PROGRAM 4:

1. Design a lexical Analyzer to validate operators to recognize the operators +,-,\*,/ using regular arithmetic operators using C

CODE: #include <stdio.h>

#include <string.h>

// Function to check if a character is a valid operator

int isOperator(char ch) {

return (ch == '+' || ch == '-' || ch == '\*' || ch == '/');

}

void validateOperators(char \*input) {

printf("Input Expression: %s\n", input);

printf("Recognized Operators:\n");

for (int i = 0; input[i] != '\0'; i++) {

if (isOperator(input[i])) {

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

}

}

}

int main() {

// Hardcoded input expression

char input[] = "a + b - c \* d / e";

// Validate and recognize operators in the input

validateOperators(input);

return 0;

}  
  
  
  
OUTPUT:

Input Expression: a + b - c \* d / e

Recognized Operators:

Operator: +

Operator: -

Operator: \*

Operator: /