

/*Program to count no of:

a) +ve and –ve integers

b) +ve and –ve fractions*/

```
%{
    int postiveno=0;
    int negtiveno=0;
    int positivefractions=0;
    int negativefractions=0;
}%

DIGIT [0-9]
%%

\+?\{DIGIT\}+    postiveno++;
-\{DIGIT\}+      negtiveno++;

\+?\{DIGIT\}*\.\{DIGIT\}+    positivefractions++;
-\{DIGIT\}*\.\{DIGIT\}+      negativefractions++;
.;
%%

main()
{
    yylex();
    printf("\nNo. of positive numbers: %d",postiveno);
    printf("\nNo. of Negative numbers: %d",negtiveno);
    printf("\nNo. of Positive fractions: %d",positivefractions);
    printf("\nNo. of Negative fractions: %d\n",negativefractions);
}
```

/*Program to count the number of characters, words, spaces, end of lines in a given input file.*/

```
%{
#include<stdio.h>
int lines=0, words=0,s_letters=0,c_letters=0, num=0, spl_char=0,total=0;
}%

/*end of defination*/

%%

/* the printf of the rules can be written without {} if its a single variable*/
\n { lines++; words++;}
```

```

[\t ' ' ] words++;
[A-Z] c_letters++;
[a-z] s_letters++;
[0-9] num++;
. spl_char++;
%%
//c code

main(void)
{
yyin= fopen("2.l","r");      /* You can use different methods to input file*/
yylex();
total=s_letters+c_letters+num+spl_char;
printf(" This File contains ...");
printf("\n\t%d lines", lines);
printf("\n\t%d words",words);
printf("\n\t%d small letters", s_letters);
printf("\n\t%d capital letters",c_letters);
printf("\n\t%d digits", num);
printf("\n\t%d special characters",spl_char);
printf("\n\tIn total %d characters.\n",total);
}
int yywrap()
{
return(1);
}
/*optional*/

```

Write a Lex program to count the number of vowels and consonants in a given string.

```

%{
#include<stdio.h>
int vowels=0;
int cons=0;
%}
%%
[aeiouAEIOU] {vowels++;}
[a-zA-Z] {cons++;}
%%
int yywrap()
{
return 1;
}

```

```

main()
{
printf("Enter the string.. at end press ^d\n");
yylex();
printf("No of vowels=%d\nNo of consonants=%d\n", vowels,cons);
}

```

LEX Program to scan for even and odd numbers

```

%{

/*
1.Request input of an even and an odd number
2.indicate input characteristic : Even/Odd
3.check for input's correctness and print result
*/

#include <stdlib.h>
#include <stdio.h>

int number_1;
int number_2;

}%

number_sequence [0-9]*

%%

{number_sequence}[0|2|4|6|8] {
printf("Even number [%d]",yyleng);
return atoi(yytext);
}

{number_sequence}[1|3|5|7|9] {
printf("Odd number [%d]",yyleng);
return atoi(yytext);
}

%%

```

```
int yywrap
{
return 1;
}
```

```
int main()
{
printf("\nInput an even number and an odd number\n");
number_1 = yylex();
number_2 = yylex();
int diff = number_1 - number_2;
if(diff%2!=0)
printf("\nYour inputs were checked for correctness, \nResult : Correct\n");
else
printf("\nYour inputs were checked for correctness, \nResult : Incorrect\n");
return 1;
}
```