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<https://github.com/sjd69/CS1632_Deliverable3>

CS 1632 - DELIVERABLE 3: Unit Testing

The difficulties I encountered writing the tests for this deliverable mostly revolve around getting the specific DOM elements I needed to test specific functionality. Sometimes they had no attributes and were nested inside other elements or there were multiple elements on the page with the same tag name. The other difficulty I had was figuring out a way to test the cathedral picture list. Since you can’t really tell what the picture is off, you have to figure out a different way to test that there exist 3 pictures of the cathedral of learning. I figured I would use the alt text attribute since they all contain the word “cathedral”, however I’m not very satisfied with that roundabout way to do it. That said, I cannot think of a better way to do it with my current skillset.

DEFECTS

**SUMMARY:** The Fibonacci calculator does not correctly handle values from 1-100.

**DESCRIPTION:** Entering 100 into the Fibonacci calculator results in an incorrect output. The output is not the 100th Fibonacci number.

**REPRODUCTION STEPS:** Navigate to the Fibonacci page (<https://cs1632ex.herokuapp.com/fib>), enter 100 into the text box, and click submit.

**EXPECTED BEHAVIOR:** The 100th Fibonacci number is displayed (354224848179261915075).

**OBSERVED BEHAVIOR:** 1 is output.

**SEVERITY:** HIGH

**IMPACT:** HIGH

**SUMMARY:** The Fibonacci and Factorial calculators do not correctly handle invalid inputs.

**DESCRIPTION:** Submitting an empty input into the Fibonacci or Factorial calculators results in an internal server error.

**REPRODUCTION STEPS:** Navigate to either the Fibonacci page (<https://cs1632ex.herokuapp.com/fib>) or the Factorial page (<https://cs1632ex.herokuapp.com/fact>) and click submit without inputting anything into the text box.

**EXPECTED BEHAVIOR:** A value of 1 is output by the calculator.

**OBSERVED BEHAVIOR:** Internal server error. Redirected to error page.

**SEVERITY:** Low

**IMPACT:** Low

**SUMMARY:** A trailing value in the URL of the hello page does not correctly display hello from the trailing value.

**DESCRIPTION:** Entering a series of special characters (“!@#$%^&\*()\_+”) as the trailing value of the URL on the hello page does not display correctly.

**REPRODUCTION STEPS:** Navigate to the hello page with the URL “[https://cs1632ex.herokuapp.com/hello/!@#$%^&\*()\_](https://cs1632ex.herokuapp.com/hello/!@#$%^&*()_)+”.

**EXPECTED BEHAVIOR:** The webpage displays “Hello CS1632, from /!@#$%^&\*()\_+!”

**OBSERVED BEHAVIOR:** The webpage displays “Hello CS1632, from !@!”

**SEVERITY:** Low

**IMPACT:** Low