

PROGRAM

```
#include<stdio.h>
#include<stdlib.h>
#include<string.h>
int main(){
    char opcode[20],operand[20],symbol[20],label[20],code[20],mnemonic[25], character,
    add[20],objectcode[20];
    int flag,flag1,locctr,location,loc;
    FILE *fp1,*fp2,*fp3,*fp4;
    fp1 = fopen("out1.txt", "r");
    fp2 = fopen("twoout.txt", "w");
    fp3 = fopen("opcode.txt", "r");
    fp4 = fopen("sym.txt", "r");
    fscanf(fp1, "%s%s%s", label, opcode, operand);
    if(strcmp(opcode,"START")==0){
        fprintf(fp2, "%s\t%s\t%s\n", label, opcode, operand);
        fscanf(fp1, "%x%s%s%s", &locctr, label, opcode, operand);
    }
    while(strcmp(opcode, "END")!=0){
        flag=0;
        fscanf(fp3, "%s%s", code, mnemonic);
        while(strcmp(code,"END")!=0){
            if((strcmp(opcode,code)==0) && (strcmp(mnemonic, "")!=0)){
                flag=1;
                break;
            }
            fscanf(fp3, "%s%s", code, mnemonic);
        }
        if(flag==1){
            flag1=0; rewind(fp4);

            while(!feof(fp4)){

                fscanf(fp4, "%x%s", &locctr, symbol);
```

```

        if(strcmp(symbol,operand)==0){
            flag1=1; break;
        }
    }
    if(flag1==1){
        sprintf(add, "%x", locctr);
        strcpy(objectcode, strcat(mnemonic, add));
    }
}
else if(strcmp(opcode, "BYTE")==0 || strcmp(opcode, "WORD")==0){
    if((operand[0]=='C') || (operand[0]=='X')){
        character=operand[2];
        sprintf(add, "%d", character);
        strcpy(objectcode, add);
    }
    else{
        strcpy(objectcode, operand);
    }
}
else{
    strcpy(objectcode, "\0");
}
fprintf(fp2, "%s\t%s\t%s\t%x\t%s\n", label, opcode, operand, locctr, objectcode);
fscanf(fp1, "%x%s%s%s", &locctr, label, opcode, operand);
}

fprintf(fp2, "%s\t%s\t%s\t%x\n", label, opcode, operand, locctr);
fclose(fp1);
fclose(fp2);
fclose(fp3);
fclose(fp4);
}

```

SAMPLE INPUT

out1.txt

```
**      START    2000
2000  **          LDA      FIVE
2003  **          STA      ALPHA
2006  **          LDCH     CHARZ
2009  **          STCH     C1
200C  ALPHA  RESW      1
200F  FIVE    WORD     5
2012  CHARZ   BYTE     C'Z'
2013  C1      RESB      1
2014  **          END      **
```

sym.txt

```
200C  ALPHA
200F  FIVE
2012  CHARZ
2013  C1
```

opcode.txt

```
START  *
LDA     03
STA     0F
LDCH    53
STCH    57
END     *
```

SAMPLE OUTPUT

twoout.txt

```
**      START    2000
**      LDA      FIVE    200f  03200f
**      STA      ALPHA   200c  0F200c
**      LDCH     CHARZ   2012  532012
**      STCH     C1      2013  572013
```

ALPHA	RESW	1	200c	
FIVE	WORD	5	200f	5
CHARZ	BYTE	C'Z'	2012	90
C1	RESB	1	2013	
**	END	**	2014	