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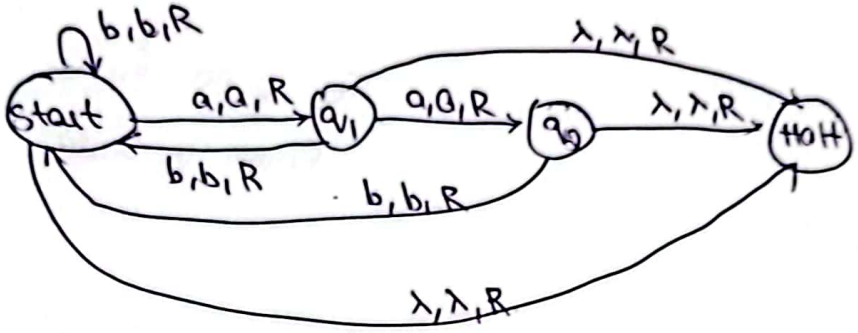
Question-5:

Given Turing Machine is



Acceptable Strings by the given turing machine is

TM = { λ, a, aa, ab, ba, bb, aabb, abab - - - }

Simply we can define given Turing Machine as

L = { accepts everything except more than "aaa" Consequtively }

Traversing the accepted strings to the given turing machine

Example:

babaaΔ ⟶ b start abaaΔ ⟶ ba q_1 baaΔ ⟶ bab start aaΔ

↓

bab a q_1 a Δ

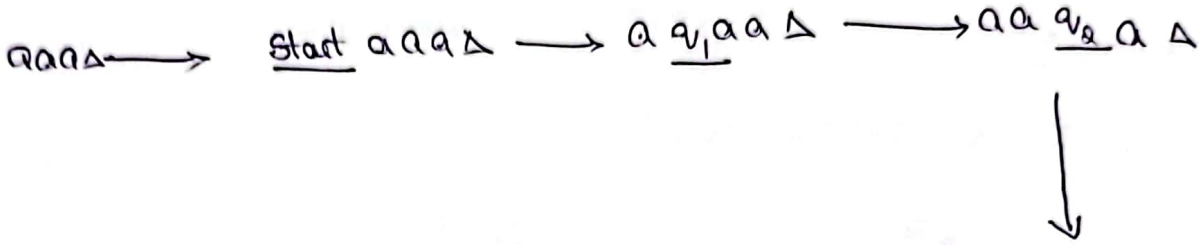
↓

babaa halt ⟵ babaa q_2 Δ

(Accepted)

Example - 2:

"aaa"



(Rejected)

Finally the language having three Consecutive "aaa" will not accepted by the Turing machine