

Experiment -18

Write a C program to implement the back end of the compiler.

Program:

```
#include<stdio.h>
#include<conio.h>
#include<string.h>
int main()
{
    int n,i,j;
    char a[50][50];
    printf("enter the no: intermediate code:");
    scanf("%d",&n);
    for(i=0;i<n;i++)
    {
        printf("enter the 3 address code:%d:",i+1);
        for(j=0;j<6;j++)
        {
            scanf("%c",&a[i][j]);
        }
    }
    printf("the generated code is:");
    for(i=0;i<n;i++)
    {
        printf("\n mov %c,R%d",a[i][3],i);
        if(a[i][4]=='-')
        {
            printf("\n sub %c,R%d",a[i][5],i);
        }
        if(a[i][4]=='+')
        {

```

```

        printf("\n add %c,R%d",a[i][5],i);
    }
    if(a[i][4]=='*')
    {
        printf("\n mul %c,R%d",a[i][5],i);
    }
    if(a[i][4]=='/')
    {
        printf("\n div %c,R%d",a[i][5],i);
    }
    printf("\n mov R%d,%c",i,a[i][1]);
    printf("\n");
}
return 0;
}

```

Output:

```

C:\Users\raksh\OneDrive\Doc  X + v
enter the no: intermediate code:2
enter the 3 address code:1:a=b+c
enter the 3 address code:2:d=n*d
the generated code is:
mov b,R0
add c,R0
mov R0,a

mov n,R1
mul d,R1
mov R1,d

-----
Process exited after 31.84 seconds with return value 0
Press any key to continue . . .

```