Number to Words conversion tool test plan

This document explains the test plan for this number to words conversion tool.

The unit test module uses the xUnit for testing, and FluentAssertions for assertions.

1. When amount is Zero

    - INPUT: USD 0

    - EXPECTED OUTPUT: ZERO DOLLAR

    - ACTUAL OUTPUT: ZERO DOLLAR ✅

2. When amount is whole and positive

    - INPUT: USD 1234

    - EXPECTED OUTPUT: ONE THOUSAND TWO HUNDRED AND THIRTY-FOUR DOLLARS

    - ACTUAL OUTPUT: ONE THOUSAND TWO HUNDRED AND THIRTY-FOUR DOLLARS ✅

3. When amount has decimal part

    - INPUT: USD 12.34

    - EXPECTED OUTPUT: TWELVE DOLLARS AND THIRTY-FOUR CENTS

    - ACTUAL OUTPUT: TWELVE DOLLARS AND THIRTY-FOUR CENTS ✅

4. When amount is negative

    - INPUT: - USD 45.67

    - EXPECTED OUTPUT: NEGATIVE FORTY-FIVE DOLLARS AND SIXTY-SEVEN CENTS

    - ACTUAL OUTPUT: NEGATIVE FORTY-FIVE DOLLARS AND SIXTY-SEVEN CENTS ✅

5. When the given currency is not supported

    - INPUT: XYZ 10

    - EXPECTED OUTPUT: *invalid operation exception thrown*

    - ACTUAL OUTPUT: *invalid operation exception thrown* ✅

6. When currency has no subunit and decimal part is within 0.1 to 0.5

    - INPUT: JPY 123.456

    - REMARKS: 123.456 will be rounding to 123

    - EXPECTED OUTPUT: ONE HUNDRED AND TWENTY-THREE YEN

    - ACTUAL OUTPUT: ONE HUNDRED AND TWENTY-THREE YEN ✅

7. When currency has no subunit and decimal part is larger than 0.5

   - INPUT: JPY 123.56

   - REMARKS: 123.56 will be rounding to 124

   - EXPECTED OUTPUT: ONE HUNDRED AND TWENTY-FOUR YEN

   - ACTUAL OUTPUT: ONE HUNDRED AND TWENTY-FOUR YEN ✅

8. When amount is one

   - INPUT: USD 1.1

   - REMARKS: all singular output

   - EXPECTED OUTPUT: ONE DOLLAR AND ONE CENT

   - ACTUAL OUTPUT: ONE DOLLAR AND ONE CENT ✅

9. When currency has no plural unit

   - INPUT: MYR 12.34

   - EXPECTED OUTPUT: TWELVE RINGGIT AND THIRTY-FOUR SEN

   - ACTUAL OUTPUT: TWELVE RINGGIT AND THIRTY-FOUR SEN ✅

10. When amount reaches the maximum boundary of the C# decimal type

    - INPUT: the max value of decimal, that is AUD 79228162514264337593543950335

    - EXPECTED OUTPUT: SEVENTY-NINE OCTILLION TWO HUNDRED AND TWENTY-EIGHT SEPTILLION ONE HUNDRED AND SIXTY-TWO SEXTILLION FIVE HUNDRED AND FOURTEEN QUINTILLION TWO HUNDRED AND SIXTY-FOUR QUADRILLION THREE HUNDRED AND THIRTY-SEVEN TRILLION FIVE HUNDRED AND NINETY-THREE BILLION FIVE HUNDRED AND FORTY-THREE MILLION NINE HUNDRED AND FIFTY THOUSAND THREE HUNDRED AND THIRTY-FIVE DOLLARS

    - ACTUAL OUTPUT: SEVENTY-NINE OCTILLION TWO HUNDRED AND TWENTY-EIGHT SEPTILLION ONE HUNDRED AND SIXTY-TWO SEXTILLION FIVE HUNDRED AND FOURTEEN QUINTILLION TWO HUNDRED AND SIXTY-FOUR QUADRILLION THREE HUNDRED AND THIRTY-SEVEN TRILLION FIVE HUNDRED AND NINETY-THREE BILLION FIVE HUNDRED AND FORTY-THREE MILLION NINE HUNDRED AND FIFTY THOUSAND THREE HUNDRED AND THIRTY-FIVE DOLLARS ✅