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

**Program:**

#include <stdio.h>

#include <stdlib.h>

#include <string.h>

#define MAX 100

typedef struct {

char op[3];

char arg1[10];

char arg2[10];

char result[10];

} TAC;

TAC tac[MAX];

int tacIndex = 0;

void generateTAC(char \*op, char \*arg1, char \*arg2, char \*result) {

strcpy(tac[tacIndex].op, op);

strcpy(tac[tacIndex].arg1, arg1);

strcpy(tac[tacIndex].arg2, arg2);

strcpy(tac[tacIndex].result, result);

tacIndex++;

}

void printTAC() {

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

for (int i = 0; i < tacIndex; i++) {

printf("%s = %s %s %s\n", tac[i].result, tac[i].arg1, tac[i].op, tac[i].arg2);

}

}

int main() {

char input[100];

printf("Enter the input statement (e.g., a = b + c): ");

fgets(input, sizeof(input), stdin);

char var1[10], var2[10], var3[10], op[3], result[10];

sscanf(input, "%s = %s %s %s", result, var1, op, var2);

generateTAC(op, var1, var2, result);

printTAC();

return 0;

}

**Output:**

A screenshot of a computer

AI-generated content may be incorrect.