Lab Report

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**Program Statement**

The goal of the programming assignment is to make a HTML error checker. To check error, stack is used. The inputs to the program is the HTML file. all tags will be store in stack, and if the end tag is found which is match with the top of stack, then it pops so it can be deleted in stack. The output should print the error of missing tags. The remaining tags in stack is the missing end tags. Error handling was not required at this assignment.

**Design**

First, download the stack header and cpp file from website. After switching private value of integer to string for tags, make a function for error checking. First process of function is the reading file. after opening the HTML file, save text to string. Make string short before push in stack so it can be easily matched when the end tag is found. When tag with slash which is end tag, is found, if the top of the stack is match with end tag, pop the stack.

**Implementation**

After open file with fstream, first, the while loop that goes until end of file was set. For reading string, getline was used. three parameters were used which the last one is the delimiter. It will getline until the third parameter character is found. and if the string is not empty, character of delimiter was added to make it full tag. If space is found between tag, it stopped reading in space and add the > at the end. For founding space, string find function was used. if space is found in the string, integer become number that place that space is at. If not, it always -1. For push and pop, find function was used again for /, slash. If slash is not found in the string, then it is beginning tag which will be pushed in stack. If slash is found, that tag is end tag which will pop if it matches with top stack. Before finishing function, close fstream. For printing error, printing stack was used.

**Testing**

First I started with reading file. after changing name other than intput.txt, reading function returned correctly with proper cout statement. First HTML file that I used for testing was HTML codes in project 4 description. It came out correctly with missing tags. For next, I used another page of pf2 webpage which shows all schedule and labs for spring 2017. There should be no error for this page, and so my stack should not contain any string. It worked.

**Conclusion**

The overall result of the assignment came out with correct output with few statements. Project worked successful. I want to try to make this assignment with coding file for checking error for {} sign.