**+2 CMD**

CS 1632 – DELIVERABLE 3: Systems Testing A Web Application

Project Under Test: Hoodpopper

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Description of Issues

We had trouble on the test testParseWhitespace() because we needed to have two separate entries be parsed so we could compare the differences between them. First we tried to use the back button to go back but realized that this would rely on the functionality of the back button. To make the test more independent we instead created a separate, local driver which entered the code with whitespace. We then compared the strings that were returned by both drivers.

We also had trouble finding out how to select the (AST) tree on the Parse page because the IDE did not explicitly say how to select it like it did with CSS. We figured out that using XPath was the only way to select the tree.

We found two similar defects in the Parse operation of Hoodpopper:

SUMMARY: The Hoodpopper app crashes when parsing one or more operators.

DESCRIPTION: If the user tries to parse code that is simply one or more operators like “+” or “-” and nothing else (no characters or integers), the application crashes.

REPRODUCTION STEPS: Navigate to the Hoodpopper webpage. In the Code box, type “+” and hit the “Parse” button.

EXPECTED BEHAVIOR: The AST is displayed containing “+”.

OBSERVED BEHAVIOR: The application crashes, and the following error message is displayed: “We’re sorry, but something went wrong. If you are the application owner check the logs for more information.”

SUMMARY: The Hoodpopper app crashes when parsing one or more special characters.

DESCRIPTION: If the user tries to parse code that is simply one or more special characters like “!” and nothing else (no letters or integers), the application crashes.

REPRODUCTION STEPS: Navigate to the Hoodpopper webpage. In the Code box, type “!” and hit the “Parse” button.

EXPECTED BEHAVIOR: The AST is displayed containing “!”.

OBSERVED BEHAVIOR: The application crashes, and the following error message is displayed: “We’re sorry, but something went wrong. If you are the application owner check the logs for more information.”

The tests that found defects returned errors. We surrounded the errors with a try-catch statement so we would know that the reason the tests failed was because of a NoSuchElementException. Based on the defects found, we would expect there may be problems going forward when parsing code that ends with operators or special characters.

Our test code, namely HoodpopperTest.java and TestRunner.java, is located at: <https://github.com/nick16754/CS1632-Deliverable3.git>

Executed Unit Tests

