**PROGRAM**

#include<stdio.h>

#include<string.h>

void main()

{

FILE \*f1,\*f2,\*f3,\*f4;

char s[100],lab[30],opcode[30],opa[30],opcode1[30],opa1[30];

int locctr,x=0;

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

f2=fopen("opcode.txt","r");

f3=fopen("out1.txt","w");

f4=fopen("sym1.txt","w");

while(fscanf(f1,"%s%s%s",lab,opcode,opa)!=EOF)

{

if(strcmp(lab,"\*\*")==0)

{

if(strcmp(opcode,"START")==0)

{

fprintf(f3,"%s %s %s",lab,opcode,opa);

locctr=(atoi(opa));

}

else

{

rewind(f2);

x=0;

while(fscanf(f2,"%s%s",opcode1,opa1)!=EOF)

{

if(strcmp(opcode,opcode1)==0)

{

x=1;

}

}

if(x==1)

{

fprintf(f3,"\n %d %s %s %s",locctr,lab,opcode,opa);

locctr=locctr+3;

}

}

}

else

{

if(strcmp(opcode,"RESW")==0)

{

fprintf(f3,"\n %d %s %s %s",locctr,lab,opcode,opa);

fprintf(f4,"\n %d %s",locctr,lab);

locctr=locctr+(3\*(atoi(opa)));

}

else if(strcmp(opcode,"WORD")==0)

{

fprintf(f3,"\n %d %s %s %s",locctr,lab,opcode,opa);

fprintf(f4,"\n %d %s",locctr,lab);

locctr=locctr+3;

}

else if(strcmp(opcode,"BYTE")==0)

{

fprintf(f3,"\n %d %s %s %s",locctr,lab,opcode,opa);

fprintf(f4,"\n %d %s",locctr,lab);

locctr=locctr+1;

}

else if(strcmp(opcode,"RESB")==0)

{

fprintf(f3,"\n %d %s %s %s",locctr,lab,opcode,opa);

fprintf(f4,"\n %d %s",locctr,lab);

locctr=locctr+1;

}

else

{

fprintf(f3,"\n %d %s %s %s",locctr,lab,opcode,opa);

fprintf(f4,"\n %d %s",locctr,lab);

locctr=locctr+(atoi(opa));

}

}

}

}

**INPUT FILES**

**input.txt**

\*\* START 2000

\*\* LDA FIVE

\*\* STA ALPHA

\*\* LDCH CHARZ

\*\* STCH C1

ALPHA RESW 1

FIVE WORD 5

CHARZ BYTE C'Z'

C1 RESB 1

\*\* END \*\*

**opcode.txt**

START \*

LDA 03

STA 0F

LDCH 53

STCH 57

END

**OUTPUT FILES**

**out1.txt**

\*\* START 2000

2000 \*\* LDA FIVE

2003 \*\* STA ALPHA

2006 \*\* LDCH CHARZ

2009 \*\* STCH C1

2012 ALPHA RESW 1

2015 FIVE WORD 5

2018 CHARZ BYTE C'Z'

2019 C1 RESB 1

2020 \*\* END \*\*

**sym1.txt**

2012 ALPHA

2015 FIVE

2018 CHARZ

2019 C1