**Technical Exercise - Fixed Income Developer Position**

**The Problem**

As an author

I want to know the number of times each word appears in a sentence

So that I can make sure that I'm not repeating myself.

**Acceptance Criteria**

Given a sentence

When the program is run

Then I'm returned a distinct list of words in the sentence and the number of times they have occurred.

**Approach**

The wording of the problem suggests that the 'user' or 'project sponsor' is using Behaviour Driven Development (BDD), so the solution should continue with this practice.

**Assumptions**

Each sentence consists of one or more words, terminated with a full stop, or question mark. Other punctuation will be ignored and processing will be case-insensitive.

**Scenarios**

Scenario 1 - Sentence does not contain duplicate words.

Given the sentence "This is a test."

when the sentence is analyzed

then the output should be

"Input: This is a test.

Output:

this - 1

is - 1

a - 1

test - 1".

Scenario 2 - Sentence contains duplicate words with same case

Given the sentence "This test is an acceptance test."

when the program is run

then the output should be

" This test is an acceptance test.

Output:

this - 1

test - 2

is - 1

an - 1

acceptance - 1".

Scenario 3 - Sentence contains duplicate words with differing case

Given the sentence "This is a statement and so is this."

when the program is run

then the output should be

"Input: This is a statement and so is this.

Output:

this - 2

is - 2

a - 1

statement - 1

and - 1

so - 1".

Scenario 4 - Sentence contains punctuation

Given the sentence "This is a statement, and so is this."

when the program is run

then the output should be

" Input: This is a statement and so is this.

Output:

this - 2

is - 2

a - 1

statement - 1

and - 1

so - 1".

Scenario 5 - Sentence Contains Whitespace

Given the sentence is " This is a test. "

when the program is run

then the output should be

"Input:

Output:".

Scenario 6 - Sentence is blank

Given the sentence is blank

when the program is run

then the output should be

"Input:

Output:".

Scenario 7 - Sentence does not contain words

Given the sentence is "."

when the program is run

then output should be

"Input: .

Output:".