

Exp. No. 16

Write a LEX specification file to take input C program from a .c file and count the number of characters, number of lines & number of words.

Program: (count_lines.l)

```
%{
int nchar, nword, nline;
}%
%%
\n { nline++; nchar++; }
[^\t\n]+ { nword++, nchar += yyleng; }
. { nchar++; }
%%
int yywrap(void) {
return 1;
}
int main(int argc, char *argv[]) {
yyin = fopen(argv[1], "r");
yylex();
printf("Number of characters = %d\n", nchar);
printf("Number of words = %d\n", nword);
printf("Number of lines = %d\n", nline);
fclose(yyin);
}
```

Input Source Program: (sample.c)

```
#include <stdio.h>
int main()
{
    int number1, number2, sum;
    printf("Enter two integers: ");
    scanf("%d %d", &number1, &number2);
    sum = number1 + number2;
    printf("%d + %d = %d", number1, number2, sum);
    return 0;
}
```

Output:

```
Microsoft Windows [Version 10.0.22621.2715]
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C:\Users\Deepak>d:

D:\>cd Slots

D:\Slots>cd Compiler Design

D:\Slots\Compiler Design>flex Ex1char.l

D:\Slots\Compiler Design>gcc lex.yy.c

D:\Slots\Compiler Design>a.exe Ex1char.c
Number of characters = 243
Number of words = 33
Number of lines = 10

D:\Slots\Compiler Design>
```