

ECS 120: Theory of Computation

Homework 2 Solution

Due: 4/12/06

Problem 1.

[Linz, Page 28, Exercise 11(b).]

$S \rightarrow AaA$
 $A \rightarrow aA|bA|\lambda$

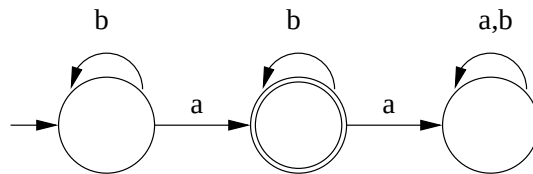
[Linz, Page 29, Exercise 14(c).]

$S \rightarrow aSb|aaab$

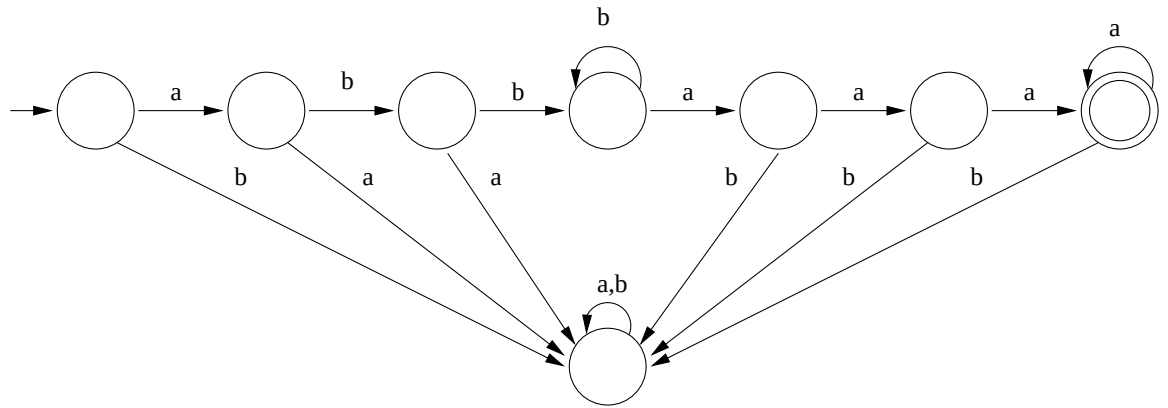
[Linz, Page 29, Exercise 18(b).]

$S \rightarrow aS|aS_0|S_0S$
 $S_0 \rightarrow aS_0b|bS_0a|S_0S_0|\lambda$

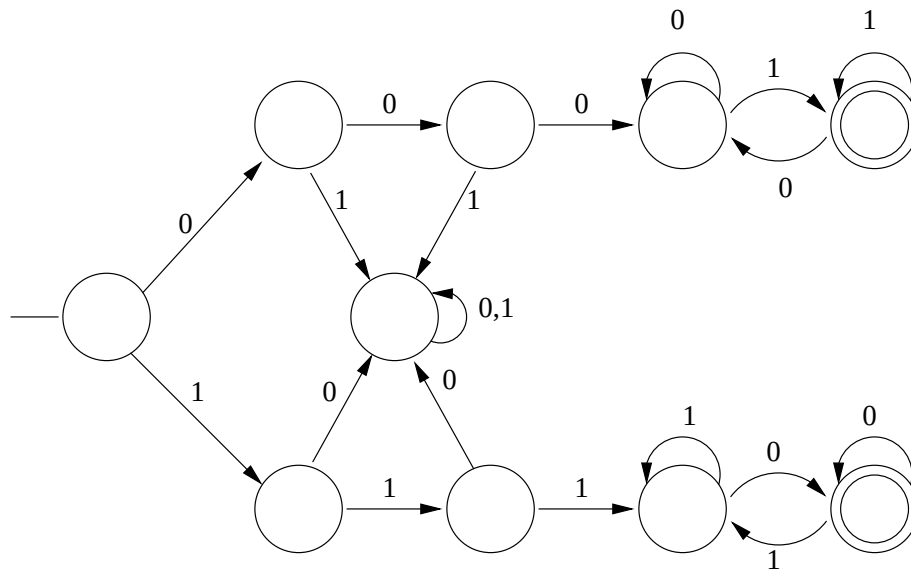
[Linz, Page 47, Exercise 2(a).]



[Linz, Page 47, Exercise 5(b).]



[Linz, Page 48, Exercise 9(g).]



Problem 2

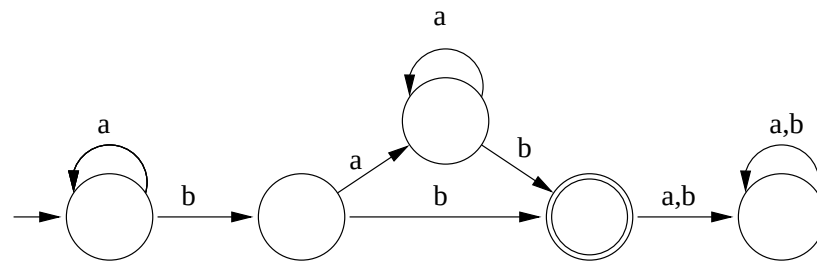
[a.]

$$L = \{a^n b : n \geq 0\}$$

[b.]

$$L = \{a^n bw : n \geq 0, w \in \Sigma^+\}$$

[c.]



Problem 3

