



CS 1632 Software Quality Assurance

Deliverable 3

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CS 1632 - DELIVERABLE 3: Automated Web Testing

1. Summary

We did not have many issues with writing the tests. The main issue we faced was that the scarcity of online information resources for Selenium IDE. We were able to figure out how IDE works by mostly trial and error. Once we became familiar with Selenium IDE, writing test cases became easy. The only problem we can expect is that Selenium IDE has steep learning curve. The IDE works but it needs to be tuned for the testing needs. After having some experience, we already knew where we should fix JUnit tests.

After having firsthand experience, we realized that how Selenium can be very useful for automated web testing. We appreciated Selenium automated tests even more after learning that debugging web programming languages like Python and JavaScript are very hard compared to strongly typed languages like Java or C++. For this reason, we really liked the Selenium because it is really easy to pin point to the problem when something stops working on the website.

We also found exporting feature of the Selenium IDE very useful. It alleviates the test writers a lot of coding. It also allows test writers to choose DOM elements easily and real time.

2. Defects

IDENTIFIER: DEFECT1-FUN-FIB

SUMMARY: Upon pressing submit with value “10”, Fibonacci page (“/fib”) does not display correct value.

DESCRIPTION: Upon pressing the submit button with value “10”, Fibonacci page (“/fib”) displays erroneous result of 1. The result should be 55 not 1.

REPRODUCTION STEPS: The link at <https://cs1632.appspot.com/fib> is open.

1. An integer of value 10 is entered in the input field.
2. The submit button is pressed.

EXPECTED BEHAVIOR: The webpage displays a string “Fibonacci of 10 is 55!”.

OBSERVED BEHAVIOR: The webpage displays a string “Fibonacci of 10 is 1!”

IDENTIFIER: DEFECT2-FUN-INVALID-VALUE

SUMMARY: Upon pressing the submit button with invalid value of “0.1” in Factorial page (“/fact”), the Whitelabel Error Page appears.

DESCRIPTION: Upon pressing the submit button with invalid value of “0.1” in Factorial page (“/fact”), the Whitelabel Error Page appears. As per requirement FUN-INVALID-VALUE, a page should show that Factorial of 0.1 is 1.

REPRODUCTION STEPS: The link at <https://cs1632.appspot.com/fact> is open.

1. A number of value 0.1 is entered in the input field.
2. The submit button is pressed.

EXPECTED BEHAVIOR: The webpage displays a string “Factorial of 0.1 is 1!”.

OBSERVED BEHAVIOR: Whitelabel Error Page is loaded showing:

Whitelabel Error Page

This application has no explicit mapping for /error, so you are seeing this as a fallback.

Mon Oct 19 07:29:24 UTC 2020

There was an unexpected error (type=Internal Server Error, status=500).

IDENTIFIER: DEFECT3-FUN-HELLO-TRAILING

SUMMARY: When trailing value ‘.’ is provided in the URL when accessing /hello page, the hello page does not display hello from the input value as per requirement FUN-HELLO-TRAILING.

DESCRIPTION: When trailing value ‘.’ is provided in the URL when accessing /hello page, the hello page displays the message "Hello CS1632, from Dr. Ahn!".

REPRODUCTION STEPS: The link at <https://cs1632.appspot.com/hello/>. is open.

EXPECTED BEHAVIOR: The webpage displays a string "Hello CS1632, from .! “

OBSERVED BEHAVIOR: The webpage displays a string "Hello CS1632, from Dr. Ahn!".