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EXPERIMENT NO :- 01

PROGRAM:

```
#include<stdio.h>
#include<stdlib.h>
#include<string.h>
#include<ctype.h>
int isKeyword(char buffer[]){
	char keywords[32][10] = {"auto","break","case","char","const","continue","default",

	"do","double","else","enum","extern","float","for","goto",

	"if","int","long","register","return","short","signed",

	"sizeof","static","struct","switch","typedef","union",
                                                        "unsigned","void","volatile","while"};
	int i, flag = 0;

	for(i = 0; i < 32; ++i){
		if(strcmp(keywords[i], buffer) == 0){
			flag = 1;
			break;
		}
	}

	return flag;
}
int main(){
	char ch, buffer[15], operators[] = "+-*/%=";
	FILE *fp;
	int i,j=0;

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

	if(fp == NULL){
		printf("error while opening the file\n");
		exit(0);
```

```
        }

        while((ch = fgetc(fp)) != EOF){
                for(i = 0; i < 6; ++i){
                        if(ch == operators[i])
                                printf("%c is operator\n", ch);
                }

                if(isalnum(ch)){
                        buffer[j++] = ch;
                }
                else if((ch == ' ' || ch == '\n') && (j != 0)){
                                buffer[j] = '\0';
                                j = 0;

                                if(isKeyword(buffer) == 1)
                                        printf("%s is keyword\n", buffer);
                                else
                                        printf("%s is indentifier\n", buffer);
                }
                }

        fclose(fp);

        return 0;
}
```

Program.txt

```
Void main()
{
int a,b,c;
c=a+b;
}
```

OUTPUT:

```
void is keyword
main is identifier
int is keyword
a is identifier
b is identifier
c is identifier
c is identifier
= is operator
a is identifier
+ is operator
b is identifier
```

EXPERIMENT NO :- 02

PROGRAM

```
#include<stdio.h>
#include<stdlib.h>
#include<conio.h>
#include<string.h>
void main()
{
  FILE *f1,*f2,*f3,*f4,*f5;
  int lc,sa,i=0,j=0,m[10],pgmlen,len,k,len1,l=0;
  char name[10],opnd[10],la[10],mne[10],s1[10],mne1[10],opnd1[10];
  char lcs[10],ms[10];
 char sym[10],symaddr[10],obj1[10],obj2[10],s2[10],q[10],s3[10];
 clrscr();
 f1=fopen("input.txt","r");
 f2=fopen("optab.txt","r");
 f3=fopen("symtab.txt","w+");
 f4=fopen("symtab1.txt","w+");
 f5=fopen("output.txt","w+");
 fscanf(f1,"%s%s%s",la,mne,opnd);
 if(strcmp(mne,"START")==0)
{
   sa=atoi(opnd);
   strcpy(name,la);
   lc=sa;
}
strcpy(s1,"*");
fscanf(f1,"%s%s%s",la,mne,opnd);
while(strcmp(mne,"END")!=0)
{
  if(strcmp(la,"-")==0)
  {
    fscanf(f2,"%s%s",mne1,opnd1);
    while(!feof(f2))
    {
      if(strcmp(mne1,mne)==0)
      {
   m[i]=lc+1;
   fprintf(f3,"%s\t%s\n",opnd,s1);
   fprintf(f5,"%s\t0000\n",opnd1);
   lc=lc+3;
   i=i+1;
   break;
}
```

```
    else
  fscanf(f2,"%s%s",mne1,opnd1);
  } }
else
 {
  fseek(f3,SEEK_SET,0);
  fscanf(f3,"%s%s",sym,symaddr);
  while(!feof(f3))
  {
   if(strcmp(sym,la)==0)
   {
 itoa(lc,lcs,10);
 fprintf(f4,"%s\t%s\n",la,lcs);
 itoa(m[j],ms,10);
 j=j+1;
 fprintf(f5,"%s\t%s\n",ms,lcs);
 i=i+1;
 break;
   }
   else
 fscanf(f3,"%s%s",sym,symaddr);
 }  //f3
 if(strcmp(mne,"RESW")==0)
  lc=lc+3*atoi(opnd);
 else if(strcmp(mne,"BYTE")==0)
 {
  strcpy(s2,"-");
  len=strlen(opnd);
  lc=lc+len-2;
  for(k=2;k<len;k++)
  {
  q[l]=opnd[k];
  l=l+1;
  }
  fprintf(f5,"%s\t%s\n",q,s2);
  break;
 }
 else if(strcmp(mne,"RESB")==0)
  lc=lc+atoi(opnd);
 else if(strcmp(mne,"WORD")==0)
 {
   strcpy(s3,"#");
   lc=lc+3;
   fprintf(f5,"%s\t%s\n",opnd,s3);
   break;
```

```
   }
  } // else la=-
   fseek(f2,SEEK_SET,0);
   fscanf(f1,"%s%s%s",la,mne,opnd);
}
fseek(f5,SEEK_SET,0);
pgmlen=lc-sa;
printf("H^%s^%d^0%x\n",name,sa,pgmlen);
printf("T^");
printf("00%d^0%x",sa,pgmlen);
fscanf(f5,"%s%s",obj1,obj2);
while(!feof(f5))
{
  if(strcmp(obj2,"0000")==0)
    printf("^%s%s",obj1,obj2);
  else if(strcmp(obj2,"-")==0)
    {
    printf("^");
    len1=strlen(obj1);
    for(k=0;k<len1;k++)
    printf("%d",obj1[k]);
    }
    else if(strcmp(obj2,"#")==0)
    {
     printf("^");
     printf("%s",obj1);
     }
  fscanf(f5,"%s%s",obj1,obj2);
}
fseek(f5,SEEK_SET,0);
fscanf(f5,"%s%s",obj1,obj2);
while(!feof(f5))
{
 if(strcmp(obj2,"0000")!=0)
 {
   if(strcmp(obj2,"-")!=0)
   {
   if(strcmp(obj2,"#")!=0)
   {
    printf("\n");
    printf("T^%s^02^%s",obj1,obj2);
   } } }
  fscanf(f5,"%s%s",obj1,obj2);
 }
printf("\nE^00%d",sa);
```

```
getch();
}
```

Input.txt

```
COPY    START   1000
-       LDA     ALPHA
-       STA     BETA
ALPHA   RESW    1
BETA    RESW    1
-       END     -
```

Optab.txt

```
LDA     00
STA     23
LDCH    15
STCH    18
```

Symbtab.txt

```
ALPHA   *
BETA    *
ALPHA   1006
BETA    1009
```

Output.txt

```
00      0000
23      0000
1001    1006
1004    1009
```

Result.txt

```
H^COPY^1000^0c
T^001000^0c^000000^230000
T^1001^02^1006
T^1004^02^1009
E^001000
```

EXPERIMENT NO :- 03

```
#include<stdio.h>
#include<conio.h>
#include<string.h>
void main()
{
FILE *f1,*f2,*f3,*f4;
int lc,sa,l,op1,o,len;
char m1[20],la[20],op[20],otp[20];
clrscr();
f1=fopen("input.txt","r");
f3=fopen("symtab.txt","w");
fscanf(f1,"%s %s %d",la,m1,&op1);
if(strcmp(m1,"START")==0)
{
 sa=op1;
 lc=sa;
 printf("\t%s\t%s\t%d\n",la,m1,op1);
 }
 else
 lc=0;
fscanf(f1,"%s %s",la,m1);
while(!feof(f1))
{
 fscanf(f1,"%s",op);
 printf("\n%d\t%s\t%s\t%s\n",lc,la,m1,op);
 if(strcmp(la,"-")!=0)
 {
 fprintf(f3,"\n%d\t%s\n",lc,la);
 }
 f2=fopen("optab.txt","r");
 fscanf(f2,"%s %d",otp,&o);
 while(!feof(f2))
 {
  if(strcmp(m1,otp)==0)
  {
    lc=lc+3;
    break;
  }
  fscanf(f2,"%s %d",otp,&o);
  }
  fclose(f2);
  if(strcmp(m1,"WORD")==0)
    {
   lc=lc+3;
   }
   else if(strcmp(m1,"RESW")==0)
   {
    op1=atoi(op);
 lc=lc+(3*op1);
    }
    else if(strcmp(m1,"BYTE")==0)
```

```
{
if(op[0]=='X')
  lc=lc+1;
  else
  {
  len=strlen(op)-2;
  lc=lc+len;}
}
else if(strcmp(m1,"RESB")==0)
{
 op1=atoi(op);
 lc=lc+op1;
 }
fscanf(f1,"%s%s",la,m1);
}
if(strcmp(m1,"END")==0)
{
printf("Program length =\n%d",lc-sa);
}
fclose(f1);
fclose(f3);
getch();
}
```

Input.txt

```
COPY   START 1000
-      LDA   ALPHA
-      ADD   ONE
-      SUB   TWO
-      STA   BETA
ALPHA        BYTE  C'KLNCE
ONE    RESB  2
TWO    WORD  5
BETA   RESW  1
-      END   -
```

Optab.txt

```
LDA   00
STA   23
ADD   01
SUB   05
```

Symtab.txt

```
1009   ALPHA
1014   ONE
1016   TWO
1019   BETA
```

Result

```
COPY    START   1000

1000   -     LDA    ALPHA

1003   -     ADD    ONE
```

```
1006  -      SUB     TWO
1006  -      STA     BETA
1009  ALPHA  BYTE    C'KLNCE
1014  ONE    RESB    2
1016  TWO    WORD    5
1019  BETA   RESW    1
1022  -      END     -    Program length = 22
```

EXPERIMENT NO :- 04

PROGRAM:

```
#include<stdio.h>
#include<stdlib.h>
#include<string.h>
struct table
{
char var[10];
int value;
};
struct table tb1[20];
int i,j,n;
void create();
void modify();
int search(char variable[],int n);
void insert();
void display();
void main(){
int ch,result=0;
char v[10];

do{
printf("\n\n1.CREATE\n2.INSERT\n3.MODIFY\n4.SEARCH\n5.DISPLAY\n6.EXIT:\t");
scanf("%d",&ch);
switch(ch)
{
```

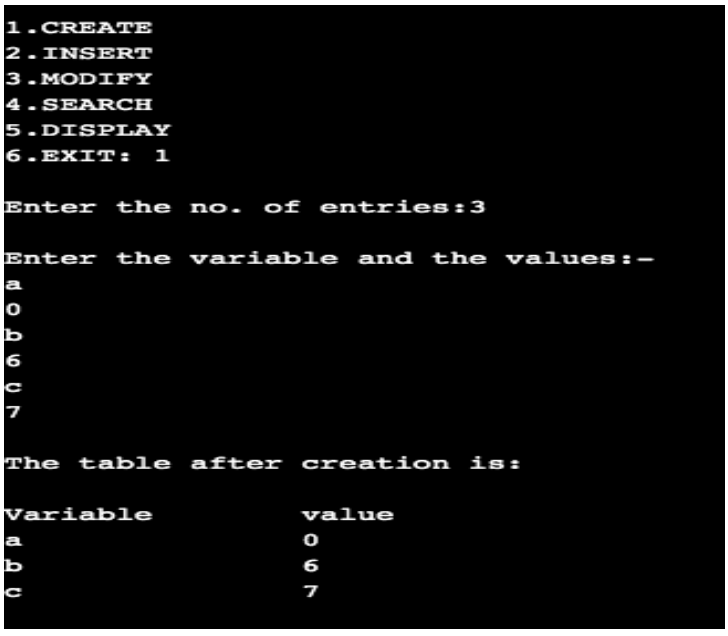
```
case 1:create(); break;


case 2:insert(); break;

case 3:modify(); break;

case 4:printf("\nEnter the variable to be searched:"); scanf("%s",&v);

result=search(v,n);

if(result==0)

printf("\nThe variable is not present\n"); else

printf("\nThe location of the variable is %d \n The value of %s is
%d.",result,tb1[result].var,tb1[result].value);

break;

case 5:display(); break;

case 6:exit(1);

}

}while(ch!=6);


}

void create(){

printf("\nEnter the no. of entries:"); scanf("%d",&n);

printf("\nEnter the variable and the values:-\n");

for(i=1;i<=n;i++) {

scanf("%s%d",tb1[i].var,&tb1[i].value);

check:

if(tb1[i].var[0]>='0' && tb1[i].var[0]<='9') {

printf("\nVariable should start with alphabet\nEnter correct name\n");

scanf("%s%d",tb1[i].var,&tb1[i].value);

goto check;

}
```

```
check1:


for(j=1;j<i;j++) {
if(strcmp(tb1[i].var,tb1[j].var)==0) {
printf("\nThe variable already present. Enter another:");
scanf("%s%d",&tb1[i].var,&tb1[i].value);
goto check1;
} } }
printf("\nThe table after creation is:\n");
display();
}
void insert() {
if(i>=20)
printf("\nCannot insert.table is full\n");
else {
n++;
printf("\nEnter the variable and the value:");
scanf("%s%d",&tb1[n].var,&tb1[n].value); check:


if(tb1[i].var[0]>='0' && tb1[i].var[0]<='9'){
printf("\nVariable should start with alphabet\nEnter correct name\n");
scanf("%s%d",tb1[i].var,&tb1[i].value);
goto check;
}
check1:
for(j=1;j<n;j++){
if(strcmp(tb1[j].var,tb1[i].var)==0){
printf("\nThe variable already present. Enter another:");
```

```
scanf("%s%d",&tb1[i].var,&tb1[i].value);


goto check1;

}

}

printf("\nThe table after insertion is:"); display();

}

}

void modify()

{

char variable[10]; int result=0;

printf("\nEnter the variable to be modified:");

scanf("%s",&variable); result=search(variable,n);

if(result==0)

printf("%s not present\n",variable);\

else{

printf("\nThe current value of the variable %s is %d.\nEnter the new variable and its
value",tb1[result].var,tb1[result].value);

scanf("%s%d",tb1[result].var,&tb1[result].value);

check:

if(tb1[i].var[0]>='0' && tb1[i].var[0]<='9'){

printf("\nVariable should start with alphabet\nEnter correct name\n");

scanf("%s%d",tb1[i].var,&tb1[i].value);

goto check;

}

}

printf("\nThe table after modification is:"); display();

}
```

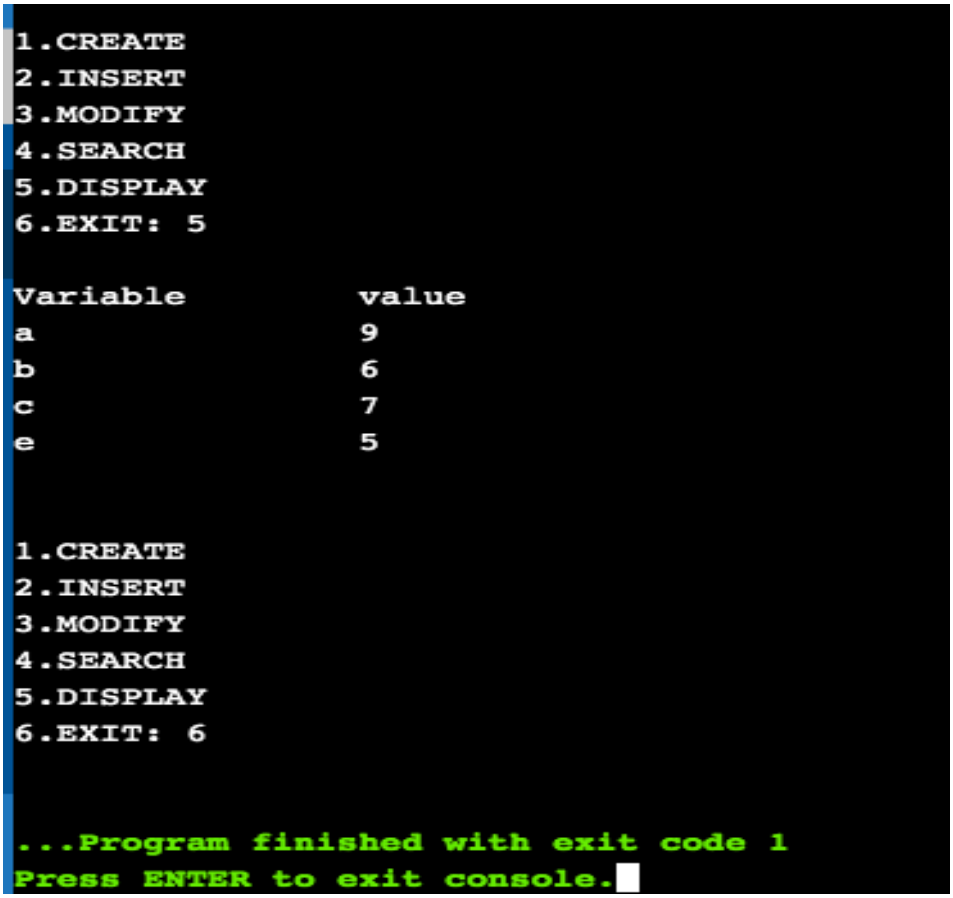
```
int search(char variable[],int n){

int flag; for(i=1;i<=n;i++)

if(strcmp(tb1[i].var,variable)==0){

flag=1;

break;

}

if(flag==1)

return i;

else

return 0;

}


void display(){

printf("\nVariable\tvalue\n");

for(i=1;i<=n;i++)

printf("%s\t\t%d\n",tb1[i].var,tb1[i].value);

}
```

OUTPUT:



```
1.CREATE
2.INSERT
3.MODIFY
4.SEARCH
5.DISPLAY
6.EXIT: 2

Enter the variable and the value:e
5

The table after insertion is:
Variable        value
a               0
b               6
c               7
e               5
```

```
1.CREATE
2.INSERT
3.MODIFY
4.SEARCH
5.DISPLAY
6.EXIT: 3

Enter the variable to be modified:a

The current value of the variable a is 0.
Enter the new variable and its valuea
9

The table after modification is:
Variable        value
a               9
b               6
c               7
e               5


1.CREATE
2.INSERT
3.MODIFY
4.SEARCH
5.DISPLAY
6.EXIT: 4

Enter the variable to be searched:c

The location of the variable is 3
 The value of c is 7.
```


1.CREATE
2.INSERT
3.MODIFY
4.SEARCH
5.DISPLAY
6.EXIT: 5
Variable value
a 9
b 6
c 7
e 5
1.CREATE
2.INSERT
3.MODIFY
4.SEARCH
5.DISPLAY
6.EXIT: 6
...Program finished with exit code 1
Press ENTER to exit console.

EXPERIMENT NO :- 05

```
#include<stdio.h>
#include<conio.h>
#include<process.h>
int i,j,ec,fg,ec2;
char fn[20],e,c;
FILE *fp1,*fp2,*fp;
void Create();
void Append();
void Delete();
void Display();
void main()
{
 do {
  clrscr();
  printf("\n\t\t***** TEXT EDITOR *****");
  printf("\n\n\tMENU:\n\t-----\n ");
  printf("\n\t1.CREATE\n\t2.DISPLAY\n\t3.APPEND\n\t4.DELETE\n\t5.EXIT\n");
  printf("\n\tEnter your choice: ");
  scanf("%d",&ec);
  switch(ec)
  {
   case 1:
     Create();
     break;
   case 2:
     Display();
     break;
   case 3:
     Append();
     break;
   case 4:
     Delete();
     break;
   case 5:
     exit(0);
  }
 }while(1);
}
void Create()
{
 fp1=fopen("temp.txt","w");
 printf("\n\tEnter the text and press '.' to save\n\n\t");
 while(1)
```

```
 {
  c=getchar();
  fputc(c,fp1);
  if(c == '.')
  {
   fclose(fp1);
   printf("\n\tEnter then new filename: ");
   scanf("%s",fn);
   fp1=fopen("temp.txt","r");
   fp2=fopen(fn,"w");
   while(!feof(fp1))
   {
    c=getc(fp1);
    putc(c,fp2);
   }
   fclose(fp2);
   break;
  }}
}
void Display()
{
  printf("\n\tEnter the file name: ");
  scanf("%s",fn);
  fp1=fopen(fn,"r");
  if(fp1==NULL)
  {
   printf("\n\tFile not found!");
   goto end1;
  }
  while(!feof(fp1))
  {
   c=getc(fp1);
   printf("%c",c);
  }
end1:
  fclose(fp1);
  printf("\n\n\tPress any key to continue...");
  getch();
}
void Delete()
{
  printf("\n\tEnter the file name: ");
  scanf("%s",fn);
  fp1=fopen(fn,"r");
  if(fp1==NULL)
  {
   printf("\n\tFile not found!");
```

```
  goto end2;
  }
  fclose(fp1);
  if(remove(fn)==0)
  {
   printf("\n\n\tFile has been deleted successfully!");
   goto end2;
  }
  else
   printf("\n\tError!\n");
end2: printf("\n\n\tPress any key to continue...");
  getch();
}
void Append()
{
  printf("\n\tEnter the file name: ");
  scanf("%s",fn);
  fp1=fopen(fn,"r");
  if(fp1==NULL)
  {
   printf("\n\tFile not found!");
   goto end3;
  }
  while(!feof(fp1))
  {
   c=getc(fp1);
   printf("%c",c);
  }
  fclose(fp1);
  printf("\n\tType the text and press 'Ctrl+S' to append.\n");
  fp1=fopen(fn,"a");
  while(1)
  {
   c=getch();
   if(c==19)
    goto end3;
   if(c==13)
   {
    c='\n';
    printf("\n\t");
    fputc(c,fp1);
   }
   else
   {
    printf("%c",c);
    fputc(c,fp1);
   }
```

```
  }
end3: fclose(fp1);
  getch();
}
```

OUTPUT:

```
            ***** TEXT EDITOR *****

      MENU:
      -----

      1.CREATE
      2.DISPLAY
      3.APPEND
      4.DELETE
      5.EXIT

      Enter your choice: 1
Enter the text and press '.' to save
Pansare Hrutik from Computer Department.
Enter then new filename: Personal Deatils

            ***** TEXT EDITOR *****

      MENU:
      -----

      1.CREATE
      2.DISPLAY
      3.APPEND
      4.DELETE
      5.EXIT

      Enter your choice: 2
Enter the file name: Personal Details
Pansare Hrutik from Computer Department.
Press any key to continue...

            ***** TEXT EDITOR *****

      MENU:
      -----

      1.CREATE
      2.DISPLAY
      3.APPEND
      4.DELETE
      5.EXIT
```

Enter your choice: 3
Enter the filename: Personal Deatails
Pansare Hrutik from Computer Department.
Type the text and press 'Ctrl+S' to append.
Bearing UID number 119CP3276A

***** TEXT EDITOR *****

MENU:

1.CREATE
2.DISPLAY
3.APPEND
4.DELETE
5.EXIT

Enter your choice: 2
Enter the file name: Personal Details
Pansare Hrutik from Computer Department. Bearing UID number 119CP3276A

Press any key to continue...

***** TEXT EDITOR *****

MENU:

1.CREATE
2.DISPLAY
3.APPEND
4.DELETE
5.EXIT

Enter your choice: 4
Enter the file name: Personal Details
File has been deleted successfully!
Press any key to continue...

***** TEXT EDITOR *****

EXPERIMENT NO :- 06

PROGRAM

```
#include<stdio.h>
#include<conio.h>
#include<string.h>
#include<stdlib.h>
public static void pfile(String str[])
{
File *fptr;
Char c;
fptr=fopen("str","r");
printf("\n\n \t\t %s",str);
if (fptr == NULL)
{
printf("Cannot open file \t %s",str);
exit(0);
}
c = fgetc(fptr);
while (c != EOF)
{
printf ("%c", c);
c = fgetc(fptr);
}
}
void main()
{
FILE *f1,*f2,*f3,*f4,*f5,;
int len,i,pos=1;
char arg[20],mne[20],opnd[20],la[20],name[20],mne1[20],opnd1[20],pos1[10],pos2[10],name[20];
clrscr();
f1=fopen("input.txt","r");
f2=fopen("namtab.txt","w+");
f3=fopen("deftab.txt","w+");
f4=fopen("argtab.txt","w+");
f5=fopen("op.txt","w+");
fscanf(f1,"%s%s%s",la,mne,opnd);
while(strcmp(mne,"END")!=0)
{
if(strcmp(mne,"MACRO")==0)
{
fprintf(f2,"%s\n",la);
fseek(f2,SEEK_SET,0);
fprintf(f3,"%s\t%s\n",la,opnd);
fscanf(f1,"%s%s%s",la,mne,opnd);
while(strcmp(mne,"MEND")!=0)
{
if(opnd[0]=='&')
{
```

```
itoa(pos,pos1,5);
strcpy(pos2,"?");
strcpy(opnd,strcat(pos2,pos1));
pos=pos+1;
}
fprintf(f3,"%s\t%s\n",mne,opnd);
fscanf(f1,"%s%s%s",la,mne,opnd);
}
fprintf(f3,"%s",mne);
}
else
{
fscanf(f2,"%s",name);
if(strcmp(mne,name)==0)
{
len=strlen(opnd);
for(i=0;i<len;i++)
{
if(opnd[i]!=',')
fprintf(f4,"%c",opnd[i]);
else
fprintf(f4,"\n");
}
fseek(f3,SEEK_SET,0);
fseek(f4,SEEK_SET,0);
fscanf(f3,"%s%s",mne1,opnd1);
fprintf(f5,".\t%s\t%s\n",mne1,opnd);
fscanf(f3,"%s%s",mne1,opnd1);
while(strcmp(mne1,"MEND")!=0)
{
if((opnd[0]=='?'))
{
fscanf(f4,"%s",arg);
fprintf(f5,"-\t%s\t%s\n",mne1,arg);
}
else
fprintf(f5,"-\t%s\t%s\n",mne1,opnd1);
fscanf(f3,"%s%s",mne1,opnd1);
}
}
else
fprintf(f5,"%s\t%s\t%s\n",la,mne,opnd);
}
fscanf(f1,"%s%s%s",la,mne,opnd);
}
fprintf(f5,"%s\t%s\t%s",la,mne,opnd);
fclose(f1);
pfile("namtab.txt");
fclose(f2);
pfile("deftab.txt");
fclose(f3);
```

```
pfile("argtab.txt");
fclose(f4);
pfile("optab.txt");
fclose(f5);
printf("files to be viewed \n");
printf("1. argtab.txt\n");
printf("2. namtab.txt\n");
printf("3. deftab.txt\n");
printf("4. op.txt\n");
getch();
}
```

Input.txt

```
EX1 MACRO &A,&B
- LDA &A
- STA &B
- MEND -
SAMPLE START 1000
- EX1 N1,N2
N1 RESW 1
N2 RESW 1
- END –
```

```
 SINGLE PASS MACRO-PROCESOR HAS BEEN SUCCESSFULLY DONE!

                namtab.txt
EX1


                deftab.txt
EX1     &A,&B
LDA     ?1
STA     ?2
MEND

                argtab.txt
N1
N2

                op.txt
SAMPLE  START   1000
.       EX1     N1,N2
-       LDA     ?1
-       STA     ?2
N1      RESW    1
N2      RESW    1
-       END     -
```

EXPERIMENT NO :- 07

LEX

```
%{
        #include<stdio.h>
%}
%%
ECHO;
\nECHO;
%%
int yywrap()
{
return 1;
}
main(){
        printf("ENTER THE STRING :");
yylex();
}
```

OUTPUT:

In cmd:

```
PS C:\Flex Windows\Lex\bin> lex exp7.l
PS C:\Flex Windows\Lex\bin> gcc lex.yy.c
PS C:\Flex Windows\Lex\bin> a.exe
ENTER THE STRING :PANSARE
PANSARE
```

YACC

```
%{
#include<stdio.h>
int Upper=0;
int Lower=0;
%}
%%
[A-Z] {printf("UPPERCASE\t");Upper++;}
[a-z] {printf("LOWERCASE\t");Lower++;}
%%
int yywrap(){
        return 0;
}
main(){
        printf("ENTER A STRING : ");
        yylex();
        printf("UPPERCASE=%d and LOWERCASE=%d",Upper,Lower);

}
```

OUTPUT:

In cmd:

```
PS C:\Flex Windows\gcc\bin> lex exp7.y
PS C:\Flex Windows\gcc\bin> gcc lex.yy.c
PS C:\Flex Windows\gcc\bin> a.exe
ENTER A STRING : PansaRE
UPPERCASE   LOWERCASE    LOWERCASE    LOWERCASE   LOWERCASE    UPPERCASE     UPPERCASE
```

EXPERIMENT NO :- 08

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

struct three
{
char data[10],temp[7];
}s[30];
void main()
{
char d1[7],d2[7]="t";
int i=0,j=1,len=0;
FILE *f1,*f2;
clrscr();
f1=fopen("sum.txt","r");
f2=fopen("out.txt","w");
while(fscanf(f1,"%s",s[len].data)!=EOF)
len++;
itoa(j,d1,7);
strcat(d2,d1);
strcpy(s[j].temp,d2);
strcpy(d1,"");
strcpy(d2,"t");
if(!strcmp(s[3].data,"+"))
{
fprintf(f2,"%s=%s+%s",s[j].temp,s[i+2].data,s[i+4].data);
j++;
}
else if(!strcmp(s[3].data,"-"))
{
fprintf(f2,"%s=%s-%s",s[j].temp,s[i+2].data,s[i+4].data);
j++;
}
for(i=4;i<len-2;i+=2)
{
itoa(j,d1,7);
strcat(d2,d1);
strcpy(s[j].temp,d2);
if(!strcmp(s[i+1].data,"+"))
fprintf(f2,"\n%s=%s+%s",s[j].temp,s[j-1].temp,s[i+2].data);
else if(!strcmp(s[i+1].data,"-"))
```

```
fprintf(f2,"\n%s=%s-%s",s[j].temp,s[j-1].temp,s[i+2].data);
strcpy(d1,"");
strcpy(d2,"t");
j++;
}
fprintf(f2,"\n%s=%s",s[0].data,s[j-1].temp);
fclose(f1);
fclose(f2);
getch();
}
```

Input: sum.txt

```
out = in1 + in2 + in3 - in4
```

Output :

out.txt

```
t1=in1+in2
t2=t1+in3
t3=t2-in4
out=t3
```

EXPERIMENT NO :- 09

INPUT:

```
#include<stdio.h>
int main()
{
 int a,b,c;
 a=45;
 b=25;
 c=a+b;
 printf("Sum %d",c);
 return 0;
}
```

COMMAND:

```
C:\TURBOC3\BIN>exp9spcc.c
C:\TURBOC3\BIN>gcc -S -o exp9spcc.asm exp9spcc.c
C:\TURBOC3\BIN>exp9spcc.asm
C:\TURBOC3\BIN>gcc -S -O -o exp9spcc.asm exp9spcc.c
C:\TURBOC3\BIN>exp9spcc.asm
```

OUTPUT:-

```
1:=     .file   "exp9spcc.c"
        .text
        .def    ___main;        .scl    2;      .type   32;     .endef
        .section .rdata,"dr"
LC0:
        .ascii "Sum %d\0"
        .text
        .globl  _main
        .def    _main;  .scl    2;      .type   32;     .endef
_main:
LFB11:
        .cfi_startproc
        pushl   %ebp
        .cfi_def_cfa_offset 8
        .cfi_offset 5, -8
        movl    %esp, %ebp
        .cfi_def_cfa_register 5
        andl    $-16, %esp
        subl    $32, %esp
        call    ___main
        movl    $45, 28(%esp)
        movl    $25, 24(%esp)
        movl    28(%esp), %edx
        movl    24(%esp), %eax
        addl    %edx, %eax
```

```
        movl    %eax, 20(%esp)
        movl    20(%esp), %eax
        movl    %eax, 4(%esp)


movl    $LC0, (%esp)
        call    _printf
        movl    $0, %eax
        leave
        .cfi_restore 5
        .cfi_def_cfa 4, 4
        ret
        .cfi_endproc
LFE11:
        .ident  "GCC: (MinGW.org GCC-8.2.0-3) 8.2.0"
        .def    _printf; .scl   2;      .type   32;     .endef



2:=     .file   "exp9spcc.c"
        .text
        .def    ___main;        .scl    2;      .type   32;     .endef
        .section .rdata,"dr"
LC0:
        .ascii "Sum %d\0"
        .text
        .globl  _main
        .def    _main;  .scl    2;      .type   32;     .endef
_main:
LFB13:
        .cfi_startproc
        pushl   %ebp
        .cfi_def_cfa_offset 8
        .cfi_offset 5, -8
        movl    %esp, %ebp
        .cfi_def_cfa_register 5
        andl    $-16, %esp
        subl    $16, %esp
        call    ___main
        movl    $70, 4(%esp)
        movl    $LC0, (%esp)
        call    _printf
        movl    $0, %eax
        leave
        .cfi_restore 5
        .cfi_def_cfa 4, 4
        ret
        .cfi_endproc
LFE13:
        .ident  "GCC: (MinGW.org GCC-8.2.0-3) 8.2.0"
        .def    _printf; .scl   2;      .type   32;     .endef
```