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Intencionadamente en blanco

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Aceptación por estado final vs por vaciado de pila

$$\mathcal{LF}(AP) \subseteq \mathcal{LV}(AP)$$

$$\begin{array}{rllllll} P = & \{\Sigma_E, & \Gamma, & Q, & A_1, & q_1, & f, & F\} \\ P^V := & \{\Sigma_E, & \Gamma \cup B_1, & Q \cup \{p_1, r_v\}, & B_1, & p_1, & f', & \emptyset\} \end{array}$$

1. $f'(p_1, \varepsilon, B_1) := \{(q_1, A_1 B_1)\}$
2. $f'(q, a, A) := f(q, a, A) \qquad \forall (q, a, A) \in Q \times \Sigma_E \cup \{\varepsilon\} \times \Gamma$
3. $f'(q, \varepsilon, A) := f'(q, \varepsilon, A) \cup \{(r_v, \varepsilon)\} \qquad \forall q \in F\,, A \in \Gamma \cup \{B_1\}$
4. $f'(r_v, \varepsilon, A) := \{(r_v, \varepsilon)\} \qquad \forall A \in \Gamma \cup \{B_1\}$

$$LF(P) = LV(P^V)$$

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EJEMPLO

$AP_5 = (E = \{a, b\}, \Gamma = \{A, a\}, Q = \{p, q, r, s\}, A, p, f, F = \{q\})$

$\rightarrow p$	a	b
A	(r, a)	(q, A)

$(\mathbf{q})$	a
A	(q, A)

r	a	b
a	(r, aa)	(s, ϵ)

s	b
a	(s, ϵ)

$$LF(AP_5) = ba^*$$

$$LV(AP_5) = \{a^n b^n \,/\, n > 0\}$$

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$AP_5^V = (\{a, b\}, \{B, A, a\}, \{p_1, p, q, r, s, r_v\}, B, p_1, f', \emptyset)$

$\rightarrow p_1$	ϵ
B	(p, AB)

r_v	ϵ
A	(r_v, ϵ)
a	(r_v, ϵ)
B	(r_v, ϵ)

q	a	ϵ
A	(q, A)	(r_v, ϵ)
a		(r_v, ϵ)
B		(r_v, ϵ)

p	a	b
A	(r, a)	(q, A)

r	a	b
a	(r, aa)	(s, ϵ)

s	b
a	(s, ϵ)

$$LV(AP_5^V) = ab^*$$

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$$
\begin{array}{llll}
(p, ba, A) & \vdash (\mathbf{q}, a, A) & \vdash (\mathbf{q}, \epsilon, A) & \\
\hline
(p_1, ba, B) & \vdash & & \\
(p, ba, AB) & \vdash (q, a, AB) & \vdash (q, \epsilon, AB) & \vdash (r_v, \epsilon, B) \vdash (r_v, \epsilon, \epsilon) \\
(p_1, ba, B) & \vdash & & \\
(p, ba, AB) & \vdash (q, a, AB) & \vdash (r_v, a, AB) & \vdash (r_v, a, B) \vdash (r_v, a, \epsilon)
\end{array}
$$

$$
\begin{array}{llllll}
(p, aabb, A) & \vdash (r, abb, a) & \vdash (r, bb, aa) & \vdash (s, b, a) & \vdash (s, \epsilon, \epsilon) \\
\hline
(p_1, aabb, B) & \vdash & & & \\
(p, aabb, AB) & \vdash (r, abb, aB) & \vdash (r, bb, aaB) & \vdash (s, b, aB) & \vdash (s, \epsilon, B)
\end{array}
$$

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Aceptación por estado final vs por vaciado de pila

$$\mathcal{LF}(AP) \supseteq \mathcal{LV}(AP)$$

$$
\begin{array}{rllllll}
P = & \{\Sigma_E, & \Gamma, & Q, & A_1, & q_1, & f, & F\} \\
P^F := & \{\Sigma_E, & \Gamma \cup B_1, & Q \cup \{p_1, r_f\}, & B_1, & p_1, & f', & \{r_f\}\}
\end{array}
$$

1. $f'(p_1, \varepsilon, B_1) := \{(q_1, A_1 B_1)\}$
2. $f'(q, a, A) := f(q, a, A) \qquad \forall (q, a, A) \in Q \times \Sigma_E \cup \{\varepsilon\} \times \Gamma$
3. $f'(q, \varepsilon, B_1) := \{(r_f, \varepsilon)\} \qquad \forall q \in Q$

$$LV(P) = LF(P^F)$$

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$$AP_5^F = (\{a,b\}, \{B, A, a\}, \{p_1, p, q, r, s, r_f\}, B, p_1, f', r_f)$$

p	a	b	ϵ
A	(r,a)	(q,A)	
B			(r_f,ϵ)

q	a	ϵ
A	(q,A)	
B		(r_f,ϵ)

r	a	b	ϵ
a	(r,aa)	(s,ϵ)	
B			(r_f,ϵ)

s	b	ϵ
a	(s,ϵ)	
B		(r_f,ϵ)

$\rightarrow p_1$	ϵ
B	(p,AB)

$$LF(AP_5^F) = \{a^n b^n \,/\, n > 0\}$$

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$(p, aabb, A) \vdash (r, abb, a) \vdash (r, bb, aa) \vdash (s, b, a) \vdash (s, \epsilon, \epsilon)$

$(p_1, aabb, B) \vdash$

$(p, aabb, AB) \vdash (r, abb, aB) \vdash (r, bb, aaB) \vdash (s, b, aB) \vdash (s, \epsilon, B)$

$\vdash (\mathbf{r_f}, \epsilon, \epsilon)$