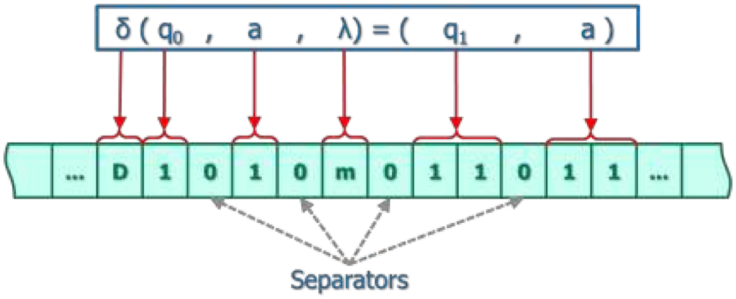
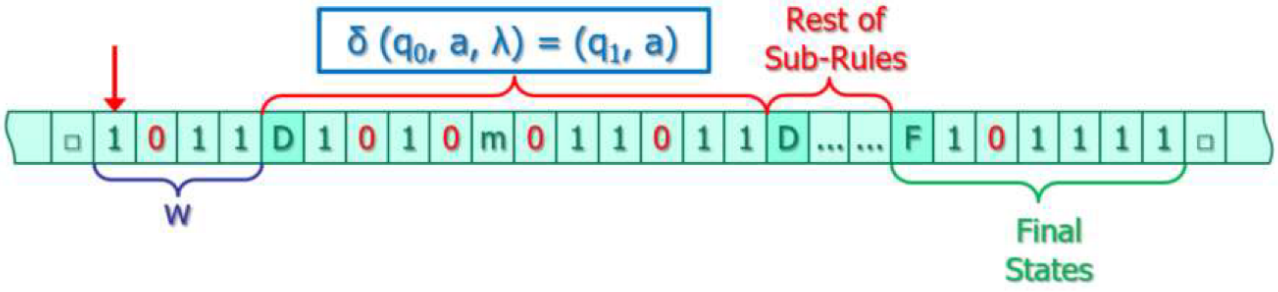
DPDA: $M = (Q, \Sigma, \Gamma, \delta, q_0, Z, F)$

Encoding:

- $Q = \{q_0, q_1, q_2, q_3\} = \{1, 11, 111, 1111\}$
- $q_0 = 1$
- $\Sigma = \{a, b\} = \{1, 11\}$
- $\Gamma = \{Z, a, b\} = \{1, 11, 111\}$
- $\lambda = m$
- $F = \{q_0, q_3\} = \{1, 1111\}$
- $\delta(q_i, a, x) = (q_j, u)$ , $u \in \Gamma^*$




* Difference from DFA
  - Subrule : there're 4 seperators (0) in each subrule

---

Examine sample project Simulate DFA by UTM

Test run 1: 1D1011D11011F  F = ϕ

D1011 ⇒ $\delta(q_0, a) = q_0$

D11011 ⇒ $\delta(q_0, b) = q_0$

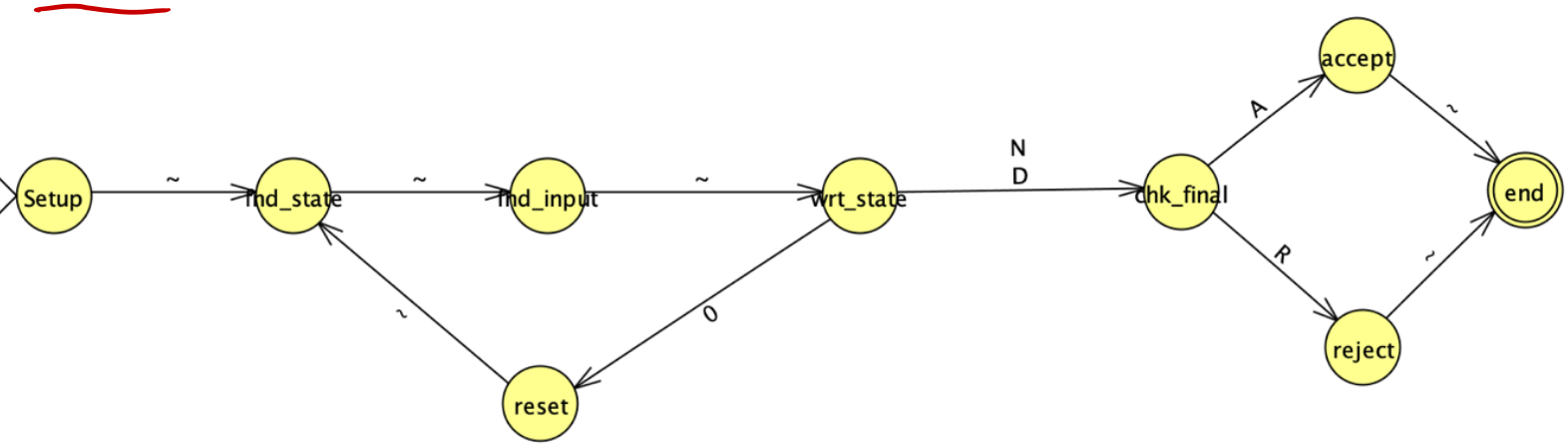

w = a ⇒ Rejected

Test run 2: 11011D1011D11011F1

w = bb  $\delta(q_0, a) = q_0$  $\delta(q_0, b) = q_0$  $F = \{q_0\}$


⇒ accepted

# Main : DFA in UTM sample project

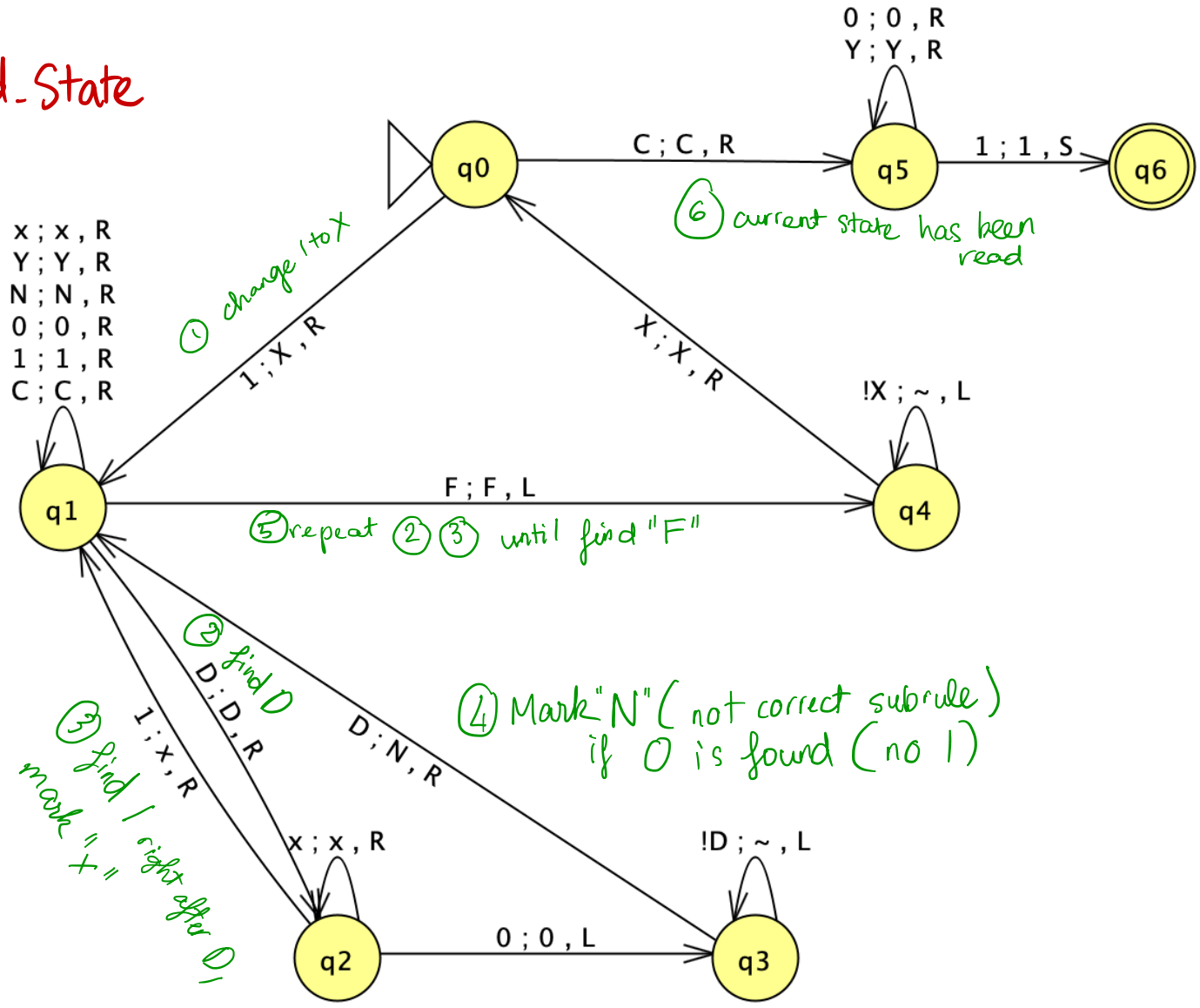



initial state
current state marker

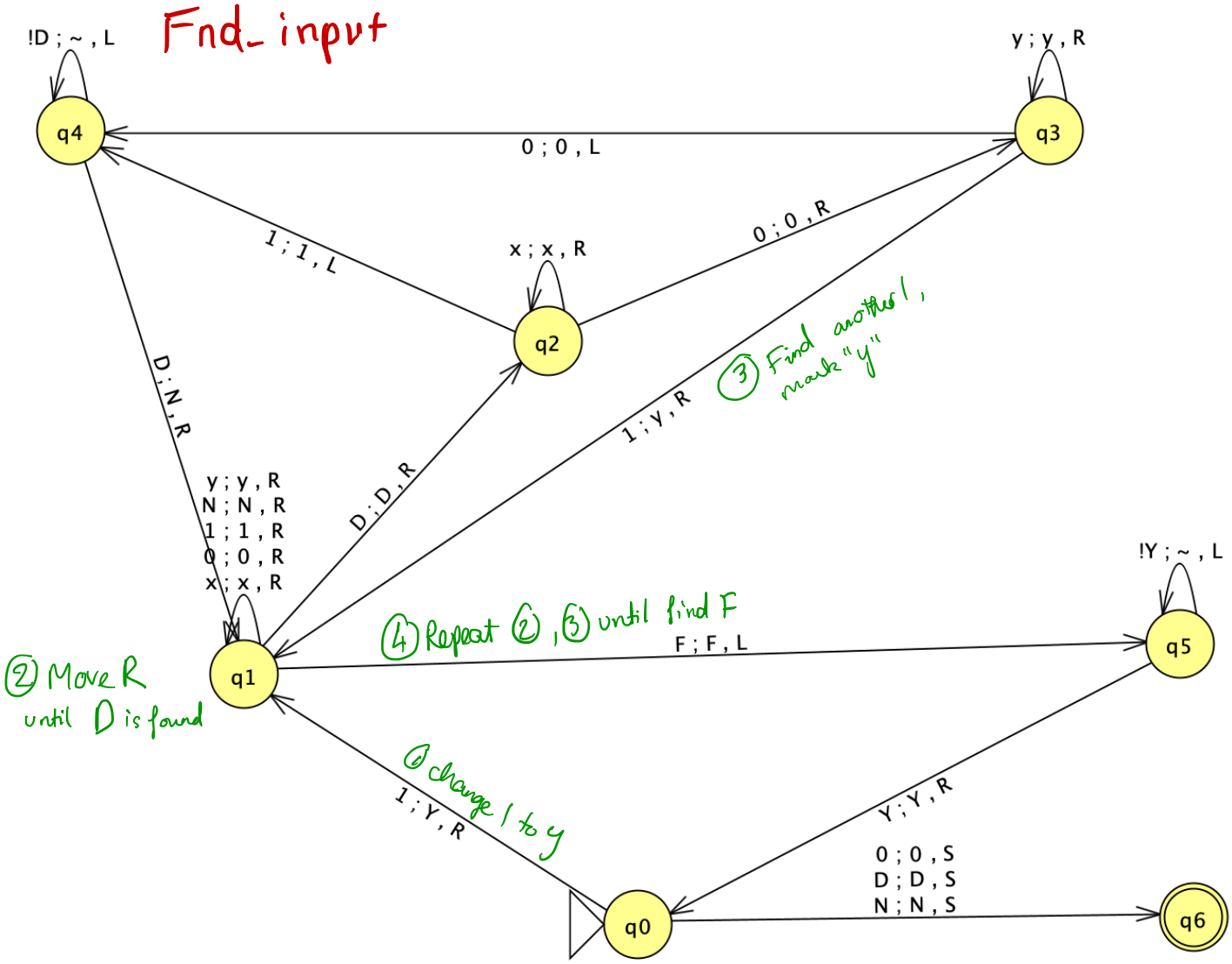
## Setup

insert "1C" before input string

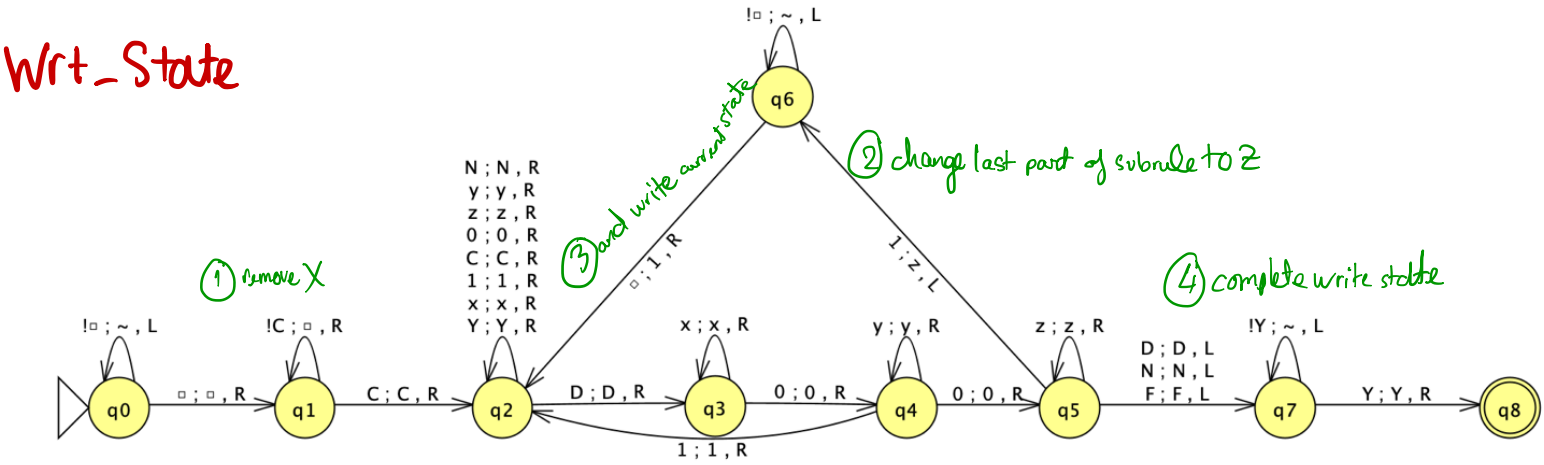

## Fnd_State



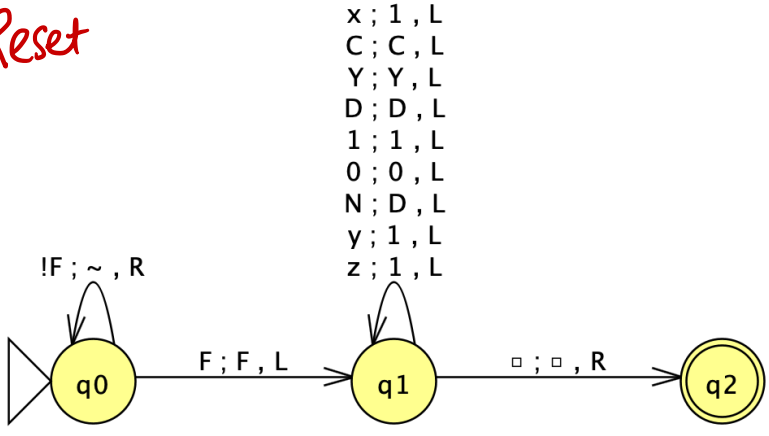
# Fnd_input



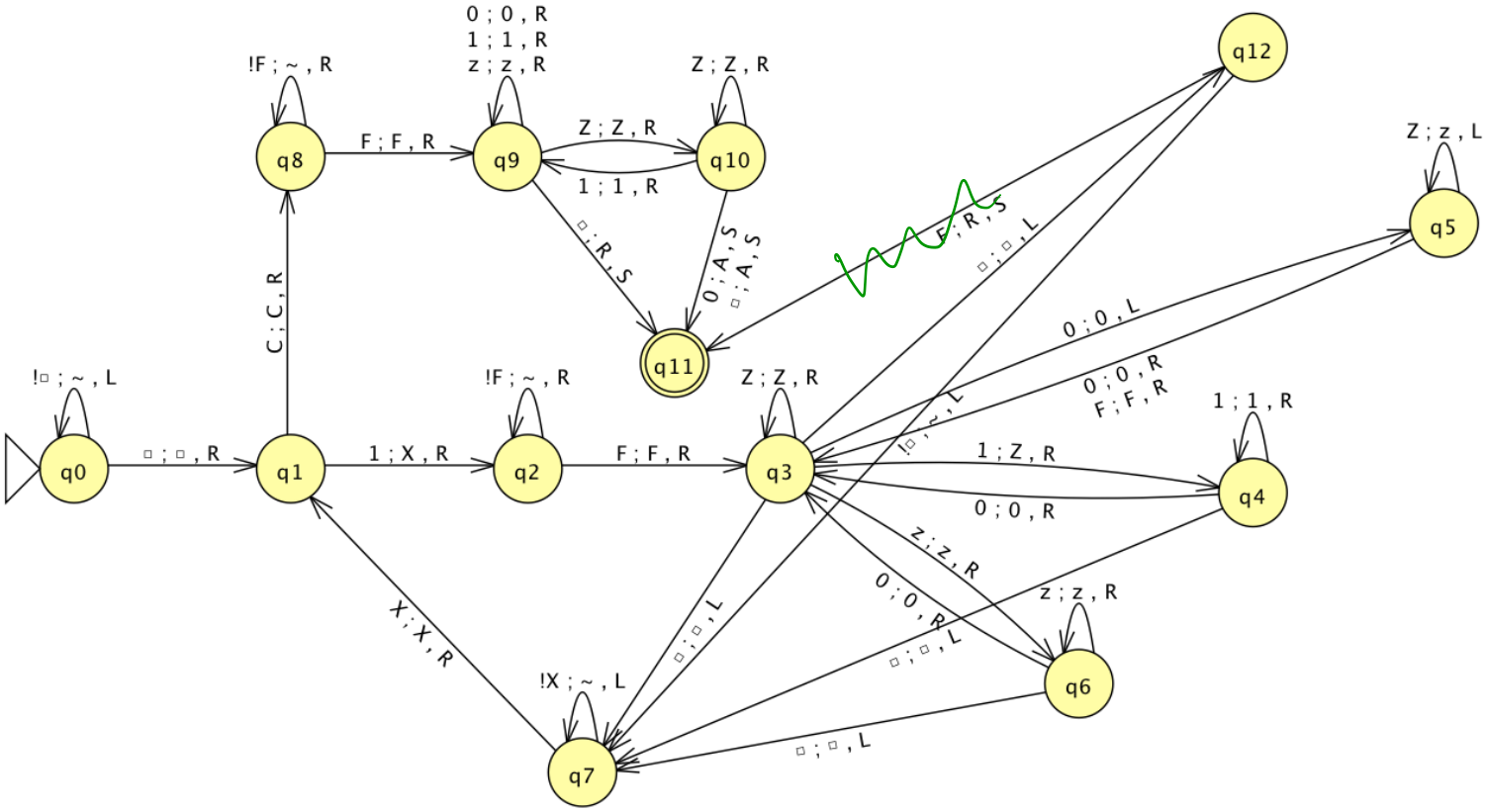

# Wrt_State



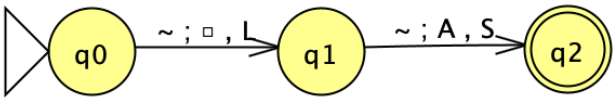

# Reset



# Check Final




# Accept




# Reject