Lexical Project

The first project(count the numbers of characters, words, and lines) is chosen.

Lex source code (lab1.lex):

```
%{
#include<stdio.h>
#include<string.h>
int char_cnt=0;
int word_cnt=0;
int line_cnt=0;
%}
letter [A-Za-z]
digit [0-9]
word ({letter}|{digit})+
line \n
%%
{word} {
    word_cnt++;
    char_cnt+=strlen(yytext);
}
{line} {
    line_cnt++;
    char_cnt++;
}
. {char_cnt++;}
%%
int main(int argc, char **argv){
    argv++;
    argc--;
    if(argc>0){
        yyin=fopen(argv[0],"r");
    }else{
        yyin=stdin;
    }
    yylex();
    printf("line_cnt:%d\n",line_cnt+1);
```

```
    printf("word_cnt:%d\n",word_cnt);
    printf("char_cnt:%d\n",char_cnt);
    return 0;
}
int yywrap(){
    return 1;
}
```

testfile.txt:

```
Hello, world!
wawawa
2020.3.7
Project1
global information:
%$ The number of words: 24
%$ The number of lines: 8
%$ the number of characters: 144
```

result:

```
PS C:\Users\PumpKin\desktop\tools\win_flex_bison> .\flex lab1.lex
PS C:\Users\PumpKin\desktop\tools\win_flex_bison> gcc -o lab1 lex.yy.c
PS C:\Users\PumpKin\desktop\tools\win_flex_bison> .\lab1 testfile.txt
line_cnt:8
word_cnt:24
char_cnt:144
PS C:\Users\PumpKin\desktop\tools\win_flex_bison> _
```