

Ex 1. Lex program to count the number of character and lines.

```
%option noyywrap
%{
    int line_no = 0;
    int char_no = 0;
%}
```

```
%%
\n     ++line_no;
.     ++char_no;
end     return 0;
```

```
%%
```

```
int main()
{
    yylex();
    printf("number of lines = %d, number of chars = %d\n",line_no, char_no );
    return 0;
```

```
}
```

```
C:\Flex Windows\EditPlusPortable>lex line_no.l
C:\Flex Windows\EditPlusPortable>gcc lex.yy.c
C:\Flex Windows\EditPlusPortable>a.exe
example
how are
you
fine
hello world
number of lines = 5, number of chars = 37
C:\Flex Windows\EditPlusPortable>
```

Ex 2. Lex program to recognize the valid Integer / Float

```
%option noyywrap
%{
    int valid_int=0, valid_float=0;
%}

%%

^[+-]?[0-9]* valid_int++;
^[+-]?[0-9]*[.][0-9]+$ valid_float++;
.;


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

```

if(valid_int!=0) printf("Valid Integer number\n");
else if(valid_float!=0) printf("Valid Float number\n");
else printf("Not valid Integer/Float number\n");

return 0;
}

```

 Command Prompt - a.exe

```

C:\Flex Windows\EditPlusPortable>lex valid_id.l
C:\Flex Windows\EditPlusPortable>gcc lex.yy.c
C:\Flex Windows\EditPlusPortable>a.exe
678

Valid Integer number

C:\Flex Windows\EditPlusPortable>a.exe
98.45

Valid Float number

C:\Flex Windows\EditPlusPortable>a.exe
.E34e
.E34e
Not valid Integer/Float number

C:\Flex Windows\EditPlusPortable>

```

Ex 3. Lex program to recognize identifier, keyword, number and unsigned number

```

% {
    #include<stdio.h>
% }

```

```
%%
```

```
if|else|while|int|switch|for|char {printf("keyword");}  
[a-z]([a-z]|0-9)* {printf("identifier");}  
[0-9]* {printf("number");}  
[0-9]+(.[0-9]+)?(E[+|-]?[0-9])? {printf("unsigned number");}  
.* { printf ("invalid"); }
```

```
%%
```

```
int main()  
{  
    yylex();  
    return 0;  
}
```

Ex 4. Lex program to determine whether the input is “C Identifier or not”.

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

```
%%
```

```
^[a-zA-Z_][a-zA-Z0-9_]* { printf("Valid Identifier"); }  
^[^a-zA-Z_] { printf("Invalid Identifier"); }  
.;
```

```
%%
```

```
int main()  
{
```

```
yylex();  
return 0;  
}
```