

# EXPERIMENT-12

## IMPLEMENT A TWO PASS MACRO PROCESSOR

### PASS 1

## Source Code

```
#include<stdio.h>
#include<conio.h>
#include<string.h>
#include<stdlib.h>

void main(){
    FILE *f1,*f2,*f3;      char
    lab[10],mne[10],op[10];
    f1=fopen("input.txt","r");
    f2=fopen("dtab.txt","w");
    f3=fopen("ntab.txt","w");
    fscanf(f1,"%s%s%s",lab,mne,op);
    while(strcmp(mne,"MEND")){
        if(strcmp(mne,"MACRO")==0){
            fprintf(f2,"%s\t%s\n",lab,op);
            fprintf(f3,"%s\n",lab);
        }      else{
            fprintf(f2,"%s\t%s\n",mne,op);
        }
        fscanf(f1,"%s%s%s",lab,mne,op);
    }
    fprintf(f2,"%s\n",mne);
    fprintf(f3,"-\n",lab);
    printf("PASS 1 is successful");
    fclose(f1);      fclose(f2);
    fclose(f3);
}
```

## Source Code

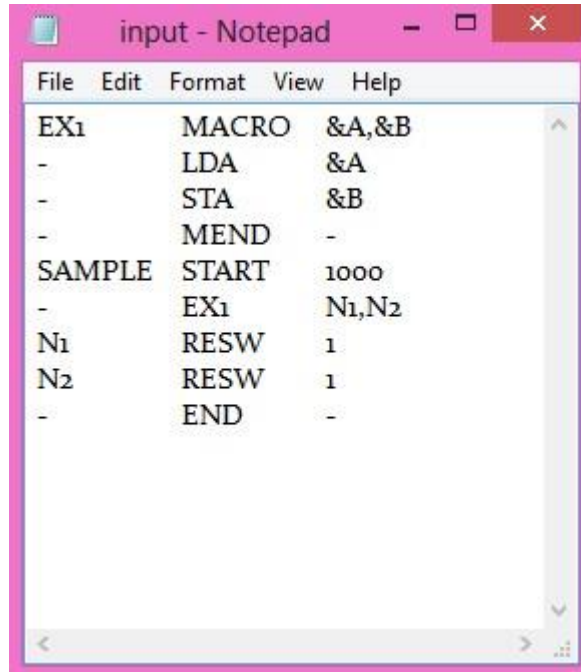
```
#include<stdio.h>
#include<conio.h>
#include<string.h>
#include<stdlib.h>
struct
argument{
    char arg[10],para[10];
}arg[10];
void main(){
    FILE *f1,*f2,*f3,*f4;    int flag=0,i=0,j;    char
lab[10],mne[10],op[10],macro[10],dmne[10],dop[10],temp1[10],temp2[10];
f1=fopen("input.txt","r");    f2=fopen("dtab.txt","r");
f3=fopen("ntab.txt","r");    f4=fopen("op.txt","w");
fscanf(f1,"%s%s%s",lab,mne,op);    while(strcmp(mne,"START")!=0)
fscanf(f1,"%s%s%s",lab,mne,op);    while(strcmp(mne,"END")!=0){
fscanf(f3,"%s",macro);    while(strcmp(macro,"-")!=0){
if(strcmp(mne,macro)==0){        flag=1;        break;
    }
    fscanf(f3,"%s",macro);
    }    rewind(f3);    if(flag){
fscanf(f2,"%s%s",dmne,dop);    while(strcmp(dmne,mne)!=0)
fscanf(f2,"%s%s",dmne,dop);    strcpy(temp1,dop);
strcpy(temp2,op);    for(char
*p=strtok(temp1,",");p!=NULL;p=strtok(NULL,",")){
strcpy(arg[i].para,p);        i++;        }
i=0;    for(char
*p=strtok(temp2,",");p!=NULL;p=strtok(NULL,",")){
strcpy(arg[i].arg,p);
```

```

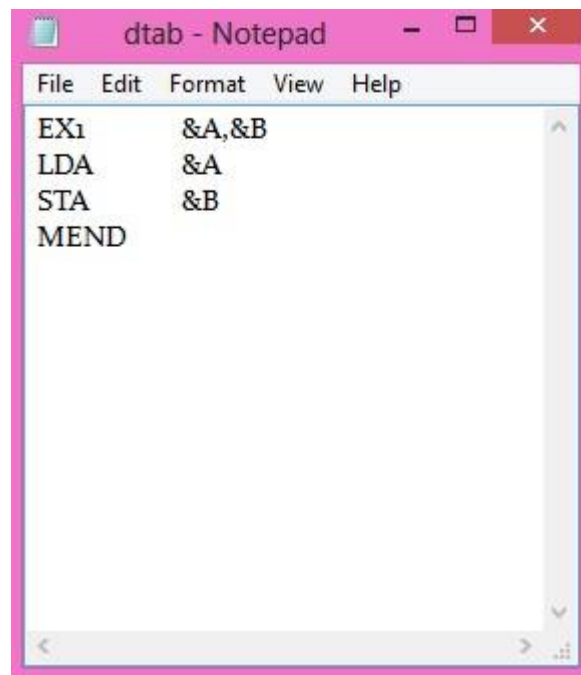
        i++;
    }
    fprintf(f4, "%s\t%s\t%s\n", lab, mne, op);
    fscanf(f2, "%s%s", dmne, dop);
    while(strcmp(dmne, "MEND") != 0){
        for(j=0; j<i; j++){
            if(strcmp(arg[j].para, dop) == 0){
                fprintf(f4, "-\t%s\t%s\n", dmne, arg[j].arg);
                break;
            }
        }
        fscanf(f2, "%s%s", dmne, dop);
    }
    rewind(f2);
    flag=0;
    i=0;
    } else{
        fprintf(f4, "%s\t%s\t%s\n", lab, mne, op);
    }
    fscanf(f1, "%s%s%s", lab, mne, op);
}
fprintf(f4, "%s\t%s\t%s\n", lab, mne, op);
fclose(f1);    fclose(f2);
fclose(f3);    fclose(f4);
printf("PASS 2 is successful");
}

```

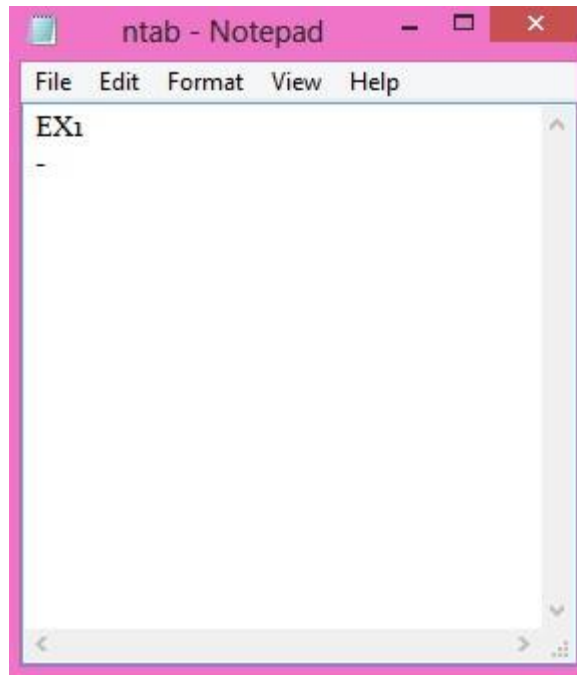
## Inputs & Outputs



```
File Edit Format View Help
EX1      MACRO  &A,&B
-        LDA    &A
-        STA    &B
-        MEND
SAMPLE   START  1000
-        EX1    N1,N2
N1       RESW   1
N2       RESW   1
-        END    -
```



```
File Edit Format View Help
EX1      &A,&B
LDA      &A
STA      &B
MEND
```

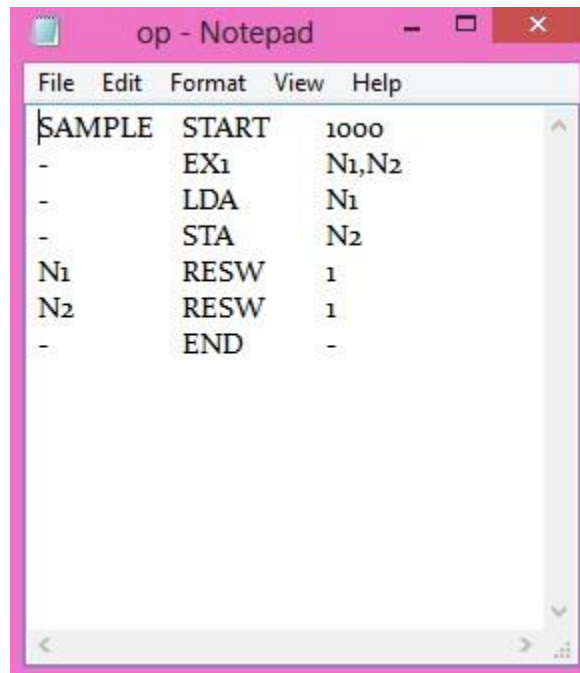


ntab - Notepad

File Edit Format View Help

EX1

-



op - Notepad

File Edit Format View Help

```
SAMPLE START 1000
- EX1 N1,N2
- LDA N1
- STA N2
N1 RESW 1
N2 RESW 1
- END -
```

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