Input is label, mnemonic, temp value, operand…

Input.txt:-

```
SIMPLE START 0 –
- BALR 15 0
- USING * 15
LOOP L R1 TWO
- A R1 TWO
- ST R1 FOUR
- BNE LOOP -
- BR 14 -
R1 EQU 1 -
TWO DC F'2' -
FOUR DS 1F -
END - - -
```

Symtbl.txt:-

```
0       LOOP
1       R1
20      TWO
24      FOUR
```

Input.txt:-

```
JOHN START 0 -
- USING * 15
- L 1 FIVE
- A 1 FOUR
- ST 1 TEMP
FOUR DC F'4' -
FIVE DC F'5' -
TEMP DS 1F -
END - - -
```

Symtbl.txt:-

```
0 JOHN
12 FOUR
16 FIVE
20 TEMP
```

Program:-

```
#include<stdio.h>
#include<string.h>
int main()
{
    FILE *f1, *f2, *f3;

    f1=fopen("input.txt","r");
    f2=fopen("symtbl.txt","r");

    int br_value, lc_symtbl, offset;
    char lb[20], m1[20], temp[20], op[20], mot[2][2]={"L","A","ST","\0"},
symtbl[20], br[20]={0};

    fscanf(f1,"%s %s %s %s",lb,m1,temp,op);
    while(!feof(f1))
    {
        if(strcmp(m1,"USING")==0)
        {
            br_value=0;
            br[0]=op[0];
            br[1]=op[1];
            printf("Base register: %s\n",br);
            printf("Value: %d\n",br_value);
        }

        for(int i=0;i<4;i++)
        {
            fscanf(f2,"%d %s", &lc_symtbl, symtbl);
            if(strcmp(op,symtbl)==0)
            {
                printf("%s, 1, ",m1);
                offset=lc_symtbl-br_value;
                printf("%d(%d,%s)\n",offset,br_value,br);
            }
        }
        fseek(f2,0,SEEK_SET);
        fscanf(f1,"%s %s %s %s",lb,m1,temp,op);
    }
}
```