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

**#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;**

**}**

**A screenshot of a computer

AI-generated content may be incorrect.**