



# **CS 1632 Software Quality Assurance**

## **Deliverable 3**

Member 1 Name: Keegan Fouse

Member 2 Name: Tyler Comisky

## **1. Summary**

We didn't encounter many difficulties in writing these tests. The most challenging of the cases was FUN-LINK, but only because it was the most involved. Casting the selected xpath link into an href object and then storing the href attribute as a variable was as complicated as the tests got, but it was otherwise a simple comparison of the stored value and the webpage's url. The rest of the cases were fairly intuitive to test after our introduction to Selenium in exercise 3. We could suspect that issues with Selenium testing might occur when elements on webpages have not been given descriptive identifiers. Otherwise, Selenium's interface is clean and user friendly and the code generation tool is very helpful. We also appreciate that it's a simple browser plug-in and not a bulky IDE with complicated setup. Selenium really streamlined the automated testing process.

## 2. Defects

**IDENTIFIER:** DEFECT1-FUN-INVALID-VALUE

**SUMMARY:** When entering any input that is not an integer for the Factorial function, the website throws an error instead of returning 1.

**DESCRIPTION:** On the Factorial page, there is a text box asking for a number to calculate the Factorial of. For values that are not 1 through 10, it is supposed to return 1, but the website redirects to an error page when the input is not an integer.

### REPRODUCTION STEPS:

Preconditions: Be connected to the internet and have a modern web browser installed.

1. Open your web browser.
2. In your browser's address bar, type "<https://cs1632.appspot.com/fact>" and press enter.
3. Type "a" into the box right below "Enter number to calculate factorial of:", and click the Submit button.
4. Observe behavior.

**EXPECTED BEHAVIOR:** The website displays "Factorial of a is 1!"

**OBSERVED BEHAVIOUR:** The website displays an error page.

**IDENTIFIER:** DEFECT2-FUN-FIB

**SUMMARY:** When entering 10 as an input for the fibonacci function, it returns 1 instead of 55.

**DESCRIPTION:** On the Fibonacci page, there is a text box asking for a number to calculate the Fibonacci of. For values 1 through 10, it is supposed to return the given value in the sequence, but when 10 is the input, it just returns 1.

### REPRODUCTION STEPS:

Preconditions: Be connected to the internet and have a modern web browser installed.

1. Open your web browser.
2. In your browser's address bar, type "<https://cs1632.appspot.com/fib>" and press enter.
3. Type "10" in the box right below "Enter number to calculate Fibonacci of:", and click the Submit button.
4. Observe website behavior.

**EXPECTED BEHAVIOR:** The website displays "Fibonacci of 10 is 55!".

**OBSERVED BEHAVIOUR:** The website displays "Fibonacci of 10 is 1!".

**IDENTIFIER:** DEFECT3-FUN-INVALID-VALUE

**SUMMARY:** When using a forward slash anywhere in the input string, the website redirects to an error page.

**DESCRIPTION:** For the trailing value in the hello page, when you use a forward slash in between any other character (Ex: "a/b"), the website redirects to an error page, instead of displaying "Hello CS1632, from [input string]!".

**REPRODUCTION STEPS:**

Preconditions: Be connected to the internet and have a modern web browser installed.

1. Open your web browser.
2. In your browser's address bar, type "<https://cs1632.appspot.com/hello/a/a>" and press enter.
3. Observe website behavior.

**EXPECTED BEHAVIOR:** The website displays "Hello CS1632, from a/a!".

**OBSERVED BEHAVIOUR:** The website displays an error page.