DFA / NFA / ε-NFA

24/06/2022

→

$ROR(L) = \{$

$aw \mid wa \in L$

L è reg. → ROR è regolare

DFA D'

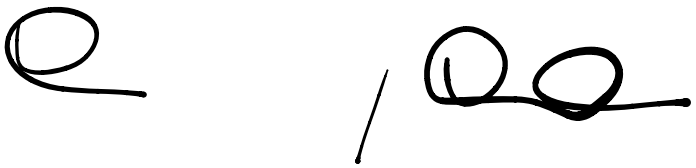
D' stesso inizio di D

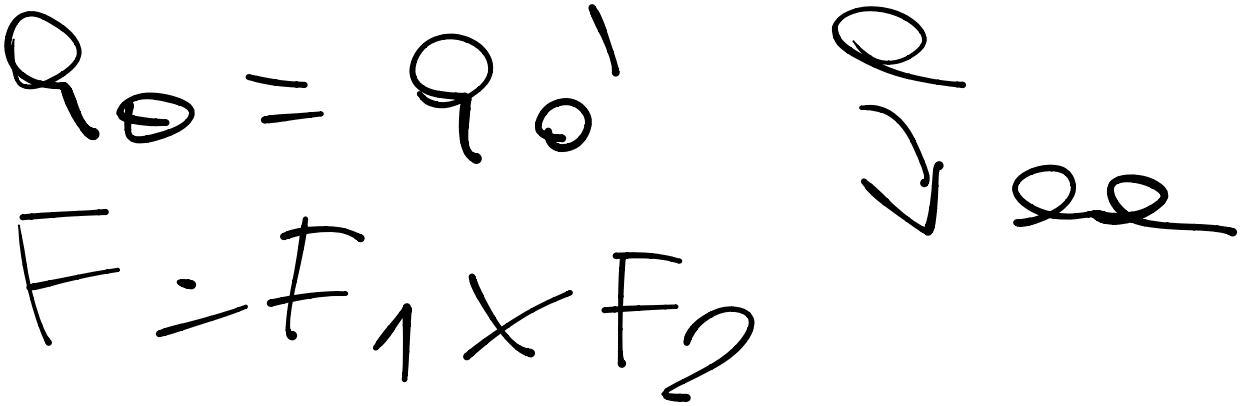
D è DFA che riconosce L

δ (TRANS.)

- DFA legge tutti i W
(tutti gli input)
- arriva al simbolo finale
(stesso n. di volte
in cui lo aperto)
- scarta i simboli

- uno volta cambiati passando con input succ.

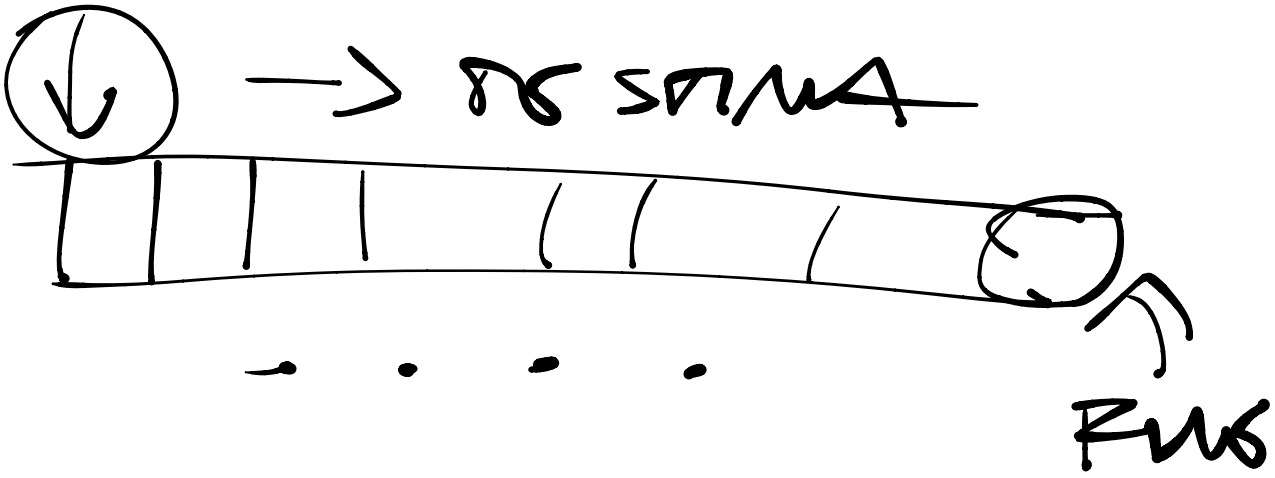




TM

TM_{VAR} — TM_{NS}

NASTRO SU CUI



F. DI TR. TM

$\delta : Q \times \Gamma \to Q \times \Gamma$

↑ (NABLA) $\times$ $\{L, R\}$

↑ NORMALE

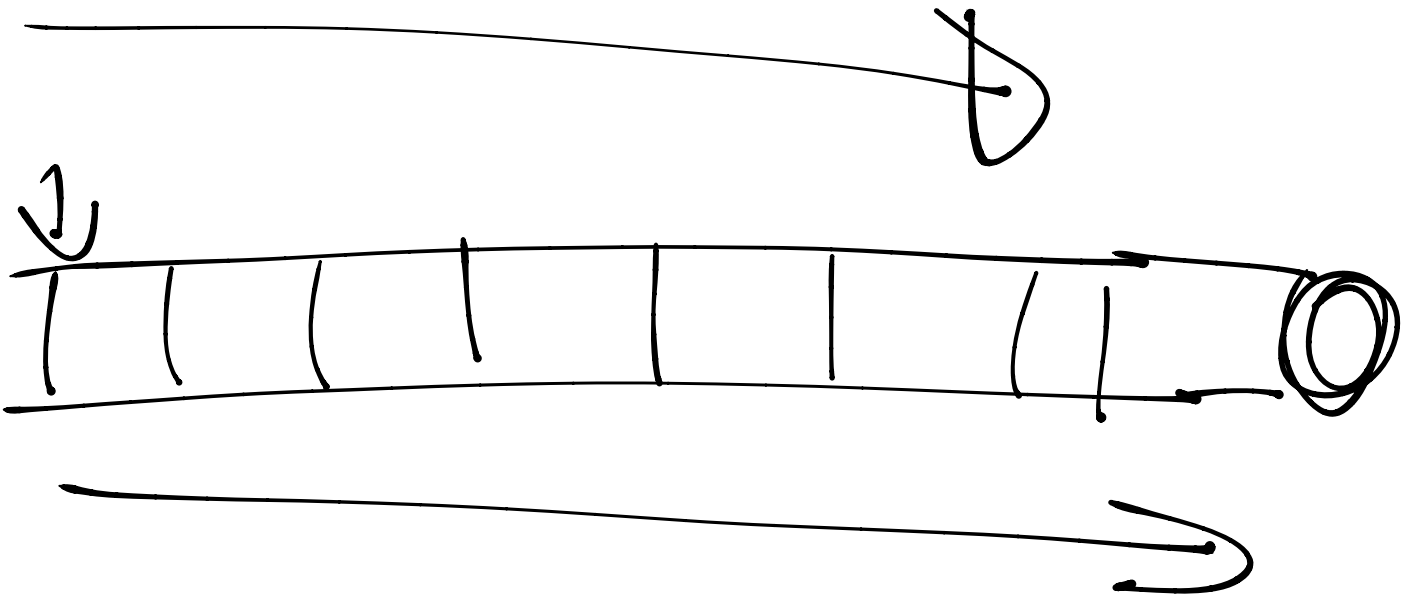
$\delta : Q \times \Gamma \longmapsto$

$Q \times \Gamma \times \{T, N, \leftarrow, \rightarrow\}$

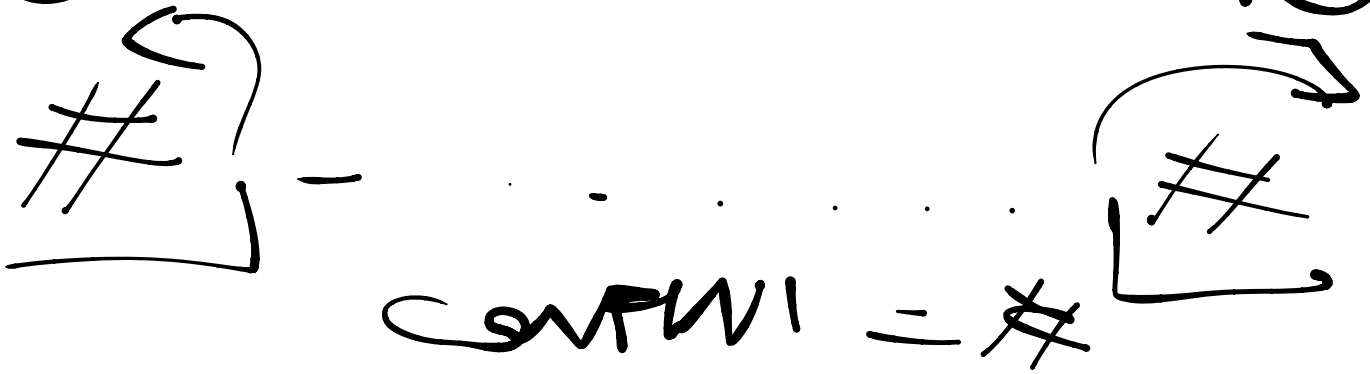
VARIANTS

$TM_{SWG} \rightarrow TM$

$\{T, N, \leftarrow, \rightarrow\}$



① CONF. SUL NASTRO



STATI CLASSE

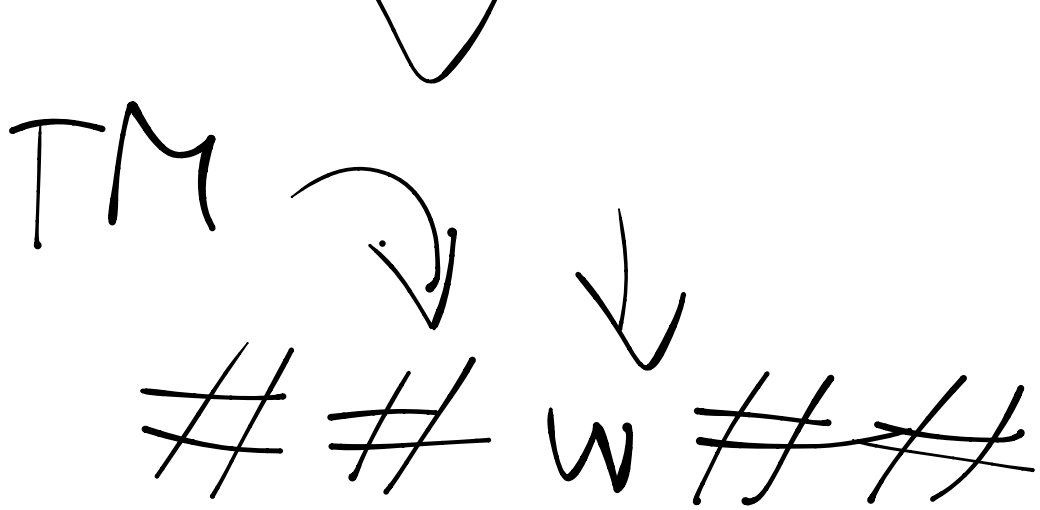
$$\delta : Q \times \Gamma \mapsto Q \times \Gamma \times \{A, B, N, Y\}$$

TM SING → ACCEPT

VERA → SI

FALSA → NO

$2^4 = 16$ comb. di $\{A, B, N, Y\}$



→ (L)

$\delta(q, a) = (q, b, L)$

→ USCO e VERIFICO
CHE LEGGO 3 SIMBOLI

→ MARCO SE
NON SONO "YES"
OPPURE "NAY"

→ (R)

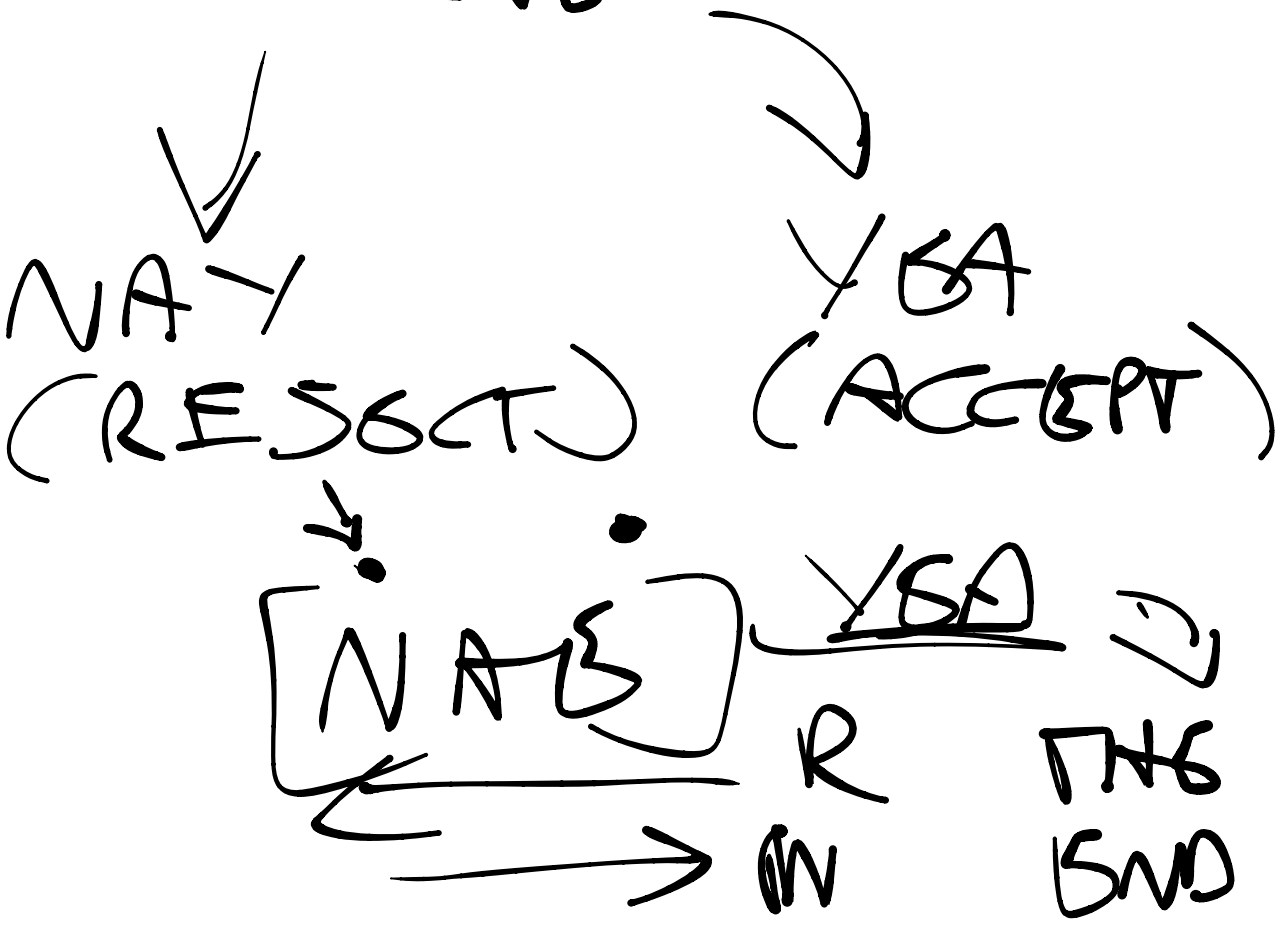
→ SCRIVO E VERIFICO

CHS STATO 3 SIRBOCI

→ MARCO ON

→ VADO AVANTI

PIN CHE



$q\{R2, L3\}$

$\sigma : Q \times \Gamma \longrightarrow$

$Q \times \bar{T} \times \{R2, L3\}$

$TM_S \leq_M TM_{L3R2}$

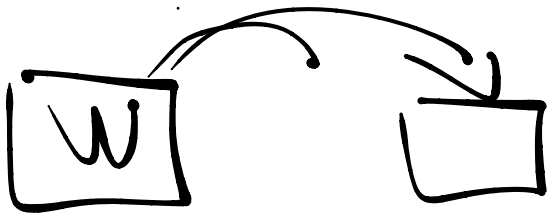
↑ LÌ NO !! (SEMI-INF)

$\{L, R\}$

$\{L3, R2\}$

- SE INIZIO NASTRO
  - (NO L3 / SI R2)

- $\delta(M, e) = \delta(q, b, R2)$



= lungo W

- scrivo W (input)
- mi sposto a dx
oltre 2 celle

// STESSO PER L3

$\delta(M, e) = \delta(q, b, L3)$

- se inizio nastro
- non fa muovere!
- se no
- scrivi W
- muovi testa L3

DECIDABLE