**EX 3:** **Design a lexical Analyzer to validate operators to recognize the operators +,-,\*,/ using regular Arithmetic operators .**

**Aim:**

To design a lexical analyzer that validates and recognizes arithmetic operators +, -, \*, and /.

**Algorithm:**

1. **Start.**
2. Read the input line from the user.
3. Define a list of valid arithmetic operators: ['+', '-', '\*', '/'].
4. Check if any of the defined operators are present in the input:
   * If found, print "Arithmetic operator detected."
   * If not found, print "No arithmetic operator detected."
5. **End.**

**CODE**

#include <stdio.h>

#include <stdlib.h>

#include <string.h>

#include <ctype.h>

#define MAX\_LEN 100

void lexicalAnalyzer(const char \*input) {

for (int i = 0; i < strlen(input); i++) {

if (isspace(input[i])) {

continue;

}

if (input[i] == '+' || input[i] == '-' || input[i] == '\*' || input[i] == '/') {

printf("Operator found: %c\n", input[i]);

} else {

printf("Invalid character: %c\n", input[i]);

}

}

}

int main() {

char input[MAX\_LEN];

printf("Enter an expression: ");

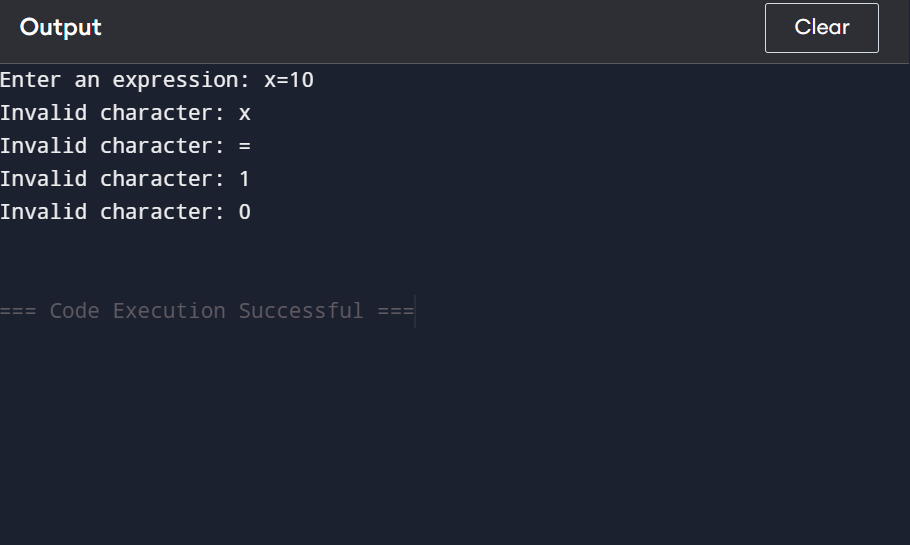
fgets(input, MAX\_LEN, stdin);

lexicalAnalyzer(input);

return 0;

}

**OUTPUT:**

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