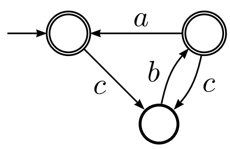
COMP11212 Lecture notes
Corrigenda

p 36 The first automaton given does not agree with the one that I continue with lower down on that page. So the automaton at the top of the page should look as follows:



p 54 The transition function of the product automaton (fourth bullet point) should be given as (note the indices in the first line):

Transition function: δ maps (q_1, q_2) and x to $(\delta_1(q_1, x), \delta_2(q_2, x))$. In other words, there is a transition

$$(q_1, q_2) \xrightarrow{x} (q_1', q_2')$$

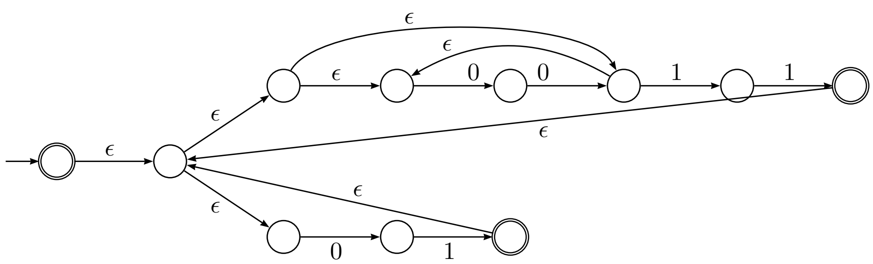
if and only if there are transitions

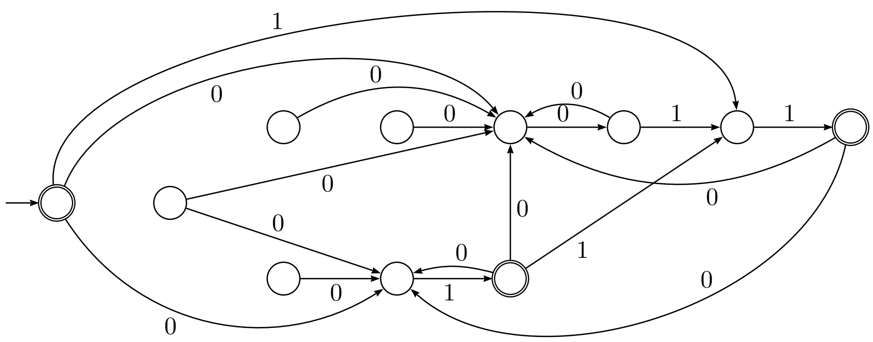
$$q_1 \xrightarrow{x} q_1' \qquad \text{and} \qquad q_2 \xrightarrow{x} q_2'.$$

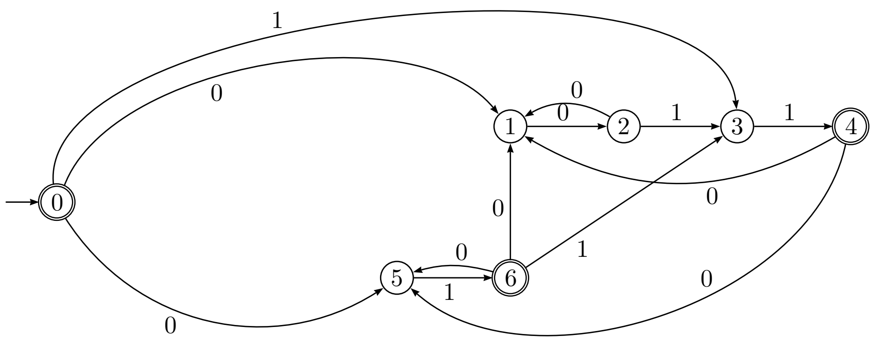
p 117. The last sentence in the solution to **Exercise 26** should be:

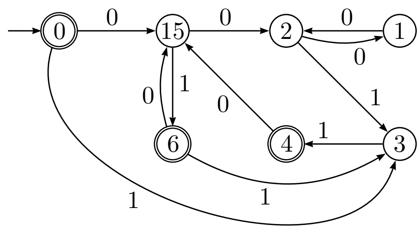
Hence a suitable pattern is $\boldsymbol{\epsilon}|(a|b)a^*b((b|aa|ab)a^*b)^*(\boldsymbol{\epsilon}|a)$.

p 117. There is a mistake (one missing transition from the second automaton) in the solution to **Exercise 32 (c)**, and the automaton with fewer states as given is also slightly wrong. The corrected version is as follows.

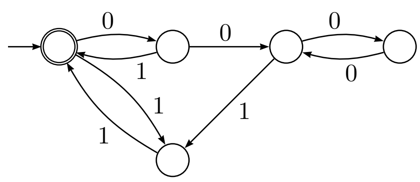




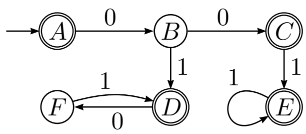




Here's another automaton for the same language but with fewer states.



p 131 The automaton used for **Exercise 46 (b)** is incorrect. The correct solution is as follows.



$\Xi = \{S, B, C, D, E, F\}$.

$S \to 0B \mid \epsilon,\ \ B \to 0C \mid 1D,\ \ C \to 1E \mid \epsilon,\ \ D \to 0F \mid \epsilon,\ \ E \to 1E \mid \epsilon,\ F \to 1D.$