**Macro\_pass2**

#include<stdio.h>

#include<conio.h>

#include<string.h>

struct mnt

{

char mnm[50];

int index;

};

char instr[50][50]={"MOVEM AREG,#0","ADD AREG,#0","MEND"};

char arg[50][50]={"&ARG1"};

struct mnt mnt[40]={"ABC"};

char buff[50],temp[50];

void read(char,FILE \*);

void expand(int,FILE \*);

int main()

{

FILE \*fp,\*fp1;

int i,j,k,flag=0;

int mntc=1;

char ch;

fp=fopen("out.dat","r");

fp1=fopen("exp.dat","w");

printf("\n\n\t Input File\n");

printf("\n---------------Intermediate code-----------------");

while(!feof(fp))

{

ch=fgetc(fp);

printf("%c",ch);

}

rewind(fp);

do

{

i=0;

j=0;

read(getc(fp),fp);

while(buff[i]!=' ')

{

temp[j++]=buff[i++];

}

temp[j]='\0';

for(k=0;k<mntc;k++)

{

if(strcmp(temp,mnt[k].mnm)==0)

{

flag=1;

break;

}

}

if(flag==1)

{

expand(k,fp1);

flag=0;

}

else

{

fprintf(fp1,"\n%s",buff);

}

}

while(strcmp(buff,"END")!=0);

fclose(fp);

fclose(fp1);

fp1=fopen("exp.dat","r");

printf("\n-------------Expanded Code--------------");

while(!feof(fp1))

{

ch=fgetc(fp1);

printf("%c",ch);

}

fclose(fp1);

return 0;

}

//-------------------------------------------------------------------------

void read(char ch,FILE \*fp)

{

int i=0;

while(ch!='\n' && ch!=EOF)

{

buff[i++]=ch;

ch=getc(fp);

}

buff[i]='\0';

}

//-------------------------------------------------------------------------

void expand(int m,FILE \*fp1)

{

int j=0,k=0,mdti=0,r=0,i=0,argc=0;

char str[10],instrcat[20]="";

while(buff[i]!=' ')

{

temp[j++]=buff[i++];

}

temp[j]='\0';

while(buff[i]!='\0')

{

i++;j=0;

while(buff[i]!=',' && buff[i]!='\0')

{

temp[j++]=buff[i++];

}

temp[j]='\0';

strcpy(arg[argc],temp);

argc++;

}

mdti=mnt[m].index+1;

strcpy(buff,instr[mdti]);

do

{

i=0;

while(buff[i]!='\0')

{

j=0;

while(buff[i]!='\0' && buff[i]!=' ' && buff[i]!=',')

{

temp[j++]=buff[i++];

}

temp[j]='\0';

k=0;

if(temp[k]=='#')

{

k++;

r=temp[k]-48;

strcpy(temp,arg[r]);

}

strcat(instrcat,temp);

int k=0;

str[k++]=buff[i];

str[k]='\0';

strcat(instrcat,str);

if(buff[i]=='\0')

break;

i++;

}

fprintf(fp1,"\n%s",instrcat);

strcpy(buff,instr[++mdti]);

strcpy(instrcat,"");

}

while(strcmp(buff,"MEND")!=0);

}

//------------------------------------------------------------------------

/\*---------OUTPUT--------------

Input File

---------------Intermediate code-----------------

START 101

ABC N,ADD

COMP CREG,A

END

-------------Expanded Code--------------

START 101

MOVEM AREG,N

ADD CREG ='9'

COMP CREG,A

END

\*/





