

5. Design, develop and implement a C/Java program to generate the machine code using **Triples** for the statement  **$A = -B * (C + D)$**  whose intermediate code in three-address form:

```
#include<stdio.h>
#include<stdlib.h>
#include<ctype.h>
#include<string.h>
char op[2],arg1[5],arg2[5],result[5];
void main( ) {
    FILE *fp1,*fp2;
    fp1=fopen("input.txt","r");
    fp2=fopen("output.txt","w");

    while(!feof(fp1)) {
fscanf(fp1,"%s%s%s%s",result,arg1,op,arg2);
        if(strcmp(op,"+")==0) {
            fprintf(fp2,"\nMOV R0,%s",arg1);
            fprintf(fp2,"\nADD R0,%s",arg2);
            fprintf(fp2,"\nMOV %s,R0",result);
        }
        if(strcmp(op,"*")==0) {
            fprintf(fp2,"\nMOV R0,%s",arg1);
            fprintf(fp2,"\nMUL R0,%s",arg2);
            fprintf(fp2,"\nMOV %s,R0",result);
        }
        if(strcmp(op,"-")==0)
        {
            fprintf(fp2,"\nMOV R0,%s",arg1);
            fprintf(fp2,"\nSUB R0,%s",arg2);
            fprintf(fp2,"\nMOV %s,R0",result);
        }
        if(strcmp(op,"/")==0) {
            fprintf(fp2,"\nMOV R0,%s",arg1);
            fprintf(fp2,"\nDIV R0,%s",arg2);
            fprintf(fp2,"\nMOV %s,R0",result);
        }
        if(strcmp(op,"")==0) {
            fprintf(fp2,"\nMOV R0,%s",arg1);
            fprintf(fp2,"\nMOV %s,R0",result);
        }
    }
    fclose(fp1);
    fclose(fp2);
    getch();
}
```