

HTML2LaTeX

Synopsis

The HTML2LaTeX lab is an assignment where we have to use a combination of C and Lex to make an interpreter that accepts HTML as input, and converts it to LaTeX code. The solution to the problem given is fairly straight forward.

Approach

The solution to the problem given is pretty straight forward. I've been working with Regex for over a year now, and I have learned how to use it to its full extent. Unfortunately, this lab didn't allow me to use it to the extent I would have liked, but at least we got to use it. The obvious approach to the problem is to simply consider all possible cases of HTML tags given in the assignment, understand how HTML is written, and understand how LaTeX is written. After that, simply write the interpreter with Regex code to handle all of the capturing and replacing.

Debugging Solution

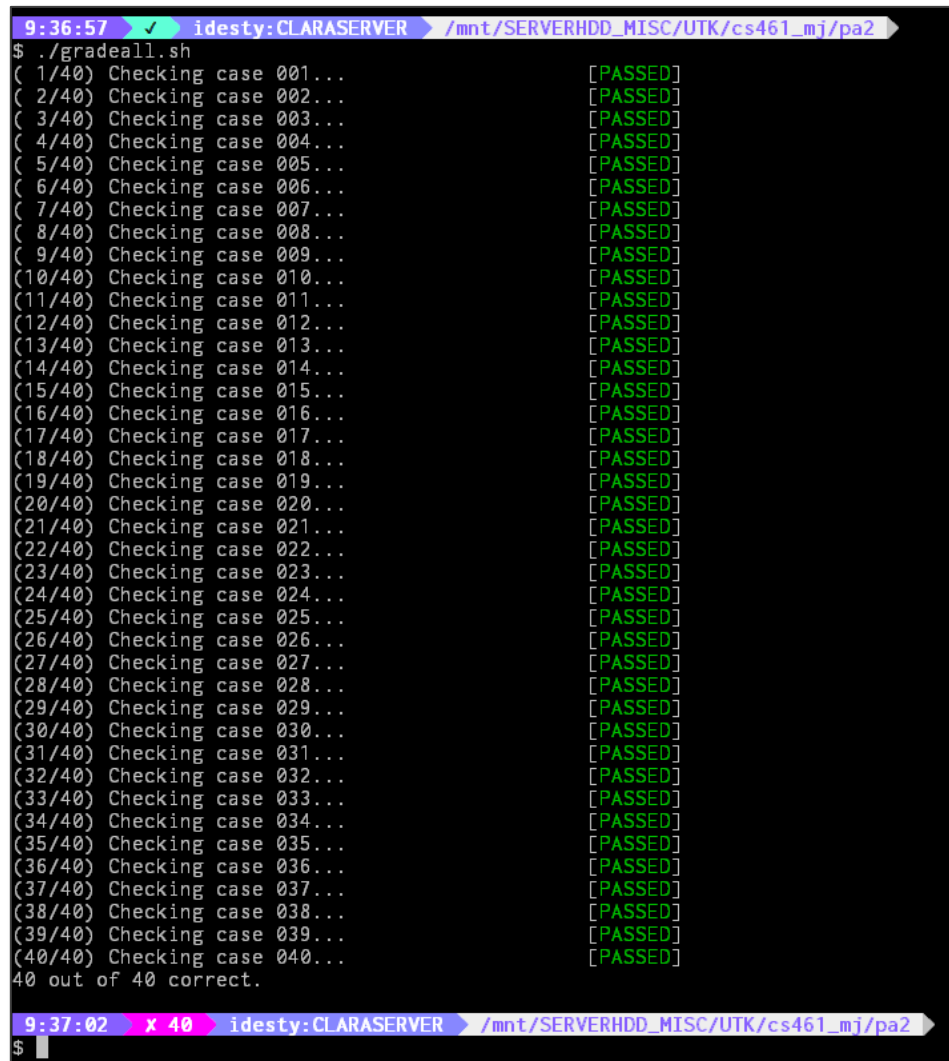
Inspired by the almighty Dr. Plank, I have decided to check my code via brute force by making test cases (which are actually included in this submitted tarball). I made 40 test cases (with a quarter of them being based on the test.html file given in the assignment tarball) and a few shell scripts. Executing "gradeall.sh" will run all 40 test cases on my executable and compare its output to cached output from the solution code. Executing "gradeall2.sh" will run all 40 test cases on both the solution code and my own code and compare their outputs. When I hit all 40 test cases, I knew that my code was good enough to submit. Please check page 2 to see a screenshot of the gradescript in action.

Issues

Coding in Lex for the first time was fairly (and disappointingly) trivial. There were not any problems at all with the assignment.

Gradescript

As mentioned above, here is a screenshot of the gradescript in action. It works on my personal server and on Tesla/Hydra. Feel free to try it yourself. More details on the shell scripts can be found in README.md.



```
9:36:57 ✓ idesty:CLARASERVER /mnt/SERVERHDD_MISC/UTK/cs461_mj/pa2
$ ./gradeall.sh
( 1/40) Checking case 001... [PASSED]
( 2/40) Checking case 002... [PASSED]
( 3/40) Checking case 003... [PASSED]
( 4/40) Checking case 004... [PASSED]
( 5/40) Checking case 005... [PASSED]
( 6/40) Checking case 006... [PASSED]
( 7/40) Checking case 007... [PASSED]
( 8/40) Checking case 008... [PASSED]
( 9/40) Checking case 009... [PASSED]
(10/40) Checking case 010... [PASSED]
(11/40) Checking case 011... [PASSED]
(12/40) Checking case 012... [PASSED]
(13/40) Checking case 013... [PASSED]
(14/40) Checking case 014... [PASSED]
(15/40) Checking case 015... [PASSED]
(16/40) Checking case 016... [PASSED]
(17/40) Checking case 017... [PASSED]
(18/40) Checking case 018... [PASSED]
(19/40) Checking case 019... [PASSED]
(20/40) Checking case 020... [PASSED]
(21/40) Checking case 021... [PASSED]
(22/40) Checking case 022... [PASSED]
(23/40) Checking case 023... [PASSED]
(24/40) Checking case 024... [PASSED]
(25/40) Checking case 025... [PASSED]
(26/40) Checking case 026... [PASSED]
(27/40) Checking case 027... [PASSED]
(28/40) Checking case 028... [PASSED]
(29/40) Checking case 029... [PASSED]
(30/40) Checking case 030... [PASSED]
(31/40) Checking case 031... [PASSED]
(32/40) Checking case 032... [PASSED]
(33/40) Checking case 033... [PASSED]
(34/40) Checking case 034... [PASSED]
(35/40) Checking case 035... [PASSED]
(36/40) Checking case 036... [PASSED]
(37/40) Checking case 037... [PASSED]
(38/40) Checking case 038... [PASSED]
(39/40) Checking case 039... [PASSED]
(40/40) Checking case 040... [PASSED]
40 out of 40 correct.

9:37:02 X 40 idesty:CLARASERVER /mnt/SERVERHDD_MISC/UTK/cs461_mj/pa2
$
```