5 tuples of DFA:

M = (Q, Σ, δ, q1, F)

Q (Set of finite state) = {q1, q2, q3, q4, q5, q6, q7, q8, q9}

Σ (Given that) = Γ ∪ Λ ∪ ∆ ∪ Φ

Where, Γ = {a, b, c, . . ., z}, Λ = {0, 1, 2, …9}, ∆ = {.}, and Φ = {@}

q1 (Initial state) = q1

F (Accept state) = {q8}

δ (Transition table): Q × Σ → Q

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| state | Γ | Λ | ∆ | Φ | Γ - c | c | Γ - o | o | Γ - m | m |
| q1 | q2 | q9 | q9 | q9 |  |  |  |  |  |  |
| q2 | q2 | q2 | q1 | q3 |  |  |  |  |  |  |
| q3 | q4 | q9 | q9 | q9 |  |  |  |  |  |  |
| q4 | q4 | q4 | q5 | q9 |  |  |  |  |  |  |
| q5 |  | q9 | q9 | q9 | q4 | q6 |  |  |  |  |
| q6 |  | q4 | q5 | q9 |  |  | q4 | q7 |  |  |
| q7 |  | q4 | q5 | q9 |  |  |  |  | q4 | q8 |
| q8 | q4 | q4 | q5 | q9 |  |  |  |  |  |  |

q9 Trap State

Γ = {a, b, c, . . ., z}, Λ = {0, 1, 2, . . ., 9}, ∆ = {.} and Φ = {@}