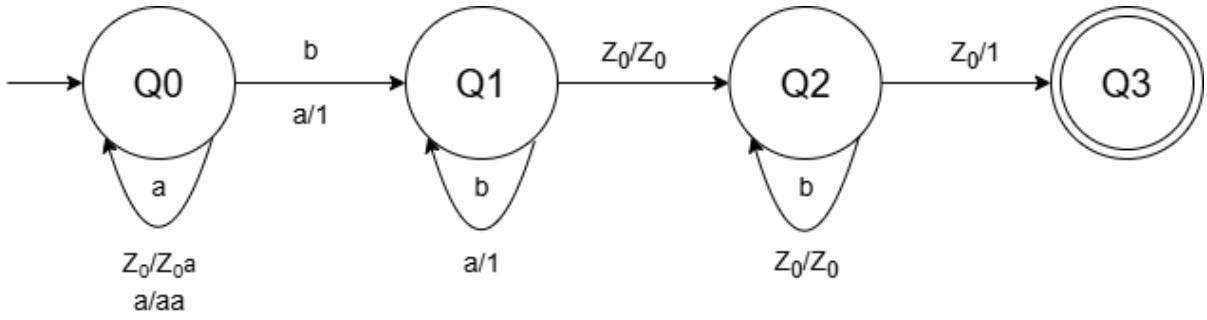
Zad. 5

d) $\mathbf{L_4 = \{a^n b^m : 1 \leq n \leq m\}}$



Zad. 7

a) $\mathbf{L_1 = \{a^n b^m c^{n+m} : n, m > 0\}}$

S → aPc
P → aPc | bQc
Q → bQc | ε

b) $\mathbf{L_2 = \{a^n b^m : 0 < n < m\}}$

S → aSbP | abbP
P → bP | ε

c) $\mathbf{L_3 = \{a^n b^k c^n : n \geq 0, k \geq 5\}}$

S → P | R
P → bbbbbQ
R → aRc | P
Q → b | ε

d) $\mathbf{L_4 = \{a^n b^{2n} , n > 0\}}$

S → aPbb | aSbb
P → ε