

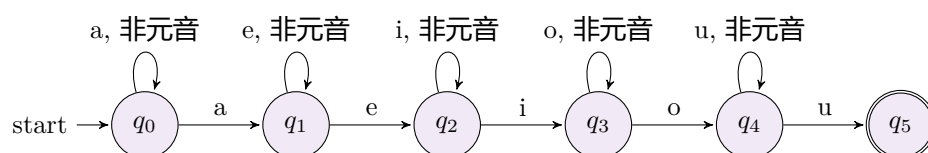
Compiler 2

孔静 2014K8009929022

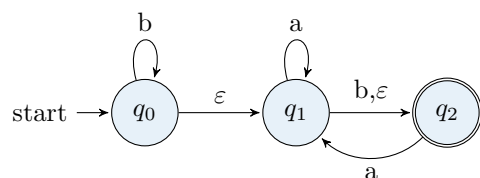
October 8, 2017

1 为下面的语言设计一个 DFA 或 NFA

1.1 包含 5 个元音的所有小写字母串，这些串中的元音按顺序出现



1.2 所有由 a 和 b 组成且不含子串 abb 的串



2 用算法 3.22 模拟图 3-29 中的 NFA 在处理输入 aabb 时的过程

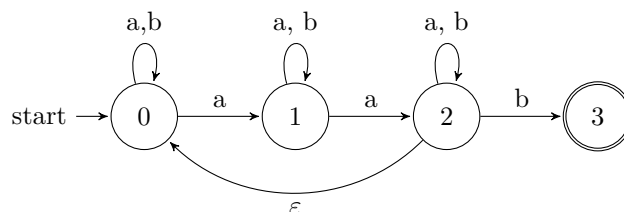
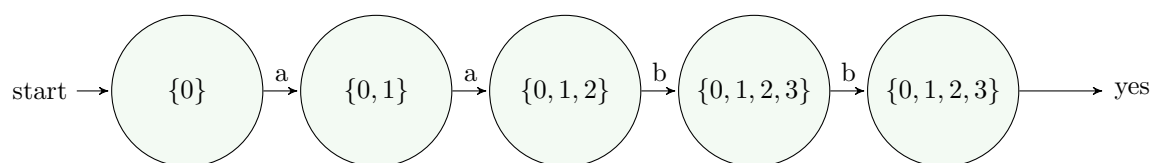
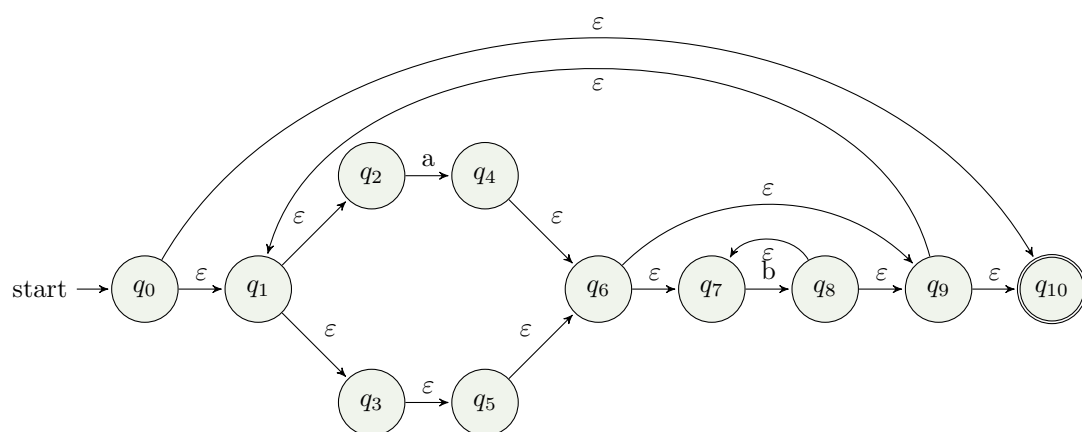


Figure 1: 3-29

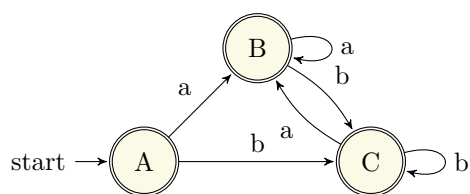


3 使用算法 3.23 和 3.20 将下述正则表达式转换为 DFA , 并尝试化简该 DFA

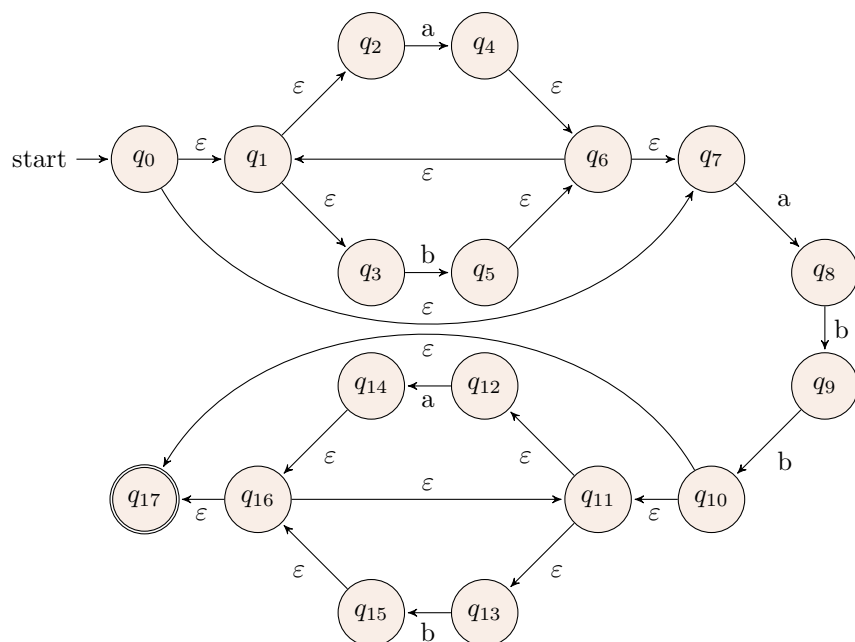
3.1 $((\varepsilon|a)b^*)^*$



NFA	DFA	a	b
0,1,2,3,4,6,7,9,10	A	B	C
1,2,3,4,5,6,7,9,10	B	B	C
1,2,3,4,6,7,8,9,10	C	B	C



3.2 $(a|b)^*abb(a|b)^*$



NFA	DFA	a	b
0,1,2,3,7	A	B	C
1,2,3,5,6,7	C	B	C
1,2,3,4,6,7,8	B	B	D
1,2,3,5,6,7,9	D	B	E
1,2,3,5,6,7,10,11,12,13,17	E	F	G
1,2,3,5,6,7,11,12,13,15,16,17	G	F	G
1,2,4,4,6,7,8,11,12,13,14,16,17	F	F	H
1,2,3,5,6,7,9,11,12,13,15,16,17	H	F	I
1,2,3,5,6,7,10,11,12,13,15,16,17	I	F	G

