

COMP 335 Assignment 8

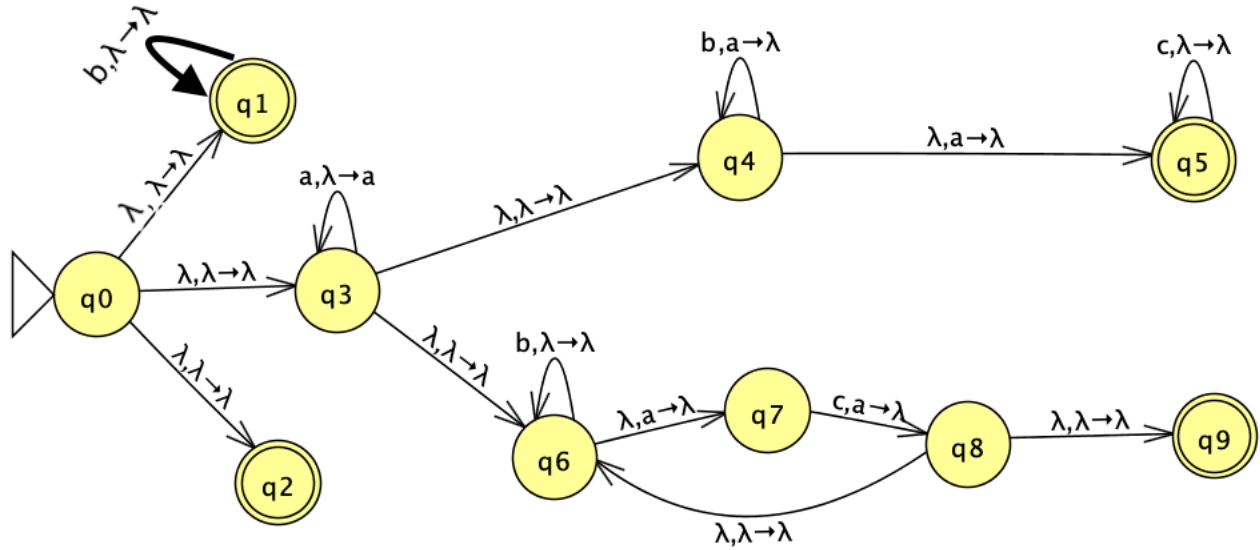
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Question 1.

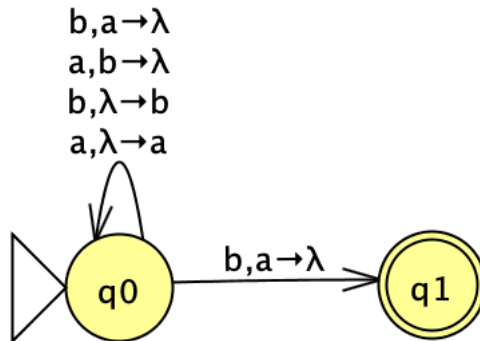
(a)

States q_1, q_2 take care of accepting b^*, λ , while the path q_3-q_5 enforces $2i = k$, and path q_3-q_9 provides an alternative route by enforcing $i = j + 1$.



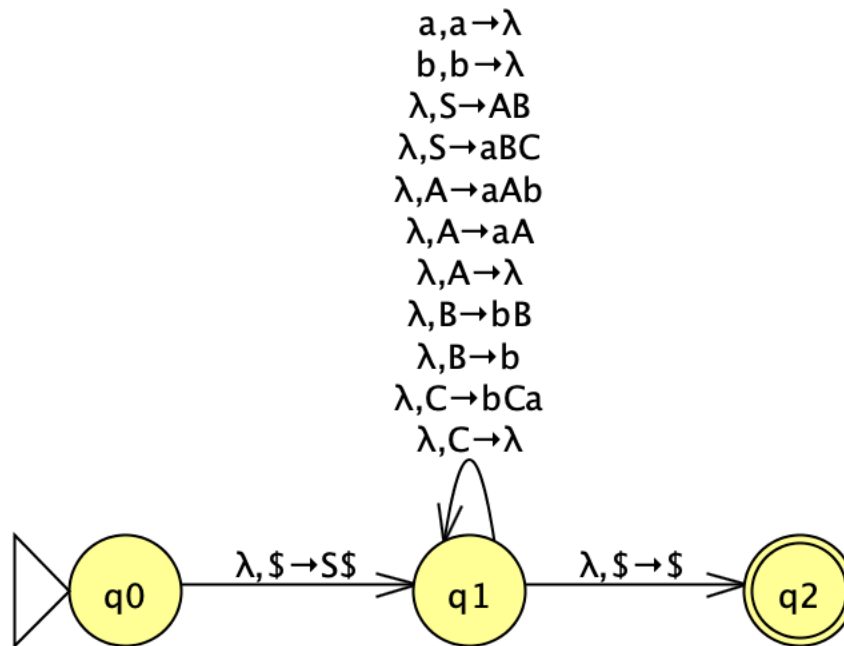
(b)

if $n_a(w) = n_b(w)$, and for all prefixes of w have $n_a(v) \geq n_b(v)$, then the strings accepted must have b as the last letter, example: $w = \text{babaab, aaabbb, ababab, bbbbaaab, etc.}$



Question 2.

Converting the given CFG to an equivalent PDA, we get:

**Question 3.**

Accepts λ , or makes 0 in multiples of 2/6s, so 1 pops them appropriately in multiples of 3s.

