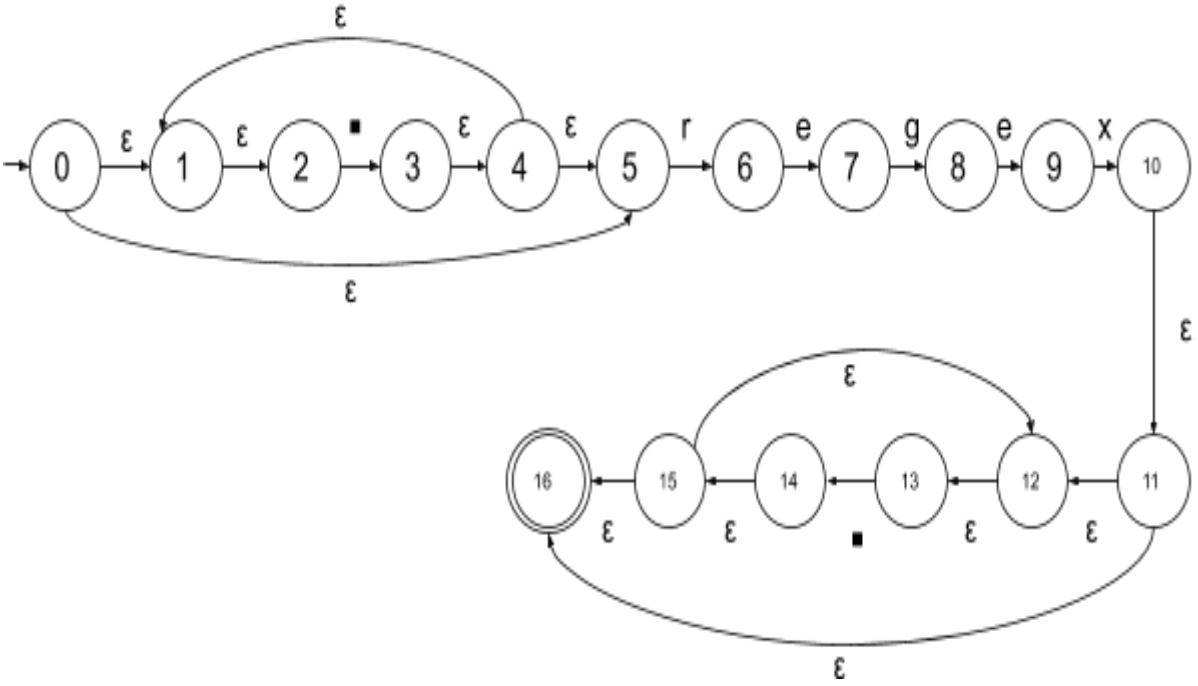
EXPRESIÓN REGULAR:

- .*regex.*

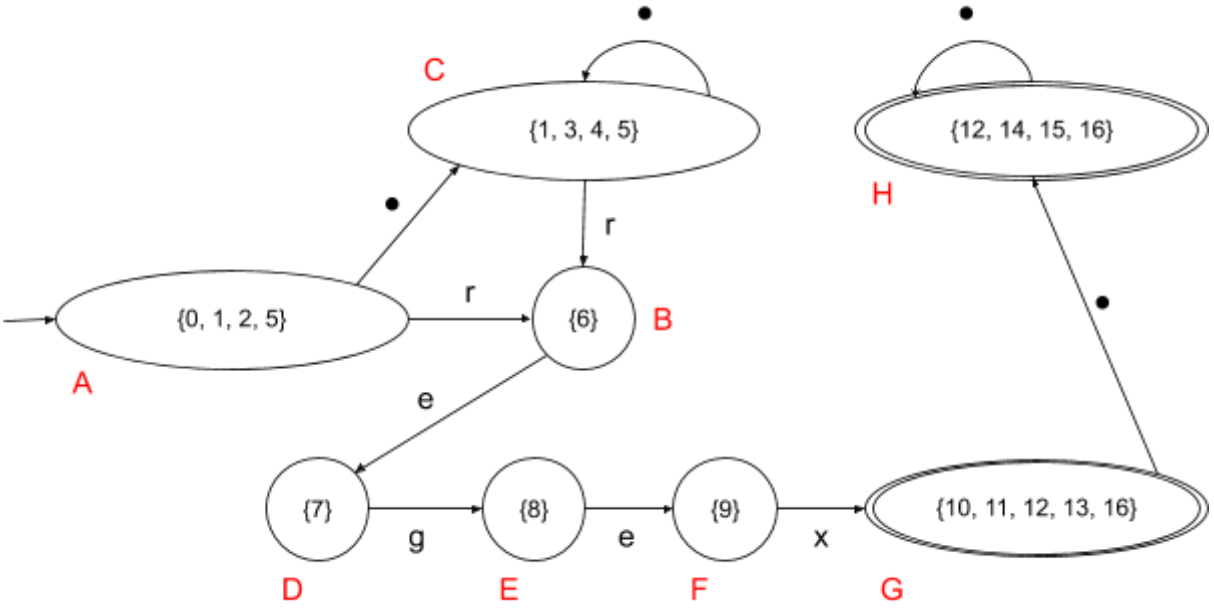
AFN:



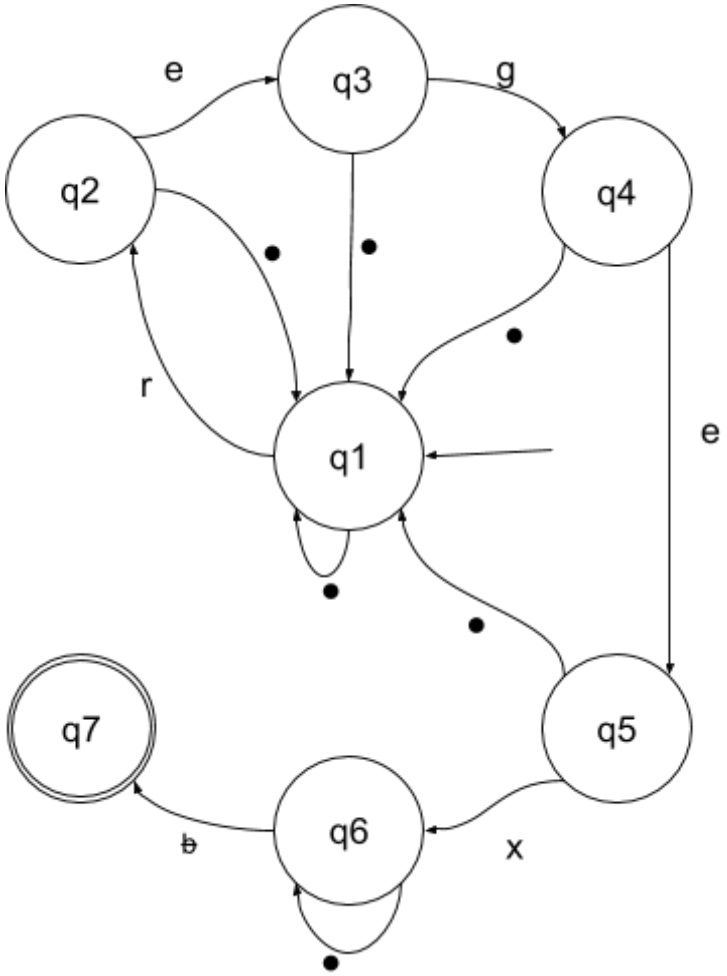
AFD:

- A → {0, 1, 2, 5} → r'' ó ε
- B → {6} → r'r'
- D → {7} → r'e'
- E → {8} → r'g'
- F → {9} → r'e'
- G → {10, 11, 12, 13, 16} → r'x'
- C → {1, 3, 4, 5} → r'.'
- H → {12, 14, 15, 16} → r'.'

- regex →A B D E F G
- regex . →A B D E F G H
- . regex →A C B D E F G
- . regex . → A C B D E F G H



Máquina de Turing reconocedora de '.*regex.*':



Definición:

- Q = {q1, q2, q3, q4, q5, q6, q7}
- ∑ = {., r, e, g, x}
- Γ = {., r, e, g, x, ~~b~~}
- s = q1
- F = {q7}
- δ dado por:
    - δ(q1, .) = (q1, ., R)
    - δ(q1, r) = (q2, r, R)
    - δ(q2, .) = (q1, ., R)
    - δ(q2, e) = (q3, e, R)
    - δ(q3, .) = (q1, ., R)
    - δ(q3, g) = (q4, g, R)
    - δ(q4, .) = (q1, ., R)
    - δ(q4, e) = (q5, e, R)
    - δ(q5, .) = (q1, ., R)
    - δ(q5, x) = (q5, x, R)
    - δ(q6, .) = (q6, ., R)
    - δ(q6, ~~b~~) = (q7, ~~b~~, R)