

本科实验报告

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| 课程名称： | 编译原理 |
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| 学 院： | 海洋学院 |
| 专 业： | 海洋工程与技术 |
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| 指导教师： | 鲁东明 |

2020年 3 月 21 日

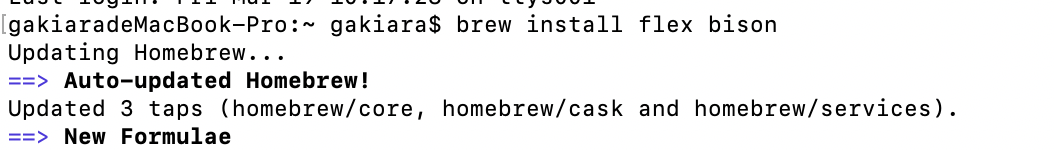
Lab1—利用LEX计算文本文件的字符数

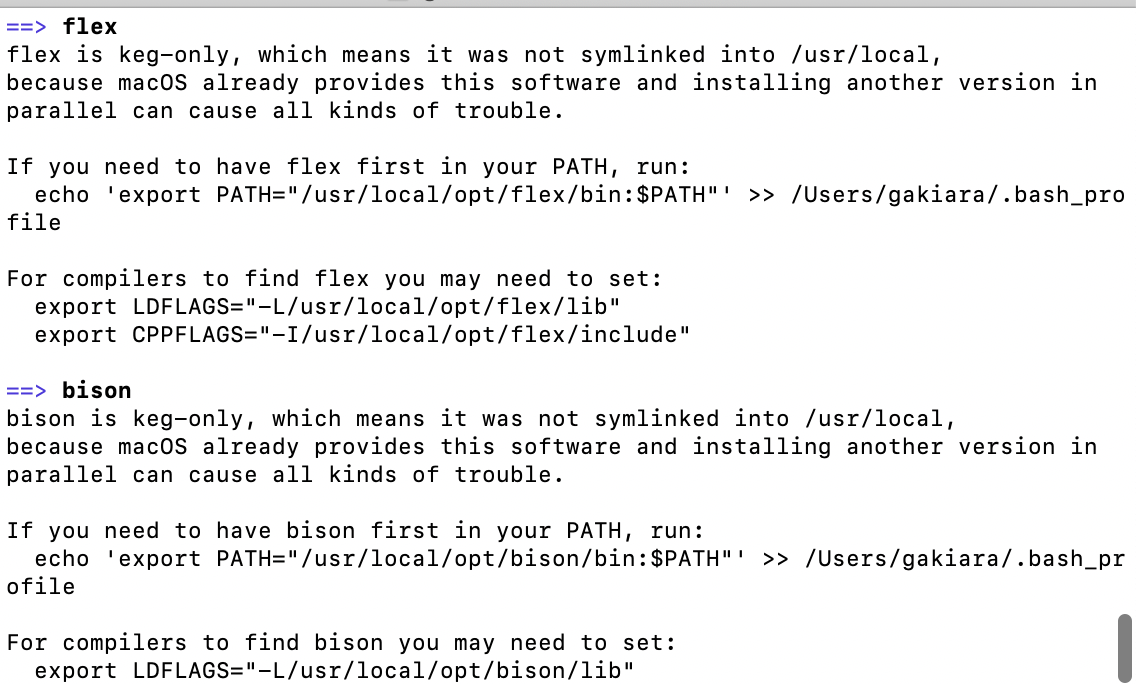
1. 实验内容

* Experimental purpose: to understand the basic programming methods of LEX.
* Experimental requirements: Write a LEX input file to generate a program that can calculate the number of characters, words and lines in a text file and report these numbers. A word is a sequence of letters and/or numbers without punctuation or spaces. Punctuation and blank spaces are not counted as words.

1. 实验过程以及截图

* **Install flex&bison on the mac OS**





* **Code writing**

1. **Initial the variable that is used for counting：**



1. **Initial the state:**

State value :

0: words acceptable 1: reading a word

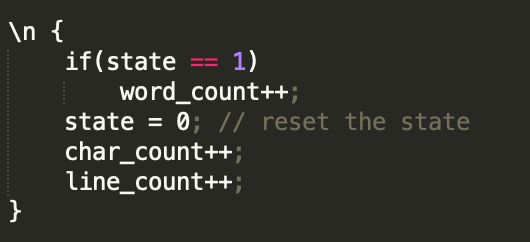


1. **When meet a ‘\n’:**

char\_count++;

line\_count++;

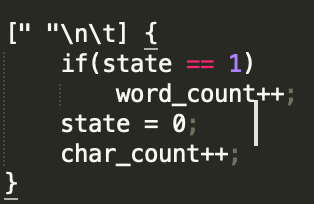
If it is reading a word and does not have a space in the end: word\_count++;



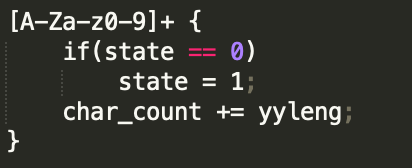
1. **When meet a [" "\n\t]**

If it is reading a word: word\_count++;

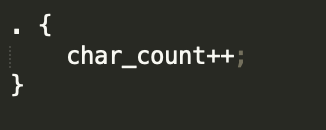
char\_count++



1. **When meet number or letter**

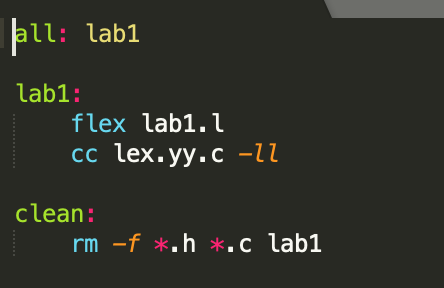


1. **when finding a symbol**



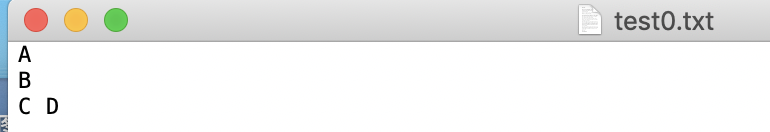
* **Compile**

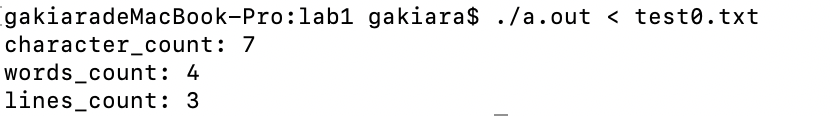
**Make file:**



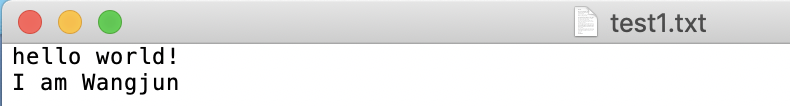
1. 测试和结果

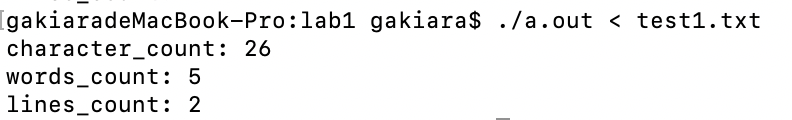
Test0:



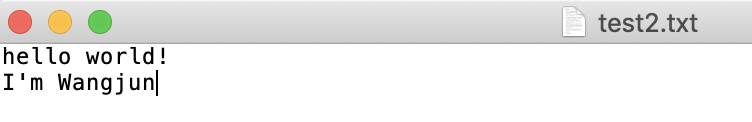


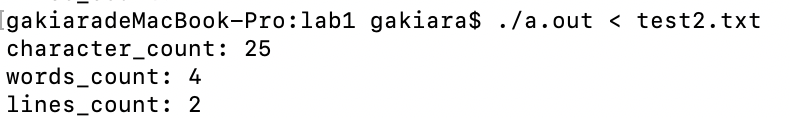
Test1:

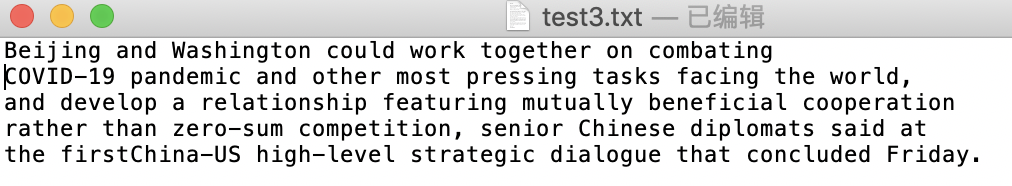


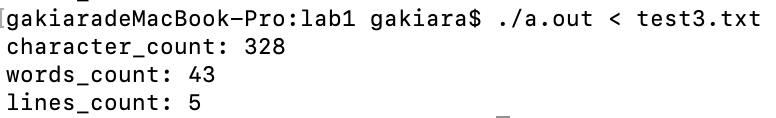


Test2: (I’m) counts for one world



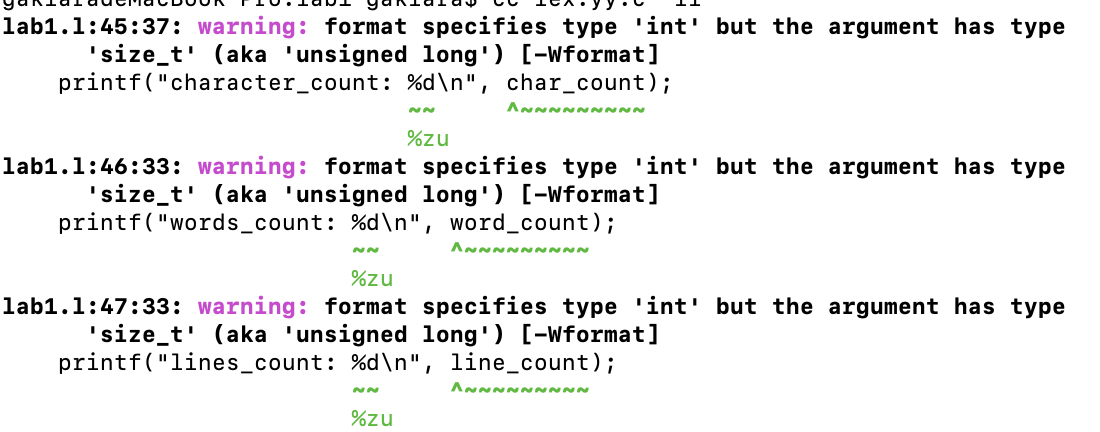






1. 总结和反思

* We should change the type to int, but it doesn’t matter.



* The letter count should be initialized to 1:

