

Homework

- 2.1 Write regular expressions for the following character sets, or give reasons why no regular expression can be written:
 - (a) All strings of lowercase letters that begin and end in a.
 - (c) All strings of digits that contain no leading zeros.
 - (d) All strings of digits that represent even numbers.
- 2.8 Draw DFAs for each of the sets of characters of (a),(c) and (d) in Exercise 2.1, or state why no DFA exists
- 2.12 (a) Use Thompson's construction to convert the regular expression $(a|b)^*a(a|b|\epsilon)$.
 - (b) Convert the NFA of part (a) into a DFA using the subset construction.
- Deadline: 3.11(Tuesday)
- The homework answers should be written in **English**.

Lexical Project

- Choose one project:

- Deadline: 22:00, March 10(next Tuesday)

1. 利用LEX计算文本文件的字符数等 (5分)

- 实验目的：了解LEX的基本编程方法。
- 实验要求：编写一个LEX输入文件，使之生成可计算文本文件的字符、单词和行数且能报告这些数字的程序。单词为不带标点或空格的字母和/数字的序列。标点和空白格不计算为单词。

2. 利用LEX进行字母的大小写转换 （5分）

- 实验目的：了解LEX的基本编程方法
- 实验要求：编写一个LEX输入文件，使之可生成将SPL程序注释之外的所有关键字（保留字）均大写的程序。有关SPL的关键字请见第二章或第八章所述。该LEX生成的程序要能够对SPL源程序进行分析，将不是大写的关键字均转换为大写。