**Exp 5**

**Input File:**

MACRO

INCR &M1,&M2,&M3

MOV &M1,&M2

ADD &M1,&M3

MOV &M1,&M2

MEND

MACRO

INCR1 &N1,&N2

MOV &N1,&N2

MEND

**Code:**

//program to print macro name table and argument list array

#include<stdio.h>

#include<stdlib.h>

#include<string.h>

#include<math.h>

#include<ctype.h>

void main()

{

int flag=0;

int op;

int count=0;

int v=0,i=0,j=0, k=0,d=0;

char c;

char m;

char arr[30]={0};

char mname[30]={0};

char arr1[30]={0};

char var[4]={0};

FILE \*fp,\*fp1,\*fp2,\*fp4;

fp=fopen("//home//etc//anand//macro\_src.c","r");

fp1=fopen("//home//etc//anand//macro\_dest.c","r");

fp2=fopen("//home//etc//anand//macro\_mnt.c","w");

fp4=fopen("//home//etc//anand//macro\_ala1.c","w");

fprintf(fp2,"\t\t\t\t\t\t Macro Name Table\n");

while(!feof(fp))

{

c=fgetc(fp);

while(isalpha(c))

{

arr[i]=c;

i++;

c=fgetc(fp);

}

//code to print macro name table

if(c=='\n')

count++;

arr[i]='\0';

i=0;

j=strcmp(arr,"MACRO");

if(j==0) //strcmp function return 0 if strings are equal

{

{

if(c=='\n')

c=fgetc(fp);

while(c!=' ')

{

mname[v]=c;

v++;

c=fgetc(fp);

}

mname[v]='\0';

v=0;

fprintf(fp2,"%s\t",mname);

fprintf(fp2,"%d\n",count);

c=fgetc(fp);

count++;

// code to print argument list array

if(c=='&')

{

c=fgetc(fp);

while(c!='\n')

{

var[v]=c;

if(var[v]=='&'||var[v]==',')

c=fgetc(fp);

v++;

c=fgetc(fp);

}

var[v]='\0';

v=0;

fprintf(fp4,"\n%s",var);

}

}

}

}

}

**Output:**

Macro Name Table

INCR 1

INCR1 7

M1,&M2,&M3

N1,&N2

**Code:**

//program to print macro definition table

#include<stdio.h>

#include<stdlib.h>

#include<string.h>

#include<math.h>

#include<ctype.h>

void main()

{

int count=0;

int v,i,j;

char c;

char arr[30];

FILE \*fp,\*fp1;

fp=fopen("//home//etc//anand//macro\_src.c","r");

fp1=fopen("//home//etc//anand//macro\_dest.c","w");

fprintf(fp1,"%d \t",0);

while(!feof(fp)) // to scan till the end of source file

{

c=fgetc(fp); // to increament file pointer

if(c!='\n') //to print lines one by one till it encounters '\n'

fprintf(fp1,"%c",c);

if(c=='\n')

{

fprintf(fp1,"\n %d",count+1);

fprintf(fp1,"\t");

count++;

}

}

}

**Output:**

0 MACRO

1 INCR &M1,&M2,&M3

2 MOV &M1,&M2

3 ADD &M1,&M3

4 MOV &M1,&M2

5 MEND

6 MACRO

7 INCR1 &N1,&N2

8 MOV &N1,&N2

9 MEND