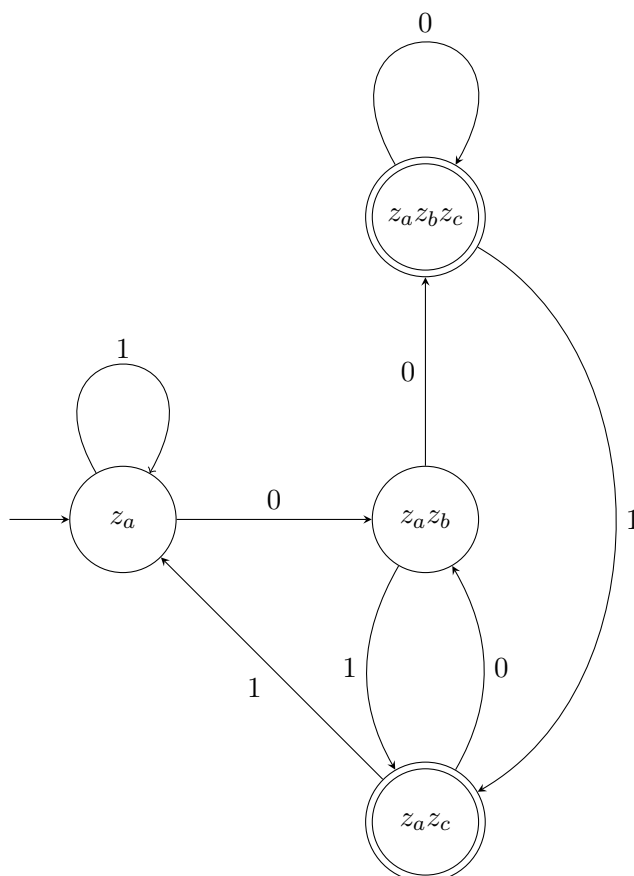

Elias Gestrich
Finite state machines, regular languages

exercise 1: Finite-State Machines, Regular Language

- a) $M = (\{S, A, B\}, \{a, b\}, \{\delta(S, a) = B, \delta(S, b) = A, \delta(A, a) = A, \delta(A, b) = B, \delta(B, b) = A\}, S, A)$
- b) SBAABA

exercise 2: Finite-State Machines II

- a) no
- b) yes
- c)



d) $(0|1)^*0(0|1)$

exercice 3: Type-3 Grammars

a) no

c) $M_3 = (\{V_1, V_2, X\}, \{a, b\}, \delta, V_2, X)$ with

δ	a	b
V_1	$\{X, V_1\}$	X
V_2	V_1	V_2
X		

