LEX PROGRAM FOR CAPITAL WORDS

```
%{
        #include<stdio.h>
%}

%%
[A-Z]+[\t\n ] { printf("%s",yytext); }
. ;
%%
Int yywrap(){}
int main( )
{
        printf("Enter the input string:\n");
        yylex();
}
```

LEX PROGRAM FOR EMAIL VALID OR NOT

```
%{
%}

%%

[a-z.0-9_]+@[a-z]+".com"|".in"  { printf(“it is valid”);}
.+  { printf(“it is not valid”);}
%%
int yywrap(){}

int main()
{
printf("enter the mail:");
yylex();
}
```

LEX PROGRAM FOR MOBILE NUMBER VALID OR NOT

```
%{
%}

%%

[0-9][0-9]{9} {printf("\n mobile number valid\n");}
.+ {printf("\n mobile number invalid\n");}

%%
int yywrap(void){}

int main()
{
printf("\n enter the mobile number:");
yylex();
printf("\n");
return 0;
}
```

LEX PROGRAM FOR COUNT COMMENT LINES

```
%{
#include<stdio.h>
int nc=0;
%}

%%
"/*"[a-zA-Z0-9\n\t ]*"*/"  {nc++;}
"//"[a-zA-Z0-9\t ]*"\n"   {nc++;}
%%
int yywrap( ){}

int main(int argc ,char* argv[])
{
        yyin=fopen(argv[1],"r");

        yyout=fopen("output.c","w");
```

LEX PROGRAM FOR COUNT OF POSITIVE NUMBER AND NEGATIVE NUMBER

```
%{
int positive_no = 0, negative_no = 0;
%}

%%
^[-][0-9]+ {negative_no++;
                printf("negative number = %s\n",yytext);}

[0-9]+ {positive_no++;
                printf("positive number = %s\n",yytext);}

%%

int yywrap(){}
int main()
```

LEX PROGRAM FOR HTML

```
%{
#include<stdio.h>
%}

%%
\<[^>]*\> fprintf(yyout,"%s\n",yytext);
.|\n;

%%

int yywrap()
{
return 1;
}

int main()
```

```
        yylex( );
        printf("The number of comment lines=%d\n",nc);

}
```

```
{

yylex();
printf ("number of positive numbers = %d,"
                "number of negative numbers = %d\n",
                        positive_no, negative_no);

return 0;
}
```

```
{
yyin=fopen("sample.html","r");
yyout=fopen("output.txt","w");
yylex();
return 0;
}
```

LEX PROGRAM FOR IDENTIFIER OR NOT

```
%{
#include<stdio.h>
%}

%%

[a-zA-Z][a-zA-Z0-9]+ { printf("\n%s is IDENTIFIER", yytext);}
.+ { printf("\n%s is NOT AN IDENTIFIER",yytext);}

%%
int yywrap(){}
int main()
{
        while( yylex());
}
```

LEX PROGRAM FOR COUNT VOWELS AND CONSONENTS

```
%{
int vow_count=0;
int const_count=0;
%}

%%

[aeiouAEIOU] {vow_count++;}

[a-zA-Z] {const_count++;}

%%

int yywrap(){}
int main()
{
printf("enter the string of vowels and consonents:");
yylex();
printf("number of vowels are:%d\n",vow_count);
printf("number of consonents are:%d\n",const_count);
return 0;
}
```

LEX PROGRAM FOR ADD LINE NUMBER

```
%{
#include<stdio.h>
int ln=0;
%}

%%

.* {ln++; fprintf(yyout,"\n%d:%s",ln,yytext);}
%%
int yywrap(){}

int main()
{
yyin=fopen("simple.txt","r");
yyout=fopen("out.txt","w");
yylex();
return 0;
}
```

LEX PROGRAM FOR COMMENT OR NOT

```
%{
#include<stdio.h>
%}
%%
```

LEX PROGRAM FOR DIGIT OR NOT

```
%{
#include<stdio.h>
%}
%%
```

LEX PROGRAM FOR MACROS AND HEADER FILES

```
%{
int nmacro, nheader;
%}
%%
^#define { nmacro++; }
```

```
[/]{2}.* { printf("\n%s is COMMENT", yytext);}
.+ { printf("\n %s is NOT A COMMENT",yytext);}
%%
int yywrap(){}

int main()
{
        while( yylex());
}
```

```
[0-9]+|[0-9]*\.[0-9]+ { printf("\n%s is DIGIT", yytext);}
.+ { printf("\n%s is NOT A DIGIT",yytext);}
%%
int yywrap(){}
int main()
{
while( yylex());
}
```

```
^#include { nheader++; }
%%
int yywrap(void) {
return 1;
}
int main() {
yylex();
printf("Number of macros defined = %d\n", nmacro);
printf("Number of header files included = %d\n", nheader);
}
```

LEX PROGRAM FOR KEYWORDS AND IDENTIFIERS

```
%{
#include<stdio.h>
%}

%%

if|else|while|int|switch|for|char { printf("its a keyword");}
[a-zA-Z0-9]+ { printf("\n%s is IDENTIFIER", yytext);}

%%
int yywrap( ){}
int main()
{
        while( yylex());
}
```

LEX PROGRAM FOR BASIC MATHEMATICAL OPERATIONS

```
%{
#include<stdio.h>
%}
%%

"="|"+"|"-"|"/"|"*" { printf("valid");}
.+ {printf("invalid");}
%%
int yywrap(){}
int main()
{
printf("enter the input:");
yylex();
return 0;
}
```

LEX PROGRAM FOR DOB VALID OR NOT

```
%{
#include<stdio.h>
%}

%%

[0-9][0-9]\/[0-1][0-9]\/[1-2][0-9]{3} { printf("valid");}
.+ { printf("invalid");}
%%

int yywrap(){}

int main()
{
yylex();
}
```

LEX PROGRAM FOR URL VALID OR NOT

```
%{
%}

%%
((http)|(ftp))s?:\/\/[a-zA-Z0-9]{2}(\.[a-z]{2})+(\/[a-zA-Z0-9+=?]*)*
{printf("\nURL InValid\n");}
.+ {printf("\nURL valid\n");}
```

LEX PROGRAM FOR COUNT NO OF TOKENS

```
%{
int n = 0 ;
%}
%%
"while"|"if"|"else"|"int"|"float"  {n++;printf("\t keywords : %s",
yytext);}
[a-zA-Z_][a-zA-Z0-9_]* {n++;printf("\t identifier : %s", yytext);}
"<="|"=="|"="|"++"|"-"|"*"|"+" {n++;printf("\t operator : %s",
```

LEX PROGRAM FOR SUBSTRING CONVERT abc to ABC

```
%{
%}
%%

[a-z] {printf("%c",yytext[0]-32);}
. {}

%%
```

```
%%
int yywrap(){}

void main()
{
        printf("\nEnter URL : ");
        yylex();
        printf("\n");
}
```

```
yytext);}
[(){}|, ;]    {n++;printf("\t separator : %s", yytext);}
[0-9]*"."[0-9]+ {n++;printf("\t float : %s", yytext);}
[0-9]+ {n++;printf("\t integer : %s", yytext);}
.    ;
%%
int yywrap(){
return 1;
}
int main()
{
   yylex();
   printf("\n total no. of token = %d\n", n);

}
```

```
int yywrap(void){}

int main()
{
printf("\nenter the string : ");
yylex();
}
```

LEX PROGRAM FOR NO.OF CHARS,LINES,WORDS

```
%{
int nlines,nwords,nchars;
%}

%%
\n {
        nchars++;nlines++;
        }

[^ \n\t]+ {nwords++, nchars=nchars+yyleng;}
. {nchars++;}

%%

int yywrap(void) {}
int main()
{
 yylex();
 printf("Lines = %d\nChars=%d\nWords=%d",nlines,nchars,nwords);

 return 0;
}
```

LEX PROGRAM FOR ALL CONSTANTS

```
%{
%}

%%
<INITIAL>[0-9]+ {printf("Integer\n");}
<INITIAL>[0-9]+[.][0-9]+ {printf("Float\n");}
<INITIAL>[A-Za-z0-9_]* {printf("Identifier\n");}
<INITIAL>[^\n] {printf("Invalid\n");}

%%

int yywrap(){}

int main()
{
printf("Enter String\n");
yylex();
return 0;
}
```

LEX PROGRAM TO COUNT WORDS

```
%{
#include<stdio.h>
#include<string.h>
int i = 0;
%}

%%
([a-zA-Z0-9])*    {i++;}

"\n" {printf("%d\n", i); i = 0;}
%%

int yywrap(){}

int main()
{
   printf("Enter the Sentence :");
    yylex();

    return 0;
}
```

LEX PROGRAM TO COUNT THE FREQUENCY OF THE CODE

```
%{
#include<stdio.h>
#include<string.h>
char word [] = "geeks";
int count = 0;
%}
%%
[a-zA-Z]+    { if(strcmp(yytext, word)==0)
               count++; }
. ;
%%
int yywrap(){}

int main()
{
      yyin=fopen("input.txt", "r");
      yylex();
      printf("%d", count);
 }
```

Lex code to find the length of the longest word

```
/*lex code to find the length of the longest word*/

% {
int counter = 0; %
}

%
% [a - zA - Z] + {
if (yyleng > counter) {
          counter = yyleng;
}
} %
%

main() {
yylex();
printf("largest: %d", counter);
printf("\n");
}
```

Lex code to replace a word with another word in a file

```
%{
#include<stdio.h>
#include<string.h>
char replace_with [] = "Best";
char replace [] ="A";

%}

%%
[a-zA-Z]+ { if(strcmp(yytext, replace)==0)
          fprintf(yyout, "%s", replace_with);
          else
          fprintf(yyout, "%s", yytext);}
.         fprintf(yyout, "%s", yytext);
%%

int yywrap()
{
          return 1;
}
int main()
{
          extern FILE *yyin, *yyout;
          yyin=fopen("input.txt", "r");
          yyout=fopen("output.txt", "w");
          yylex();
}
```