**Module 7 : Unit Testing Documentation**

*Source code : https://github.com/joannashad/CountWords.git*

Unit testing for Word Count application proved to be very beneficial. First of all, when creating a testing plan it proved essential that more code should be separated into classes than what was originally written. For example, error checking was built directly into the UI layer of the code. That was separated into it’s own class. Doing this made it possible to check that those procedures were performing as expected through automated unit testing. Second of all, when running the automated unit testing, several errors were caught that were not found in initial manual testing. For example, when testing that the website entered was valid, a null value was not tested and error handling for null exceptions was not built in. Another example was that word case was not considered, so the words were converted to lower case before searching and counting.

The following values for website input were tested for **checkLength**() method:

https://www.gutenberg.org/files/1065/1065-h/1065-h.htm \*\*assertEquals(expResult, result) //should be valid

https://en.wikipedia.org/wiki/Wyoming \*\*assertEquals(expResult, result) //should be valid

" " \*\*assertFalse(result.length()==0 //should be invalid

null \*\*assertFalse(result.length()==0 //should be invalid

https:// \*\*assertFalse(result.length()==0 //should be valid

https://en.wikipedia.org/wiki/Botanical\_garden \*\*assertEquals(expResult, result) //should be valid

The following values for website input were tested for **checkValid**() method:

https://www.gutenberg.org/files/1065/1065-h/1065-h.htm \*\*assertEquals(expResult, result) //should be valid

https://en.wikipedia.org/wiki/Wyoming \*\*assertEquals(expResult, result) //should be valid

" " \*\*assertEquals(expResult, result) \*\*assertFalse(result.length()==0 //should be invalid

null \*\*assertFalse(result.length()==0 //should be invalid

https:// \*\*assertTrue(result.length()==0 //should be invalid

https://en.wikipedia.org/wiki/Botanical\_garden \*\*assertEquals(expResult, result) //should be valid

The following values for website input were tested for **wordCount**() method:

https://www.gutenberg.org/files/1065/1065-h/1065-h.htm \*\*assertEquals(expResult, result); //should be 441

https://en.wikipedia.org/wiki/Wyoming \*\*assertEquals(expResult, result); //should be 3686

https://en.wikipedia.org/wiki/Botanical\_garden \*\*assertEquals(expResult, result); //should be 2849