직접 작성한 Scanner 소스
in Java (좀더 high level)

```
import java.io.Reader;
import java.util.Scanner;
import java.util.HashMap;
import java.util.regex.Pattern;

public class Lexer {
    public static enum TokenType {
        GTEQ(">="), LTEQ("<="), GT(">"), LT("<"), ARROW("-->"),
        PLUS("+"), MINUS("-"), STAR("*"), SLASH("/"), ASSIGN("="),
        LPAR ("("), RPAR (")"), SEMI(";"), COMMA(","), IF("if"),
        ELSE("else"), WHILE("while"), IDENT(null), NUMERAL(null),
        EOF(null), ERROR (null);

        final private String lexeme;
        TokenType (String s)   { lexeme = s;}
    }
    public String  lastLexeme;
    private static HashMap<String, TokenType> tokenMap
                        = new HashMap<String, TokenType > ();
    static {
        for (TokenType c : TokenType.values())
            tokenMap.put (c.lexeme, c);
    }
```

https://inst.eecs.berkeley.edu/~cs164/sp11/lectures/lecture2/Lexer.java

```
    private Scanner inp;
    private static final Pattern tokenPat =
        Pattern.compile ("(\\s+|#.*)"
                         + "|>=|<=|-->|if|def|else|fi|while"
                         + "|([a-zA-Z][a-zA-Z0-9]*)|(\\d+)" + "|.");
public Lexer (Reader reader)   { inp = new Scanner (reader); }
    public TokenType nextToken ()     {
        if (inp.findWithinHorizon (tokenPat, 0) == null)
            return TokenType.EOF;
        else {
            lastLexeme = inp.match ().group (0);
            if (inp.match ().start (1) != -1)
                return nextToken ();
            else if    (inp.match ().start (2) != -1)
                return TokenType.IDENT;
            else if    (inp.match ().start (3) != -1)
                return TokenType.NUMERAL;

            TokenType result = tokenMap.get (lastLexeme);
            if (result == null)    return TokenType.ERROR;
            else                   return result;
        }
    }
}
```

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