16)Write a C Program to Generate the Three address code representation for the given input statement?

#include <stdio.h>

#include <stdlib.h>

#include <ctype.h>

#include <string.h>

int tempCount = 1;

void generateTAC(char \*expr) {

char op1, op2, op;

char result[3];

char temp[3];

int i = 0, j = 0;

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

if (isalnum(expr[i])) {

result[j++] = expr[i];

} else if (strchr("+-\*/", expr[i])) {

op = expr[i];

op1 = result[--j];

op2 = expr[++i];

sprintf(temp, "T%d", tempCount++);

printf("%s = %c %c %c\n", temp, op1, op, op2);

result[j++] = temp[0];

}

i++;

}

}

int main() {

char expr[100];

printf("Enter an arithmetic expression (without parentheses, e.g., a+b\*c): ");

scanf("%s", expr);

printf("\nThree Address Code:\n");

generateTAC(expr);

return 0;

}

