for typical and edge inputs

- SOAP message formatting

- Fault message verification

- Manual testing via Postman/Bruno

# Exclusions

- Performance/Load testing

- Automation via code clients

- Negative testing for other operations (e.g., NumberToDollars)

# Test Environment

Component | Details

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API Endpoint | https://www.dataaccess.com/webservicesserver/NumberConversion.wso?op=NumberToWords

Clients Used | Postman, Bruno

Protocol | HTTPS, SOAP 1.1

Device/OS | Windows 10/11, macOS, browser-based tools

WSDL URL | https://www.dataaccess.com/webservicesserver/NumberConversion.wso?WSDL

# Test Data Examples

Test Case | Input | Expected Output

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TC01 | 0 | zero

TC02 | 1 | one

TC03 | 12345 | twelve thousand three hundred forty five

TC04 | 1000000 | one million

TC05 | -10 | SOAP fault / error message

TC06 | 1.5 | SOAP fault / error message

TC07 | abc | SOAP fault / error message

TC08 | (no input) | SOAP fault / error message

# Test Strategy

Execution using Postman/Bruno:

1. Set request method to POST.

2. Header: Content-Type: text/xml;charset=UTF-8

3. Body: raw XML (SOAP Envelope)

```

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

<soap:Body>

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

<ubiNum>123</ubiNum>

</NumberToWords>

</soap:Body>

</soap:Envelope>

```

4. Send request and validate:

- Status Code: 200 OK

- SOAP Body contains <NumberToWordsResult>one hundred twenty three</NumberToWordsResult>

# Test Deliverables

- Test Plan Document

- Functional Test Case Sheet

- Test Execution Report (Postman/Bruno screenshots or logs)

- Defect Reports (JIRA)

- Final Test Summary Report

# Entry and Exit Criteria

\*\*Entry\*\*

- API/WSDL is accessible

- Postman/Bruno configured

- Test cases documented

\*\*Exit\*\*

- All functional test cases executed

- Critical bugs resolved

- Summary report submitted

# Defect Reporting

All defects will be logged in JIRA with the following details:

- Input number

- Request XML

- Expected vs. Actual output

- Screenshot (Postman/Bruno)

- Assigned based on issue type

# Risks and Mitigation

Risk | Mitigation

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API becomes temporarily down | Retry after some time

WSDL URL changes or unavailable | Use stored WSDL or mock server

Fault handling inconsistent | Document behavior, escalate