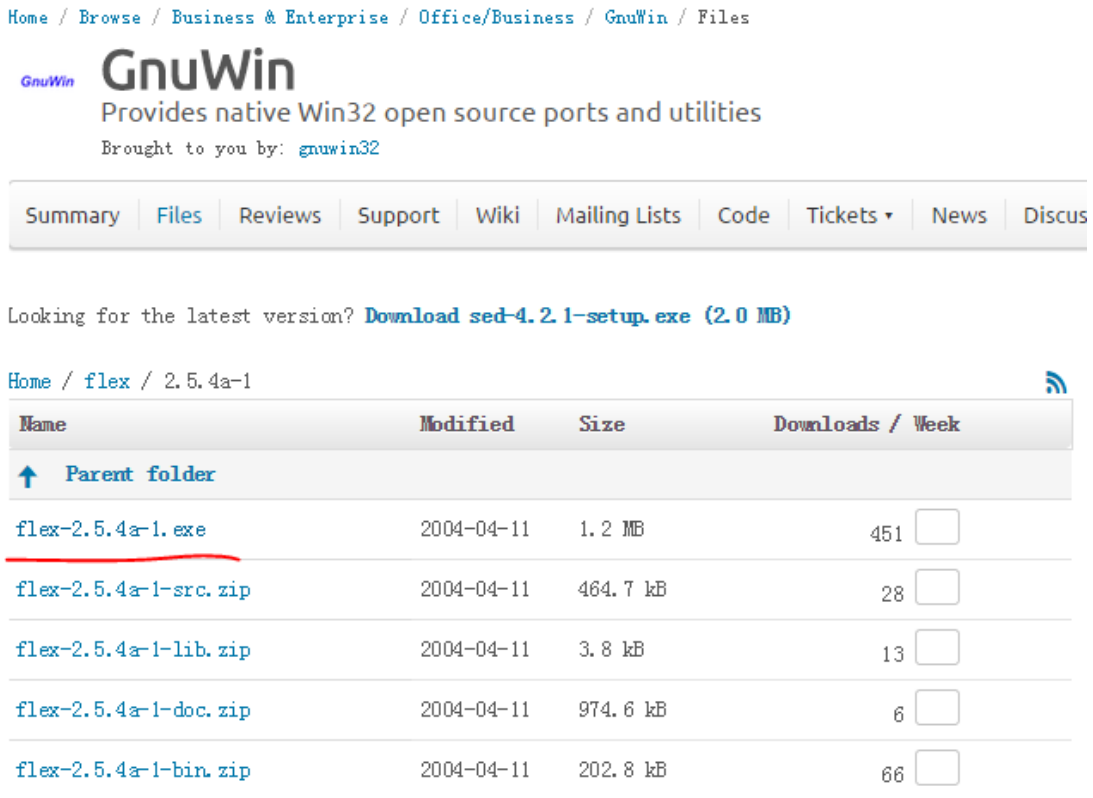
Flex实验1

1、 Windows环境下安装Flex

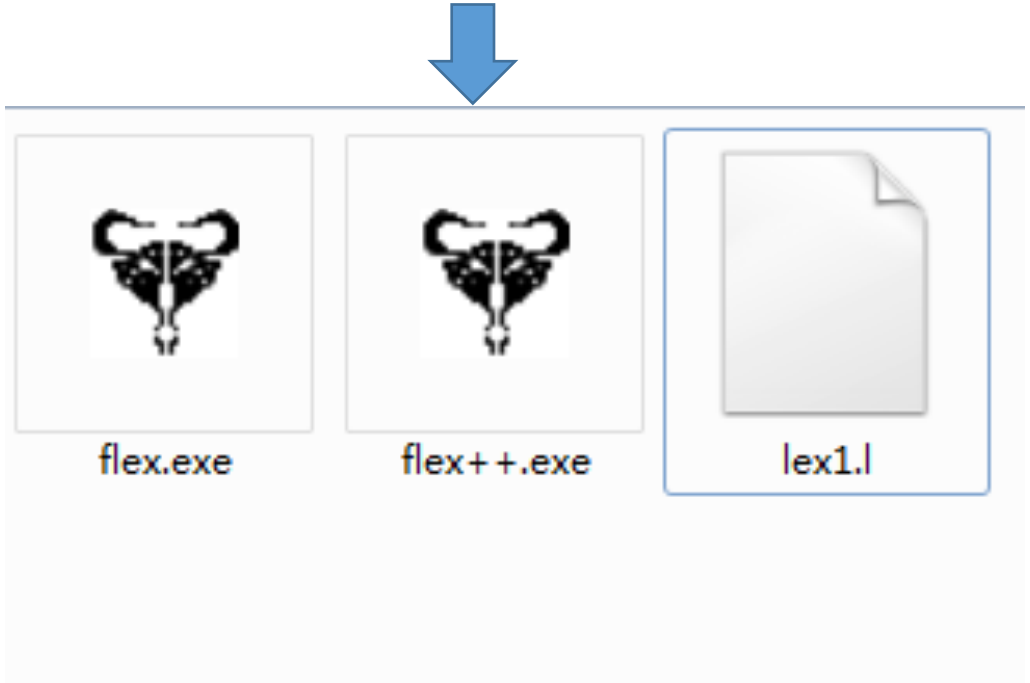
- http://sourceforge.net/projects/gnuwin32/files/flex/2.5.4a-1/



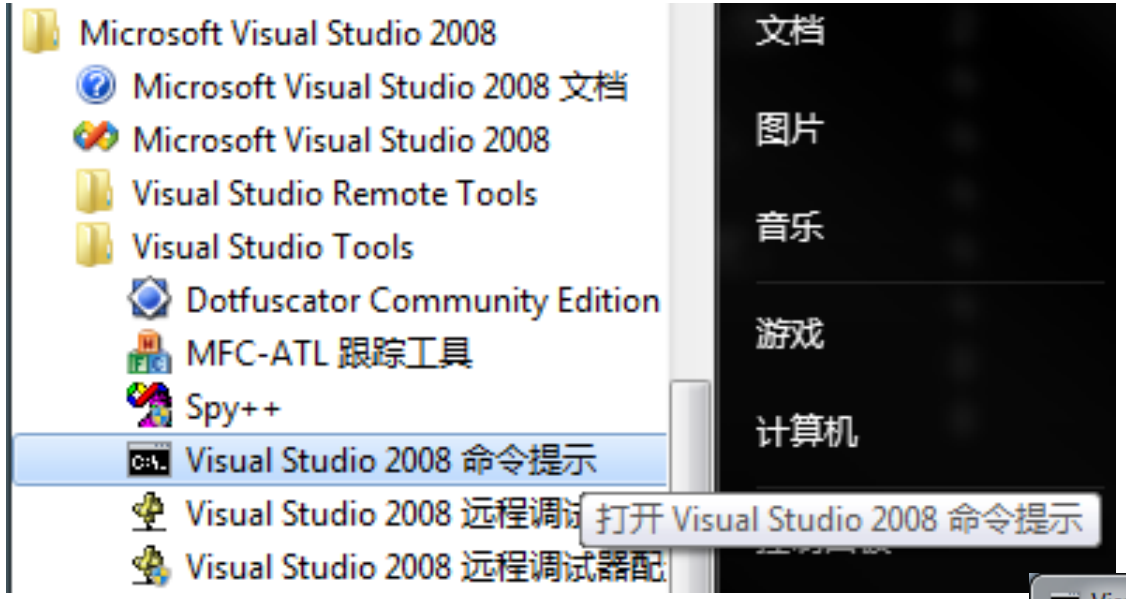
2、源程序 lex1.l

```
%{
int nchar, nword, nline;
%}
%%
\n { nline++; nchar++; }
[^ \t\n]+ { nword++, nchar += yyleng; }
. { nchar++; }
%%
void main()
{
        yylex();
        printf("%d\t%d\t%d\n", nchar, nword, nline);
}
int yywrap()
{
        return 1;
}
```

保存到flex安装目录



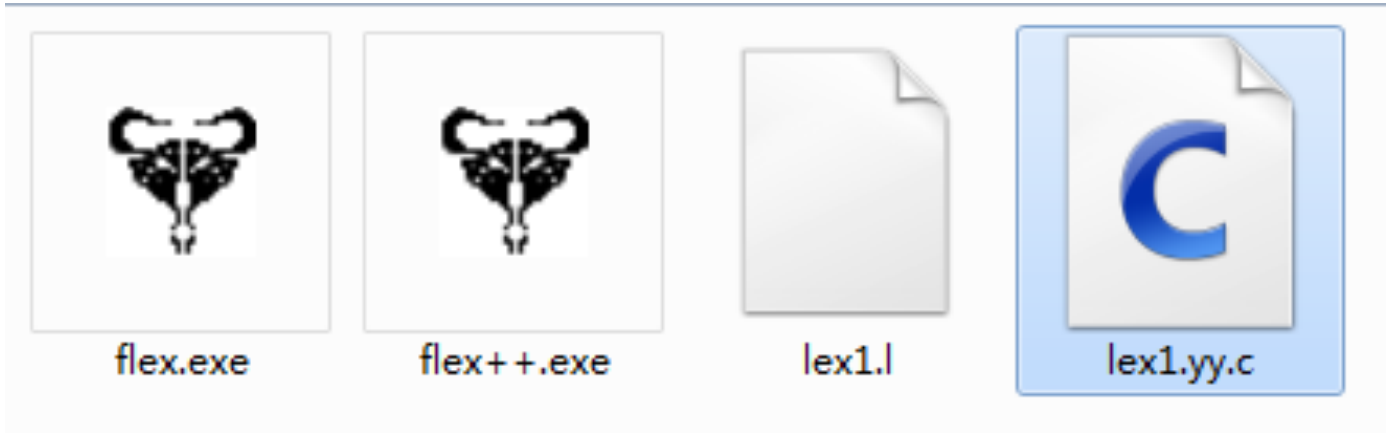
3、打开Visual Studio 2008 命令行



4、生成 lex1.yy.c

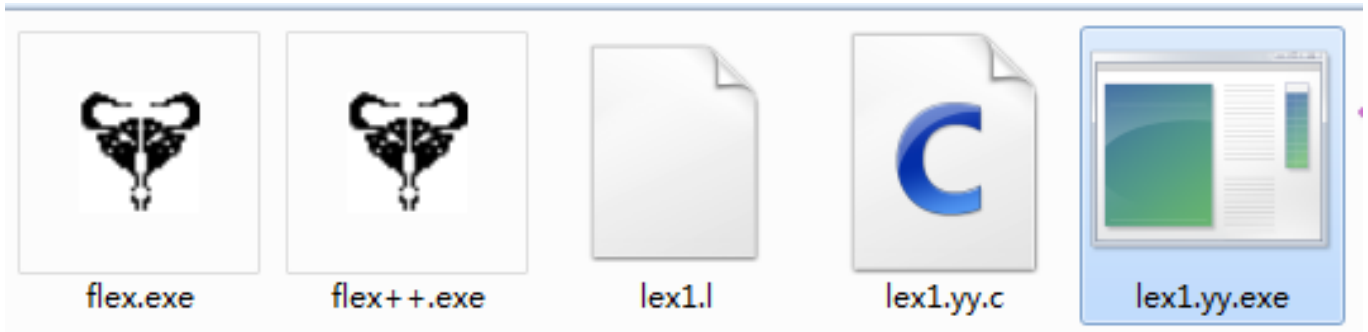
- 1、进入flex安装目录
- > cd C:\GnuWin32\bin

- 2、调用flex.exe
- > flex.exe -o"lex1.yy.c" lex1.l



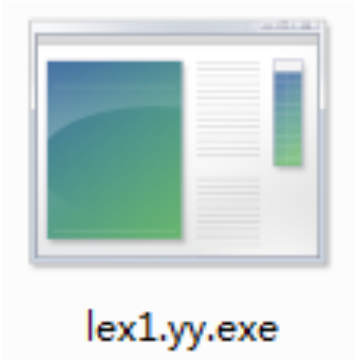
5、调用VS2008编译器cl.exe

```
C:\GnuWin32\bin>cl lex1.yy.c
用于 80x86 的 Microsoft (R) 32 位 C/C++ 优化编译器 15.00.30729.01 版
版权所有(C) Microsoft Corporation。保留所有权利。

lex1.yy.c
Microsoft (R) Incremental Linker Version 9.00.30729.01
Copyright (C) Microsoft Corporation.  All rights reserved.

/out:lex1.yy.exe
lex1.yy.obj
```

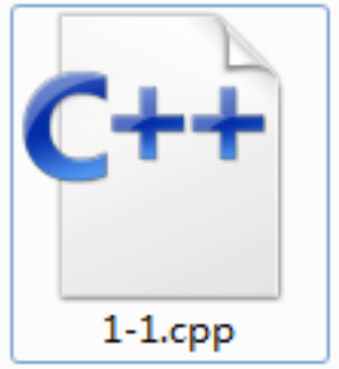


6、调用lex1.yy.exe

```
C:\GnuWin32\bin>lex1.yy.exe < 1-1.cpp
104     17      6
```




```
#include iostream
using namespace std
int main
cout "Hello! "<<endl
cout "Welcome to c++! " endl
return
```



7、源程序 lex2.l（第一部分）

- %{
- int wordCount = 0;
- %}
- chars [A-za-z_\'\.\"]
- numbers ([0-9])+
- delim [" "\n\t]
- whitespace {delim}+
- words {chars}+
- **%%**
- {words} { wordCount++; /*increase the word count by one*/ }
- {whitespace} { /* donothing*/ }
- {numbers} { /* one may want to add some processing here*/ }

7、源程序 lex2.l（第二部分）

```
void main()
{
        yylex(); /* start theanalysis*/
        printf(" No of words:%d\n", wordCount);
}
int yywrap()
{
        return 1;
}
```

7. 提交报告

- 内容：
- 1、分别生成lex1.yy.exe、lex2.yy.exe，运行的相关截图;
- 2、上传flex代码（lex1.l、lex2.l）
- 3、上传lex1.yy.c、lex2.yy.c
- 4、实验报告
  - 4.1 windows, linux（课后补充）两种环境下的配置和使用；
  - 4.2 分析flex代码，
    - 包括编程步骤、程序组成、Lex 的模式匹配规则、Lex 变量、Lex 函数
  - 4.3 分析程序输出结果。