

3. ignore redundant spaces, tabs, and ignore comments.

```
#include<string.h>

#include<ctype.h>

#include<stdio.h>

void keyword(char str[10])

{

if(strcmp("for",str)==0 || strcmp("while",str)==0 || strcmp("do",str)==0 ||

strcmp("int",str)==0 || strcmp("float",str)==0 || strcmp("char",str)==0 || strcmp("double",str)=

=0 ||

strcmp("static",str)==0 || strcmp("switch",str)==0 || strcmp("case",str)==0)

printf("\n%s is a keyword",str);

else

printf("\n%s is an identifier",str);

}

main()

{

FILE *f1,*f2,*f3;

char c,str[10],st1[10];

int num[100],lineno=0,tokenvalue=0,i=0,j=0,k=0;

printf("\nEnter the c program");/*gets(st1);*/

f1=fopen("input","w");

while((c=getchar())!=EOF)

putc(c,f1);

fclose(f1);

f1=fopen("input","r");

f2=fopen("identifier","w");

f3=fopen("specialchar","w");

while((c=getc(f1))!=EOF){

if(isdigit(c))
```

```

{
tokenvalue=c-'0';
c=getc(f1);
while(isdigit(c)){
tokenvalue*=10+c-'0';
c=getc(f1);
}
num[i++]=tokenvalue;
ungetc(c,f1);
}
else if(isalpha(c))
{
putc(c,f2);
c=getc(f1);
while(isdigit(c) || isalpha(c) || c=='_' || c=='$')
{
putc(c,f2);
c=getc(f1);
}
putc(' ',f2);
ungetc(c,f1);
}
else if(c==' ' || c=='\t')
printf(" ");
else
if(c=='\n')
lineno++;
else
putc(c,f3);

```

```

}
fclose(f2);
fclose(f3);
fclose(f1);
printf("\nThe no's in the program are");
for(j=0;j<i;j++)
printf("%d",num[j]);
printf("\n");
f2=fopen("identifier","r");
k=0;
printf("The keywords and identifiers are:");
while((c=getc(f2))!=EOF){
if(c!=' ')
str[k++]=c;
else
{
str[k]='\0';
keyword(str);
k=0;
}
}
fclose(f2);
f3=fopen("specialchar","r");
printf("\nSpecial characters are");
while((c=getc(f3))!=EOF)
printf("%c",c);
printf("\n");
fclose(f3);
printf("Total no. of lines are:%d",lineno);

```

}

OUTPUT;

```
Enter the c program$ for termination:
{
int a[3],t1,t2;
t1=2; a[0]=1; a[1]=2; a[t1]=3;
t2=-(a[2]+t1*6)/(a[2]-t1);
if t2>5 then
print(t2);
else {
int t3;
t3=99;
t2=-25;
print(-t1+t2*t3); /* this is a comment on 2 lines */
} endif
}
(ctrl+z)
^Z
```

The no's in the program are 32011232625171302

The keywords and identifiers are:

```
for is a keyword
termination is an identifier
int is a keyword
a is an identifier
t1 is an identifier
t2 is an identifier
t1 is an identifier
a is an identifier
a is an identifier
a is an identifier
t1 is an identifier
t2 is an identifier
a is an identifier
t1 is an identifier
a is an identifier
t1 is an identifier
if is an identifier
t2 is an identifier
then is an identifier
print is an identifier
t2 is an identifier
else is an identifier
int is a keyword
t3 is an identifier
t3 is an identifier
t2 is an identifier
print is an identifier
t1 is an identifier
t2 is an identifier
```