

CS 1632 - DELIVERABLE 3

Automated System Testing of a Web Application

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D3 URL: <https://github.com/MisterZW/D3>

Class Section: T TH 9:30

+1 ISSUE #26

EXTRA CREDIT #1 COMPLETED AS WELL

D3 Retrospective

On the whole, I'd say that D3 went much smoother than D2. I think this is partly because mocking, stubbing, dependency injection, etc. are more difficult techniques than testing user endpoints, but I feel that I also did a better job following the "give yourself something to test" guideline this time around as well. Furthermore, I built the traceability matrix as I built the tests so that I distributed my test focus appropriately.

The trickiest part of this deliverable was figuring out how to get the right kinds of assertions out of Katalon to check the behavior I was interested in. It took me a fair bit of digging in the documentation to find that I could index specific (row, column) pairs in an html `<table>` with the `verifyTable` action. This made testing many of the requirements much, much simpler. It isn't a perfect solution and it's dependent on the binary truth strings being generated in increasing order (e.g. FF, FT, TF, TT), but it's at least a big improvement over targeting elements by XPATH.

Still, there were a couple things I couldn't figure out how to test in Katalon. I don't know how to check the HTTP status code received against 404, for example. I also wasn't sure how to test that the error messages were `<h1>` tags specifically. Still, I felt I got pretty decent coverage on the requirements overall and my tests even caught a few minor errors before submission. Ironically, the error page itself was displaying the message "Error" rather than "ERROR" as specified in the requirements, for example.

One other thing I noticed is that the Katalon tests are run in order. Is there a way to get them to run out-of-order like the Minitest suites?

All told, I'm happy with all the concepts and tools I'm being exposed to in these assignments. I'm developing a more complex web application for CS1520 now and I suspect that Katalon will help me deliver a higher quality application. Thanks!