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Lab 2: HTML to LaTeX conversion using Lex

CS 461

## Project Report

The purpose of this lab was to use a Lexical Analyzer to parse the input of an HTML file and convert it to a LaTeX format pdf file.

Given that Lex has a structure that utilizes the C programming language, I set to code each block using C format print statements to change the HTML style to the LaTeX style. The process for implementation was simply to start from the outside and work my way inward debugging along the way. I first took care of the headers and the paragraphs. After making the executable and redirecting the output to my own text file and verifying that the output matched that of the correct pdf, I moved on to handle the unordered and ordered lists. From there I had to handle the list tag which was process dependent on what type of list it was super ceded by. The list\_type variable and a condition statement handled this properly. After debugging and again checking, I moved on and completed and checked the style tags. I finished everything by making the executable with text and then opening that resultant pdf with adobe and everything looked good.

The biggest issues with this assignment was the lack of familiarity with Lex. The C code was straightforward and did not give problem but how to handle the list portion in conjunction with the list types probably took the longest time. In the end, it was setting a variable for whether an ordered or unordered list was being used and then having an if/else statement handle the return to that appropriate list. The matching posed some problems but the header and comment examples did help with those and the Lex manual offered some insight as well.