**ITELIMA FAITH IBIFUBARA HAPPINESS**

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**CSC 312**

**Loop and switch scanner:**

A "loop & switch" implementation consists of a main loop that reads characters one by one from the input file and uses a switch statement to process the character(s) just read. The output is a list of tokens and lexemes from the source program. The mythical source language tokenized by the scanner requires that reserved words be in all upper case and identifiers in all lower case. This convenient feature makes it easy for the scanner to choose which path to pursue after reading just one character. It is sometimes necessary to design the scanner to "look ahead" before deciding what path to follow— notice the handling for the '/' character which peeks at the next character to check whether the first slash is followed by another slash or star which indicates the beginning of a comment. If not, the extra character is pushed back onto the input stream and the token is interpreted as the single char operator for division. Loop-and-switch scanners are sometimes called ad hoc scanners, indicating their design and purpose of solving a specific instance rather a general problem. For a sufficiently reasonable set of token types, a hand coded, loop and switch scanner might be all that’s needed— it requires no other tools.