Experiment 3

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

Program:

#include <stdio.h>

#include <stdbool.h>

int main() {

char input[100];

printf("Enter an arithmetic expression: ");

scanf("%s", input);

int i = 0;

while (input[i] != '\0') {

if (input[i] == ' ' || input[i] == '\t' || input[i] == '\n') {

i++;

continue;

}

bool isValidOperator = false;

if (input[i] == '+') {

isValidOperator = true;

} else if (input[i] == '-') {

isValidOperator = true;

} else if (input[i] == '\*') {

isValidOperator = true;

} else if (input[i] == '/') {

isValidOperator = true;

} else if (input[i] == '=') {

isValidOperator = true;

}

if (isValidOperator) {

printf("%c - operator.\n", input[i]);

} else {

printf("%c - not an operator.\n", input[i]);

}

i++;

}

return 0;

}

Output:

