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CS 370 Lab # 1
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The original code wordlengthlab1.l counted the frequency of certain lengths of words in a file and outputted the results. The modifications that I had made (highlighted below) to the code included the addition of a global variable if type int named count, which incremented every time a number occurred in the given file that we were reading from. I also added a line of code to the lex directory which incremented count every time a number occurred, as well as a print statement in the yywrap to print the amount of numbers that occurred in the file that was read from.

CODE:

```
int lgths[100];
int count = 0;                                          //count variable counts number occurances
%%
[a-zA-Z]+       lgths[yyleng]++;
[0-9]+          count++;                                //increment count when number occurs
.       |
\n      ;
%%
yywrap()
{
        int i;
        printf("Length  No. words\n");
        for (i=1; i<100; i++) {
                if (lgths[i] > 0) {
                        printf("%5d%10d\n",i,lgths[i]);
                }
        }

        printf("\n\nNumber count occurances: %5d\n", count);          //print count

        return(1);
}

main()
{  yylex();

}
```

MAKEFILE

```
all:    wordlengthlab1.l    lex.yy.c            //the two files used
        lex wordlengthlab1.l                    //compile lex file
        gcc -o wordlength lex.yy.c              //compile and link
```

```
abaca/CS370> ./wordlength < /etc/pass
Length  No. words
    1        44
    2         7
    3       128
    4        65
    5        49
    6        37
    7        43
    8         5
   10         6
   11         4
   12         1
   14         2
   15         1


Number count occurances:    85
```