

# Analizorul descendent cu reveniri

Configuratie:

$(s, i, \alpha, \beta)$

- $s$  - starea automatului
  - $q$  – stare normala
  - $r$  – stare de revenire (sau  $b$  – back)
  - $t$  – stare de terminare (terminare cu succes)
  - $e$  – stare de eroare
- $i$  – pozitia (urmatoare) in secventa de intrare
- $\alpha$  – stiva de lucru:      istoria r.p. aplicate
- $\beta$  – banda de intrare:    partea inca neprelucrata  
(stiva)

- configuratie initiala:  $(q, 1, \varepsilon, S)$

- Tranzitii:

- expandare:

$$(q, i, \alpha, A\beta) \vdash (q, i, \alpha A_1, \gamma_1 \beta)$$

- avans:

$$(q, i, \alpha, a_i \beta) \vdash (q, i+1, \alpha a_i, \beta)$$

- insucces de moment:

$$(q, i, \alpha, a\beta) \vdash (r, i, \alpha, a\beta) \quad a \neq a_i$$

- revenire:

$$(r, i, \alpha, a\beta) \vdash (r, i-1, \alpha, a\beta)$$

- alta incercare:  $(r, i, \alpha A_j, \gamma_j \beta)$

dc.  $\exists A_{j+1} \rightarrow \gamma_{j+1}$

altfel

$$\vdash (q, i, \alpha A_{j+1}, \gamma_{j+1} \beta)$$

$$\vdash (r, i, \alpha, A\beta)$$

daca  $i = 1, A = S$

$$\vdash (e, i, \alpha, A\beta)$$

$\alpha = \varepsilon, \beta = \varepsilon$

- succes:

$$(q, n+1, \alpha, \varepsilon) \vdash (t, n+1, \alpha, \varepsilon)$$

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- Obs: se numeroteaza regulile de productie cu acelasi membru stang

- Exemplu:

$$S \rightarrow aSbS$$

$$S \rightarrow aS$$

$$S \rightarrow c$$

- $w = ac$  ...?  $(q, 1, \varepsilon, S) \vdash \dots$
- $w = acbc$  ...?
- $w = aacbc$  ...?

**Analizorul descendent cu reveniri**