

CS 1632 - DELIVERABLE 4: Automated Web Testing

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<https://github.com/jreid2f/CS1632-Deliverable4>

Summary

I didn't have too many issues while completing these tests. The only problem I had with this was the difference between `assertText` and `assertTextPresent`. I got that figured out so the rest wasn't much of a problem. I went and figured this IDE out pretty well. I came up with 25 test cases. 20 of them passed and 5 of them failed. The description of the defects are talked about here and in the defect page on the last page.

I had a few test cases fail after I got all my test cases completed. The first test case that failed was "Welcome-Message-Test". That test is looking for just the text: "Welcome, friend, to a land of pure calculation". The text is seen on the screen but, it is not the only text displayed within that area. Since it has more text than just that, the test case fails.

The second test case that failed was "Fact-Char-Test". The test is looking for the text "Factorial of @\$ is 1!". I figured this would be a good test case because it is something the website would not be expecting to type in. Typing in "@\$" in the input box actually causes an internal server error and never finds the text the test is looking for. Since it cannot find the text, the test case fails.

The third test case that failed was "Fib-Char-Test". The test is looking for the text "Fibonacci of @\$ is 1!". I figured this would be a good test case because it is very similar to "Fact-Char-Test". It is something the website would not be expecting to type in. Typing in "@\$" in the input box actually causes an internal server error and never finds the text the test is looking for. Since it cannot find the text, the test case fails.

The fourth test case that failed was "Hello-Char-Test". That test checks if the correct hello message is displayed. I used the input "@\$#". I found out that "#" does not display on the page at all. If you use just "#", it will display the regular hello message: "Hello CS1632, From Prof. Laboon!". Since it does not display the proper message, the test case fails.

The fifth and final test case that failed was "Number-List-Test". That test looks in the div for that page whether it displays the number list on the page. For whatever reason, I'm not sure why, the test cannot find the numbers for the list. It normally checks for "1." then "2." then "3.". It stops at "1." and does not go any further. Since it can't find any even at "1." the test case fails.

Test Results

Test Suites	
● Fact-Above-Test *	
● Fact-Char-Test *	
● Fib-Neg-Test *	
● Fib-Above-Test *	
● Fib-Char-Test *	
● Basic-Hello-Message *	
● Num-Hello-Test *	
● Name-Hello-Test *	
● Char-Hello-Test *	
● Number-List-Test *	
● Visible-Image-Test *	
Passed: 20	Failed: 5

Traceability Matrix

Display-Text-Req: Welcome-Message-Test, Class-Message-Test

Link-Req: Home-Link-Test, Fact-Link-Test, Fib-Link-Test, Hello-Link-Test, Cathy-Link-Test

Factorial-Req: Fact-1-Test, Fact-Int-Test, Fact-100-Test

Fibonacci-Req: Fib-1-Test, Fib-Int-Test, Fib-100-Test

Invalid-Req: Fact-Neg-Test, Fact-Above-Test, Fact-Char-Test, Fib-Neg-Test, Fib-Above-Test, Fib-Char-Test

Display-Hello-Req: Basic-Hello-Test

Display-Trailing-Hello-Req: Num-Hello-Test, Name-Hello-Test, Char-Hello-Test

Cathy-Req: Number-List-Test, Visible-Image-Test

Defects

SUMMARY: The text, "Welcome, friend, to a land of pure calculation" is not found.

DESCRIPTION: The test case, "Welcome-Message-Test", checks if just the text "Welcome, friend, to a land of pure calculation" is displayed.

REPRODUCTION STEPS: Open up the home page: <https://cs1632ex.herokuapp.com/>

EXPECTED BEHAVIOR: The test should pass and say that the message is present on the page

OBSERVED BEHAVIOR: The test actually fails and cannot find the message on the page

SUMMARY: The test cannot find the text "Factorial of @\$ is 1!"

DESCRIPTION: In the test case, "Fact-Char-Test", it checks if typing in characters effects the text displayed. When it runs, it causes an error.

REPRODUCTION STEPS: Open up the home page: <https://cs1632ex.herokuapp.com/>. Go to the Factorial page. Type in "@\$" into the input box.

EXPECTED BEHAVIOR: It should display and find Factorial of @\$ is 1!

OBSERVED BEHAVIOR: It throws an internal server error and cannot find the text.

SUMMARY: The test cannot find the text "Fibonacci of @# is 1!"

DESCRIPTION: In the test case, "Fib-Char-Test", it checks if typing in characters effects the text displayed. When it runs, it causes an error.

REPRODUCTION STEPS: Open up the home page: <https://cs1632ex.herokuapp.com/>. Go to the Fibonacci page. Type in "@#" into the input box.

EXPECTED BEHAVIOR: It should display and find Fibonacci of @# is 1!

OBSERVED BEHAVIOR: It throws an internal server error and cannot find the text.

SUMMARY: The test cannot find the text "Hello CS1632, from @\$#!"

DESCRIPTION: In the test case, "Char-Hello-Test", it checks if typing in "@\$#" in the URL will display "Hello CS1632, from @\$#!".

REPRODUCTION STEPS: Open up the home page: <https://cs1632ex.herokuapp.com/>. Go to the Hello page. Type in "@\$#" in the URL "hello/@\$#".

EXPECTED BEHAVIOR: It should display and find "Hello CS1632, from @\$#!"!

OBSERVED BEHAVIOR: It displays "Hello CS1632, from @\$!" and does not register "#". It causes the case to fail.

SUMMARY: It checks if there is a list of numbers on the page.

DESCRIPTION: In the test case "Number-List-Test", it checks the main div for the number list.

REPRODUCTION STEPS: Open up the home page: <https://cs1632ex.herokuapp.com/>. Go to the Cathy page.

EXPECTED BEHAVIOR: It should find the numbers that are displayed on the page.

OBSERVED BEHAVIOR: It does not find the numbers that are displayed on the page.