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EXPERIMENT NO.1

Aim : Write a program to implement Lexical analyzer

Code:

```
import re  # for performing regex expressions
tokens = []  # for string tokens
command = input("Enter a command: ")
source_code = command.split()  #splitting source code statement into words

for word in source_code:
    if word in ['str', 'int', 'bool','if', 'elif', 'else','for', 'do', 'while','in','range']:
        tokens.append(['KEYWORD', word])

    elif re.match("[a-z]", word) or re.match("[A-Z]", word):
        tokens.append(['IDENTIFIER', word])

    elif word in '*-/+%=':
        tokens.append(['OPERATOR', word])

    elif re.match(".[0-9]", word):
        if word[len(word) - 1] == ';':
            tokens.append(["CONSTANT", word[:-1]])
            tokens.append(['END_STATEMENT', ';'])
        else:
            tokens.append(["INTEGER", word])
```

print(tokens)

Output: