**Macro Pass 1**

#include <stdio.h>

#include <string.h>

struct mnt

{

char mnm[50];

int index;

} mnt[50];

FILE \*fp, \*fp1, \*fp2, \*fp3;

int mntc = 0, mdtc = 0, flag = 0;

char instr[50][50];

char buff[50];

void read(char ch, FILE \*fp);

void callmac();

int main()

{

int i;

char ch;

fp = fopen("in.txt", "r");

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

fp2 = fopen("mdt.dat", "w");

fp3 = fopen("mnt.dat", "w");

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

printf("\n ======================================\n");

while ((ch = fgetc(fp)) != EOF)

{

printf("%c", ch);

}

fseek(fp, 0, SEEK\_SET);

do

{

read(fgetc(fp), fp);

if (strcmp(buff, "MACRO") != 0)

{

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

}

else

{

callmac();

}

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

printf("\n\n MNT TABLE");

printf("\n ======================================");

printf("\nMacro Name\tStarting index");

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

{

printf("\n %s\t \t%d", mnt[i].mnm, mnt[i].index);

}

printf("\n\n MDT TABLE");

printf("\n ======================================");

printf("\nopcode\t\tIndex\n");

for (i = 0; i < mdtc; i++)

{

printf("\n %s\t\t%d", instr[i], i);

}

fclose(fp);

fclose(fp1);

fclose(fp2);

fclose(fp3);

FILE \*fp1\_read = fopen("inter.dat", "r");

printf("\n \nIntermediate code");

printf("\n ======================================");

while ((ch = fgetc(fp1\_read)) != EOF)

{

printf("%c", ch);

}

fclose(fp1\_read);

fclose(fp1);

printf("\n");

return 0;

}

void read(char ch, FILE \*fp)

{

int i = 0;

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

{

buff[i++] = ch;

ch = fgetc(fp);

}

buff[i] = '\0';

}

void callmac()

{

read(fgetc(fp), fp);

strcpy(mnt[mntc].mnm, buff);

fprintf(fp3, "\n%s", buff);

mnt[mntc].index = mdtc;

mntc++;

strcpy(instr[mdtc], buff);

mdtc++;

do

{

read(fgetc(fp), fp);

strcpy(instr[mdtc], buff);

fprintf(fp2, "\n%s", buff);

mdtc++;

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

}











