CSA1413- COMPILER DESIGN FOR INTERMEDIATE LANGUAGE

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The main function of the Intermediate code generation is producing three address code statements for a given input expression. The three address codes help in determining the sequence in which operations are actioned by the compiler. The key work of Intermediate code generators is to simplify the process of Code Generator. Write a C Program to Generate the Three address code representation for the given input statement.

PROGRAM:

```
#include <stdio.h>


int temp = 1;


void generate(char a, char b, char op) {
   printf("t%d = %c %c %c\n", temp, a, op, b);
   temp++;
}


int main() {
   char expr[20];
   printf("Enter expression (a+b*c): ");
   scanf("%s", expr);


   // Only works for single operator expressions like a+b, a*b+c, etc.
   for(int i=0; expr[i]!='\0'; i++) {
      if(expr[i]=='+' || expr[i]=='-' || expr[i]=='*' || expr[i]=='/') {
```

```
            generate(expr[i-1], expr[i+1], expr[i]);
        }
    }
    return 0;
}
```

OUTPUT: