

Assignment No 1



Name:

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Subject:

Compiler Construction

Submitted to:

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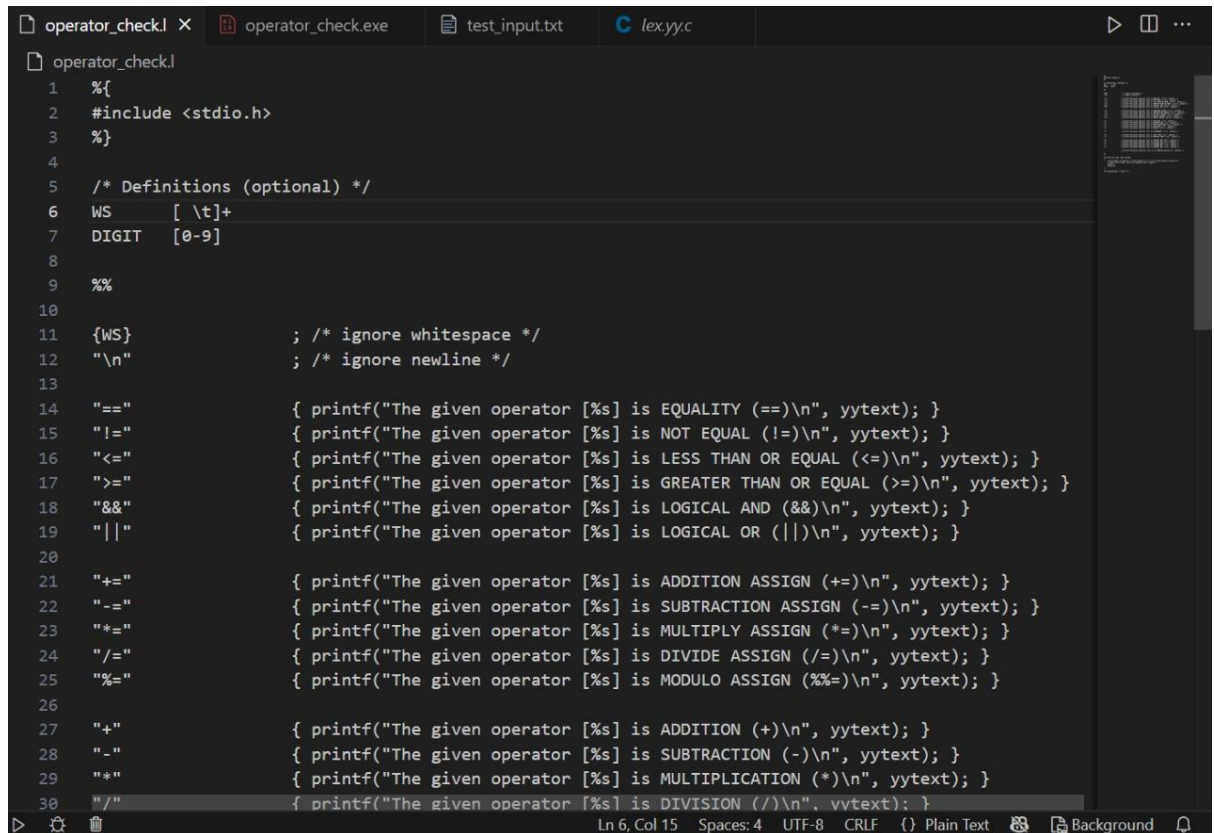
Write a lex file to check whether a user enter a VALID operator or INVALID not.

This program is written in Lex (Flex) to check whether a user enters a valid operator (like +, -, *, /, &&, ||, etc.) or an invalid operator.

If the entered symbol matches a defined operator, the program displays its meaning; otherwise, it prints that the operator is invalid.

How the Program Works

- The user enters an operator, and the program checks it against a list of valid operators using Lex rules.
- If the input matches, it prints the operator's name; otherwise, it shows "INVALID operator," and then the program ends.



```
1  %{
2  #include <stdio.h>
3  %}
4
5  /* Definitions (optional) */
6  WS      [ \t]+
7  DIGIT   [0-9]
8
9  %%
10
11 {WS}      ; /* ignore whitespace */
12 "\n"      ; /* ignore newline */
13
14 "=="      { printf("The given operator [%s] is EQUALITY (==)\n", yytext); }
15 "!="      { printf("The given operator [%s] is NOT EQUAL (!=)\n", yytext); }
16 "<="      { printf("The given operator [%s] is LESS THAN OR EQUAL (<=)\n", yytext); }
17 ">="      { printf("The given operator [%s] is GREATER THAN OR EQUAL (>=)\n", yytext); }
18 "&&"      { printf("The given operator [%s] is LOGICAL AND (&&)\n", yytext); }
19 "||"      { printf("The given operator [%s] is LOGICAL OR (||)\n", yytext); }
20
21 "+="      { printf("The given operator [%s] is ADDITION ASSIGN (+=)\n", yytext); }
22 "-="      { printf("The given operator [%s] is SUBTRACTION ASSIGN (-=)\n", yytext); }
23 "*="      { printf("The given operator [%s] is MULTIPLY ASSIGN (*=)\n", yytext); }
24 "/="      { printf("The given operator [%s] is DIVIDE ASSIGN (/=)\n", yytext); }
25 "%="      { printf("The given operator [%s] is MODULO ASSIGN (%%=)\n", yytext); }
26
27 "+"       { printf("The given operator [%s] is ADDITION (+)\n", yytext); }
28 "-"       { printf("The given operator [%s] is SUBTRACTION (-)\n", yytext); }
29 "*"       { printf("The given operator [%s] is MULTIPLICATION (*)\n", yytext); }
30 "/"       { printf("The given operator [%s] is DIVISION (/)\n", yytext); }
```

```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL
TERMINAL
powershell + - [ ] [x]
● PS D:\Compiler Construction Lab\Theory Assignmnet 1> .\operator_check.exe
Enter an operator to check whether it is in the valid operators OR Not
● PS D:\Compiler Construction Lab\Theory Assignmnet 1> echo "==" | .\operator_check.exe
Enter an operator to check whether it is in the valid operators OR Not
The given operator [==] is EQUALITY (==)
● PS D:\Compiler Construction Lab\Theory Assignmnet 1> Get-Content test_in
put.txt | .\operator_check.exe
Enter an operator to check whether it is in the valid operators OR Not
The given operator [==] is EQUALITY (==)
The given operator [!=] is NOT EQUAL (!=)
The given operator [<=] is LESS THAN OR EQUAL (<=)
The given operator [>=] is GREATER THAN OR EQUAL (>=)
The given operator [&&] is LOGICAL AND (&&)
The given operator [||] is LOGICAL OR (||)
The given operator [+=] is ADDITION ASSIGN (+=)
The given operator [+] is ADDITION (+)
The given operator [-] is SUBTRACTION (-)
```