Fioramonti Nahuel 2019 2K1

Sintaxis y Semántica de los lenguajes

Cuadro resumen maquinas abstractas

Máquina	Jerarquía de Chomsky	Nombre de la Gramatica	Reglas de producción	Definición Formal	Función de Transición	Configuración inicial (K_0)	Configuración instantánea (K_t)	Configuración final (K_f)	Aceptación de palabras y lenguaje
ME	---	---	---	ME= $(\Sigma_e, \Sigma_s, Q, f, g)$	$f: Q \times \Sigma_e \rightarrow Q$ $g: Q \times \Sigma_e \rightarrow \Sigma_s$	---	---	---	---
MO	---	---	---	MO= $(\Sigma_e, \Sigma_s, Q, f, g)$	$f: Q \times \Sigma_e \rightarrow Q$ $g: Q \rightarrow \Sigma_s$	---	---	---	---
AFD_r	Tipo 3	Lenguajes Regulares	$S := \lambda$ $A := aB/Ba$	$AFD_r = (\Sigma_e, Q, q_0, A, f)$	$f: Q \times \Sigma_e \rightarrow Q$	$K_0 = (q_0, \alpha)$	$K_t = (q, \beta)$	$K_f = (q_n, \lambda)$	$L = \{\alpha / (q_0, \alpha) \vdash^{*} (q_A, \lambda)\}$
AFD_t	Tipo 3	Lenguajes Regulares	$S := \lambda$ $A := aB/Ba$	$AFD_t = (\Sigma_e, \Sigma_s, Q, A, q_0, f, g)$	$f: Q \times \Sigma_e \rightarrow Q$ $g: Q \times \Sigma_e \rightarrow \Sigma_s$	$K_0 = (q_0, \alpha)$	$K_t = (q, \beta)$	$K_f = (q_n, \lambda)$	$L = \{\alpha / (q_0, \alpha) \vdash^{*} (q_A, \lambda)\}$
AFND	Tipo 3	Lenguajes Regulares	$S := \lambda$ $A := aB/Ba$	AFND = (Σ_e, Q, q_0, A, f)	$f: Q \times \Sigma_e \rightarrow P(Q)$	$K_0 = (q_0, \alpha)$	$K_t = (\{q\}, \beta)$	$K_f = (\{q_n\}, \lambda)$	$L = \{\alpha / (q_0, \alpha) \vdash^{*} (q_A, \lambda)\}$
AFND-λ	Tipo 3	Lenguajes Regulares	$S := \lambda$ $A := aB/Ba$	AFND-λ = (Σ_e, Q, q_0, A, f)	$f: Q \times (\Sigma_e \cup \{\lambda\}) \rightarrow P(Q)$	$K_0 = (q_0, \alpha)$	$K_t = (\{q\}, \beta)$	$K_f = (\{q_n\}, \lambda)$	$L = \{\alpha / (q_0, \alpha) \vdash^{*} (q_A, \lambda)\}$
AFDB	Tipo 3	Lenguajes Regulares	$S := \lambda$ $A := aB/Ba$	AFDB = $(\Sigma_e, \Gamma_c, Q, q_0, A, f)$	$f: Q \times \Gamma \rightarrow Q \times \{I, D, N\}$	$K_0 = (q_0, \vdash\alpha\dashv, o)$	$K_t = (q, \vdash\alpha\dashv, k)$	$K_f = (q, \vdash\alpha\dashv, n)$	$L = \{\alpha / (q_0, \vdash\alpha\dashv, o) \vdash^{*} (q_A, \vdash\alpha\dashv, n)\}$
APD	Tipo 2	Independientes del contexto	$S := \lambda$ $A := \alpha$	APD= $(\Sigma_e, \Gamma_p, Q, q0, \#, A, f)$	$f: Q \times \Sigma e \times \Gamma \rightarrow Q \times \Gamma^{*}$	$K_0 = (q_0, \alpha, \#)$	$K_t = (q, \beta, \delta)$	$K_f = (q, \lambda, \#)$	$L = \{\alpha / (q0, \alpha, \#) \vdash^{*} (q, \lambda, \#\})$ $L = \{\alpha / (q0, \alpha, \#) \vdash^{*} (q_A, \lambda, \delta\})$ $L = \{\alpha / (q0, \alpha, \#) \vdash^{*} (q_A, \lambda, \#\})$
APND	Tipo 2	Independientes del contexto	$S := \lambda$ $A := \alpha$	APND = $(\Sigma_e, \Gamma_p, Q, q0, \#, A, f)$	$f: Q \times (\Sigma_e \cup \{\lambda\}) \times \Gamma \rightarrow P(Q \times \Gamma^{*})$	$K_0 = (q_0, \alpha, \#)$	$K_t = (\{q\}, \beta, \delta)$	$K_f = (\{q\}, \lambda, \#)$	$L = \{\alpha / (q0, \alpha, \#) \vdash^{*} (q, \lambda, \#\})$ $L = \{\alpha / (q0, \alpha, \#) \vdash^{*} (q_A, \lambda, \delta\})$ $L = \{\alpha / (q0, \alpha, \#) \vdash^{*} (q_A, \lambda, \#\})$
ALA	Tipo 1	Dependientes del contexto	$S := \lambda$ $\alpha A \beta := \alpha\gamma\beta$	ALA= $(\Sigma_e, \Gamma_c, Q, q_0, A, f)$	$f: Q \times \Gamma \rightarrow Q \times \Gamma \times \{I, D, N, P\}$	$K_0 = (q_0, \vdash\alpha\dashv, 1)$	$K_t = (q, \vdash\beta_t\dashv, k)$	$K_f = (q, \vdash\beta_t\dashv, k)$	$L = \{\alpha / (q_0, \vdash\alpha\dashv, 1) \vdash^{*} (q_A, \vdash\beta_t\dashv, k)\}$ $L = \{\alpha / (q_0, \vdash\alpha\dashv, 1) \vdash^{*} (q, \vdash\beta_t\dashv, k)\}$
MT	Tipo 0	Lenguajes Libres	$\alpha A \beta := \gamma$	MT = $(\Sigma_e, \Gamma_c, Q, q_0, A, f, \text{ƀ})$	$f: Q \times \Gamma \rightarrow Q \times \Gamma \times \{I, D, N, P\}$	$K_0 = (q_0, \alpha, 1)$	$K_t = (q, \beta_t, k)$	$K_f = (q, \beta_t, k)$	$L = \{\alpha / (q_0, \alpha, 1) \vdash^{*} (q_A, \beta_t, k)\}$ $L = \{\alpha / (q_0, \alpha, 1) \vdash^{*} (q, \beta_t, k)\}$
MTND	Tipo 0	Lenguajes Libres	$\alpha A \beta := \gamma$	MTND = $(\Sigma_e, \Gamma_c, Q, q_0, A, f, \text{ƀ})$	$f: Q \times \Gamma \rightarrow P(Q \times \Gamma \times \{I, D, N, P\})$	$K_0 = (q_0, \alpha, 1)$	$K_t = (\{q\}, \beta_t, k)$	$K_f = (\{q\}, \beta_t, k)$	$L = \{\alpha / (q_0, \alpha, 1) \vdash^{*} (q_A, \beta_t, k)\}$ $L = \{\alpha / (q_0, \alpha, 1) \vdash^{*} (q, \beta_t, k)\}$