**Lexical Analyzer**

A sample computer programming language contains the following symbols and reserved words.

Symbols : [A-Z], [a-Z], [0-9]

( ) { } [ ] . ; + - \* / % = ++ -- \_ $ \ ‘ “ \n \t \r \\

The corresponding tokens are the following.

|  |  |  |
| --- | --- | --- |
|  | Inputs | Outputs |
| 1 | Identifiers (Contain -, $, letters and digits. No digit in the beginning) | ID1, ID2, or ID2 |
| 2 | Literals (123, 1.23, 'C', "NSU", 0x12CB) | ILIT, RLIT, CLIT, SLIT, HLIT |
| 3 | (, ), {, }, [, ], ., ; | LPT, RPT, LCB, RCB, LSB, RSB, DOT, SEMI |
| 4 | +, -, \*, /, %, =, ++, -- | PLUS, MINUS, PROD, DIV, REM, ASSIGN, INC, DEC |
| 5 | \_, $, \, ', " | UNDERSCORE, DOLLAR, BACKSL, SINGLEQ, DOUBLEQ |
| 6 | if, else, for, return, int, real, char, void | IF, ELSE, FOR, RETURN, INT, REAL, CHAR, VOID |
| 7 | \n \t \r \\ | NL, TAB, CR, BKSL |
| 8 | Anything else | ERROR |