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CS214

Assignment 0

Description

Our program takes a single string argument from the command line, testing that there is only a single argument. We set different input types, then listed different inputs. We then allocated space for a Hash Map to store special characters and keywords, initialized it, and inserted the special characters in the table using modulo the size of the Hash Map. We then start working with the string: we check for spaces, special characters and then break the string into different cases based on what type our program currently sees it as. Finally, we copy the corresponding information into the nodes as a linked list and printed the list at the end.

Features

I think that the greatest feature of our code is the fact that it is easy to understand and adapt. For example, if you wanted to add more special characters or work with a different case, it would be easy to see where the necessary code goes. Also, our Hash Map insures close to O(1) for special characters and keywords. Our code also covers C keywords, skips C comments and strings in double or single quotes as single tokens. Based on interpretation of the instruction, a float can only contain **e** if it contains a decimal beforehand, that quotes stay inside the token when printed, and that we decided to classify the C keywords as "keyword".