ADESINA ALAMEEN B

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CSC 312

**Loop and Switch**

There are two primary methods for implementing a scanner. The first is a program that is hard-coded to perform the scanning tasks. The second uses regular expression and finite automata theory to model the scanning process.

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 following program fragment shows a skeletal implementation of a simple loop and switch scanner. The main program calls **InitScanner** and loops calling **ScanOneToken** until **EOF**. **ScanOneToken** reads the next character from the file and **switch**es off that **char** to decide how to handle what is coming up next in the file. The return values from the scanner can be passed on to the parser in the next phase.