Test Plan

# Validator Gate

The first part of the test is to test the validation of the input. Once the input passes the validation, it only proceeds to convert the numbers into words.

This is supported input format, testing on validator can be done based on below.

* Must be a positive number, negative sign is not allowed.
* Only allow number characters (1 to 9), except for one dot before Fractional part.
* Integer part: Up to 126 digits.
* Fractional part: Up to 2 digits.

Extracted test case:

* Both positive and negative cases for supported input format, and combination of them.
* Test all numbers from “Conversion – Extracted test cases” section.

# Conversion

The second part of the test is to test the conversion from numbers to words.

Basic requirement is.

* Input: “123.45”
* Output: “ONE HUNDRED AND TWENTY-THREE DOLLARS AND FORTY-FIVE CENTS”

Extracted test cases:

* Test with values between 1 until 19, as they have special names.
* Test with value of 10,20,30 until 90, as they have special names.
* Test with 0 value.
* Test dollar part only.
* Test dollar part with cent part.
* Test 0 dollar with 0 cent, and more than 0 cent.
* Test big number with a lot of zeroes, group with 0 value shouldn’t be spelled out. For example: 1000000. Expected “ONE MILLION DOLLARS. Example of a wrong output is “ONE MILLION AND ZERO THOUSAND AND ZERO HUNDRED DOLLARS”.
* Bigger number, test up to 126 digits.
* Each numbers group must join by the word “AND”
* Wording for dollar part must be appended with the word “DOLLARS” (or “DOLLAR” for value 1 or less)
* Wording for Cent part must be appended with the word “CENTS” (or “CENT” for value 1 or less)

# Unit Test

Refer README.MD on how to run unit tests. Current unit test’s coverage on the algorithm is more than 95%. It tests basically all of the above use cases.