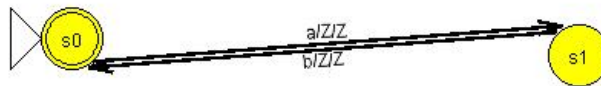


Autómata de entrada



Gramatica Obtenida del Autómata de Pila

Variables: [S, [iniauxXs0], [iniauxXs1], [iniauxXiniaux], [iniauxXaux], [auxXaux], [auxZaux], [s0Zs0], [s0Zs1], [s0Ziniaux], [s0Zaux], [s0Xaux], [s1Zs0], [s1Zs1], [s1Ziniaux], [s1Zaux]]

Variable Inicial: S

Simbolos Terminales: [a, b]

Producciones: [auxZaux]=[λ], [iniauxXiniaux]=[s0Zs0],[s0Xiniaux],[s0Zs1],[s1Xiniaux], [s0Ziniaux],[iniauxXiniaux], [s0Zaux],[auxXiniaux], [s0Zs1]=[a,[s1Zs1]], [s1Zaux]=[b,[s0Zaux]], [s1Ziniaux]=[b,[s0Ziniaux]], [iniauxXaux]=[s0Zs0],[s0Xaux], [s0Zs1],[s1Xaux], [s0Ziniaux],[iniauxXaux], [s0Zaux],[auxXaux]], [s0Ziniaux]=[a,[s1Ziniaux]], [auxXaux]=[λ], [s1Zs0]=[b,[s0Zs0]], S=[[iniauxXs0], [iniauxXs1], [iniauxXiniaux], [iniauxXaux]], [s0Xaux]=[λ], [iniauxXs1]=[s0Zs0],[s0Xs1], [s0Zs1],[s1Xs1], [s0Ziniaux],[iniauxXs1], [s0Zaux],[auxXs1]], [s0Zaux]=[a,[s1Zaux], λ], [iniauxXs0]=[s0Zs0],[s0Xs0], [s0Zs1],[s1Xs0], [s0Ziniaux],[iniauxXs0], [s0Zaux],[auxXs0]], [s1Zs1]=[b,[s0Zs1]], [s0Zs0]=[a,[s1Zs0]]

SIMPLIFICACION

Variables: [S, [iniauxXs0], [iniauxXs1], [iniauxXiniaux], [iniauxXaux], [auxXaux], [auxZaux], [s0Zs0], [s0Zs1], [s0Ziniaux], [s0Zaux], [s0Xaux], [s1Zs0], [s1Zs1], [s1Ziniaux], [s1Zaux]]

Variable Inicial: S

Simbolos Terminales: [a, b]

Producciones: [auxZaux]=[λ], [iniauxXiniaux]=[s0Zs0],[s0Xiniaux],[s0Zs1],[s1Xiniaux], [s0Ziniaux],[iniauxXiniaux], [s0Zaux],[auxXiniaux], [s0Zs1]=[a,[s1Zs1]], [s1Zaux]=[b,[s0Zaux]], [s1Ziniaux]=[b,[s0Ziniaux]], [iniauxXaux]=[s0Zs0],[s0Xaux], [s0Zs1],[s1Xaux], [s0Ziniaux],[iniauxXaux], [s0Zaux],[auxXaux]], [s0Ziniaux]=[a,[s1Ziniaux]], [auxXaux]=[λ], [s1Zs0]=[b,[s0Zs0]], S=[[iniauxXs0], [iniauxXs1], [iniauxXiniaux], [iniauxXaux]], [s0Xaux]=[λ], [iniauxXs1]=[s0Zs0],[s0Xs1], [s0Zs1],[s1Xs1], [s0Ziniaux],[iniauxXs1], [s0Zaux],[auxXs1]], [s0Zaux]=[a,[s1Zaux], λ], [iniauxXs0]=[s0Zs0],[s0Xs0], [s0Zs1],[s1Xs0], [s0Ziniaux],[iniauxXs0], [s0Zaux],[auxXs0]], [s1Zs1]=[b,[s0Zs1]], [s0Zs0]=[a,[s1Zs0]]

Quitamos variables sin producciones: [[s0Xs0], [s1Xs0], [auxXs0], [s0Xs1], [s1Xs1], [auxXs1], [s0Xiniaux], [s1Xiniaux], [auxXiniaux], [s1Xaux]]

Variables: [S, [iniauxXs0], [iniauxXs1], [iniauxXiniaux], [iniauxXaux], [auxXaux], [auxZaux], [s0Zs0], [s0Zs1], [s0Ziniaux], [s0Zaux], [s0Xaux], [s1Zs0], [s1Zs1], [s1Ziniaux], [s1Zaux]]

Variable Inicial: S

Simbolos Terminales: [a, b]

Producciones: [iniauxXiniaux]=[s0Ziniaux],[iniauxXiniaux], [auxZaux]=[λ], [s0Zs1]=[a,[s1Zs1]], [s1Zaux]=[b,[s0Zaux]], [s1Ziniaux]=[b,[s0Ziniaux]], [iniauxXaux]=[s0Zs0],[s0Xaux], [s0Ziniaux],[iniauxXaux], [s0Zaux],[auxXaux], [s0Ziniaux]=[a,[s1Ziniaux]], [auxXaux]=[λ], [s1Zs0]=[b,[s0Zs0]], S=[[iniauxXs0], [iniauxXs1], [iniauxXiniaux], [iniauxXaux]], [s0Xaux]=[λ], [iniauxXs1]=[s0Ziniaux],[iniauxXs1]], [s0Zaux]=[a,[s1Zaux], λ], [iniauxXs0]=[s0Ziniaux],[iniauxXs0]], [s1Zs1]=[b,[s0Zs1]], [s0Zs0]=[a,[s1Zs0]]

Quitamos variables con una única producción: [[auxXaux], [auxZaux], [s0Xaux]]

Variables: [S, [iniauxXs0], [iniauxXs1], [iniauxXiniaux], [iniauxXaux], [auxXaux], [auxZaux], [s0Zs0], [s0Zs1], [s0Ziniaux], [s0Zaux], [s0Xaux], [s1Zs0], [s1Zs1], [s1Ziniaux], [s1Zaux]]

Variable Inicial: S

Simbolos Terminales: [a, b]

Producciones: [iniauxXiniaux]=[s0Ziniaux],[iniauxXiniaux], [s0Zs1]=[a,[s1Zs1]], [s1Zaux]=[b,[s0Zaux]], [s1Ziniaux]=[b,[s0Ziniaux]], [iniauxXaux]=[s0Zs0], [s0Ziniaux],[iniauxXaux], [s0Zaux]], [s0Ziniaux]=[a,[s1Ziniaux]], [s1Zs0]=[b,[s0Zs0]], S=[[iniauxXs0], [iniauxXs1], [iniauxXiniaux], [iniauxXaux]], [iniauxXs1]=[s0Ziniaux],[iniauxXs1]], [s0Zaux]=[a,[s1Zaux], λ], [iniauxXs0]=[s0Ziniaux],[iniauxXs0]], [s1Zs1]=[b,[s0Zs1]], [s0Zs0]=[a,[s1Zs0]]

Quitamos variables sin producciones: [[auxXaux], [auxZaux], [s0Xaux]]

Variables: [S, [iniauxXs0], [iniauxXs1], [iniauxXiniaux], [iniauxXaux], [s0Zs0], [s0Zs1], [s0Ziniaux], [s0Zaux], [s1Zs0], [s1Zs1], [s1Ziniaux], [s1Zaux]]

Variable Inicial: S

Simbolos Terminales: [a, b]

Producciones: [iniauxXiniaux]=[s0Ziniaux],[iniauxXiniaux], [s0Zs1]=[a,[s1Zs1]], [s1Zaux]=[b,[s0Zaux]], [s1Ziniaux]=[b,[s0Ziniaux]], [iniauxXaux]=[s0Zs0], [s0Ziniaux],[iniauxXaux], [s0Zaux]], [s0Ziniaux]=[a,[s1Ziniaux]], [s1Zs0]=[b,[s0Zs0]], S=[[iniauxXs0], [iniauxXs1], [iniauxXiniaux], [iniauxXaux]], [iniauxXs1]=[s0Ziniaux],[iniauxXs1]], [s0Zaux]=[a,[s1Zaux], λ], [iniauxXs0]=[s0Ziniaux],[iniauxXs0]], [s1Zs1]=[b,[s0Zs1]], [s0Zs0]=[a,[s1Zs0]]

Quitamos variables con producciones unitarias:

Variables: [S, [iniauxXs0], [iniauxXs1], [iniauxXiniaux], [iniauxXaux], [s0Zs0], [s0Zs1], [s0Ziniaux], [s0Zaux], [s1Zs0], [s1Zs1], [s1Ziniaux], [s1Zaux]]

Variable Inicial: S

Simbolos Terminales: [a, b]

Producciones: [iniauxXiniaux]=[s0Ziniaux],[iniauxXiniaux],
[s0Zs1]=[a,[s1Zs1]], [s1Zaux]=[b,[s0Zaux]], [s1Ziniaux]=[b,[s0Ziniaux]], [iniauxXaux]=[s0Ziniaux],[iniauxXaux], a,[s1Zs0], a,[s1Zaux], λ], [s0Ziniaux]=[a,[s1Ziniaux]], [s1Zs0]=[b,[s0Zs0]], S=[iniauxXs0], [iniauxXs1], [iniauxXiniaux], [iniauxXaux]], [iniauxXs1]=[s0Ziniaux],[iniauxXs1]], [s0Zaux]=[a,[s1Zaux], λ], [iniauxXs0]=[s0Ziniaux],[iniauxXs0]], [s1Zs1]=[b,[s0Zs1]], [s0Zs0]=[a,[s1Zs0]]

Quitamos variables no alcanzables: [[s0Zs1], [s1Zs1]]

Variables: [S, [iniauxXs0], [iniauxXs1], [iniauxXiniaux], [iniauxXaux], [s0Zs0], [s0Ziniaux], [s0Zaux], [s1Zs0], [s1Ziniaux], [s1Zaux]]

Variable Inicial: S

Simbolos Terminales: [a, b]

Producciones: [iniauxXiniaux]=[s0Ziniaux],[iniauxXiniaux], [s1Zaux]=[b,[s0Zaux]], [s1Zs0]=[b,[s0Zs0]], S=[iniauxXs0], [iniauxXs1], [iniauxXiniaux], [iniauxXaux]], [s0Zaux]=[a,[s1Zaux], λ], [iniauxXs1]=[s0Ziniaux],[iniauxXs1]], [iniauxXs0]=[s0Ziniaux],[iniauxXs0]], [s1Ziniaux]=[b,[s0Ziniaux]], [s0Zs0]=[a,[s1Zs0]], [iniauxXaux]=[s0Ziniaux],[iniauxXaux], a,[s1Zs0], a,[s1Zaux], λ], [s0Ziniaux]=[a,[s1Ziniaux]]

Gramática de entrada simplificada

Variables: [S, A, B, C, D, E, F, G, H, I, J]

Variable Inicial: S

Simbolos Terminales: [a, b]

Producciones: D=[F,D, a,H, a,J, λ], E=[a,H], F=[a,I], G=[a,J, λ], A=[F,A], B=[F,B], S=[A, B, C, D], C=[F,C], H=[b,E], I=[b,F], J=[b,G]

Gramática

Variables: [S, A, B, C, D, E, F, G, H, I, J]

Variable Inicial: S

Simbolos Terminales: [a, b]

Producciones: D=[F,D, a,H, a,J, λ], E=[a,H], F=[a,I], G=[a,J, λ], A=[F,A], B=[F,B], S=[A, B, C, D], C=[F,C], H=[b,E], I=[b,F], J=[b,G]

-	S	A	B	C	D	E	F	G	H	I	J
S	-	X	X	X	X	-	-	-	-	-	-
A	-	-	-	-	-	-	X	-	-	-	-
B	-	-	-	-	-	-	X	-	-	-	-
C	-	-	-	-	-	-	X	-	-	-	-
D	-	-	-	-	-	-	X	-	-	-	-
E	-	-	-	-	-	-	-	-	-	-	-
F	-	-	-	-	-	-	-	-	-	-	-
G	-	-	-	-	-	-	-	-	-	-	-
H	-	-	-	-	-	-	-	-	-	-	-
I	-	-	-	-	-	-	-	-	-	-	-
J	-	-	-	-	-	-	-	-	-	-	-

Gramática

Variables: [S, A, B, C, D, E, F, G, H, I, J]

Variable Inicial: S

Simbolos Terminales: [a, b]

Producciones: D=[F,D, a,H, a,J, λ], E=[a,H], F=[a,I], G=[a,J, λ], A=[F,A], B=[F,B], S=[F,A, B, C, D], C=[F,C], H=[b,E], I=[b,F], J=[b,G]

-	S	A	B	C	D	E	F	G	H	I	J
S	-	-	X	X	X	-	X	-	-	-	-
A	-	-	-	-	-	-	X	-	-	-	-
B	-	-	-	-	-	-	X	-	-	-	-
C	-	-	-	-	-	-	X	-	-	-	-
D	-	-	-	-	-	-	X	-	-	-	-
E	-	-	-	-	-	-	-	-	-	-	-
F	-	-	-	-	-	-	-	-	-	-	-
G	-	-	-	-	-	-	-	-	-	-	-
H	-	-	-	-	-	-	-	-	-	-	-
I	-	-	-	-	-	-	-	-	-	-	-
J	-	-	-	-	-	-	-	-	-	-	-

Gramática

Variables: [S, A, B, C, D, E, F, G, H, I, J]

Variable Inicial: S

Simbolos Terminales: [a, b]

Producciones: $D = [F, D, a, H, a, J, \lambda]$, $E = [a, H]$, $F = [a, I]$, $G = [a, J, \lambda]$, $A = [F, A]$, $B = [F, B]$, $S = [F, A, F, B, C, D]$, $C = [F, C]$, $H = [b, E]$, $I = [b, F]$, $J = [b, G]$

-	S	A	B	C	D	E	F	G	H	I	J
S	-	-	-	X	X	-	X	-	-	-	-
A	-	-	-	-	-	-	X	-	-	-	-
B	-	-	-	-	-	-	X	-	-	-	-
C	-	-	-	-	-	-	X	-	-	-	-
D	-	-	-	-	-	-	X	-	-	-	-
E	-	-	-	-	-	-	-	-	-	-	-
F	-	-	-	-	-	-	-	-	-	-	-
G	-	-	-	-	-	-	-	-	-	-	-
H	-	-	-	-	-	-	-	-	-	-	-
I	-	-	-	-	-	-	-	-	-	-	-
J	-	-	-	-	-	-	-	-	-	-	-

Gramática

Variables: [S, A, B, C, D, E, F, G, H, I, J]

Variable Inicial: S

Simbolos Terminales: [a, b]

Producciones: $D = [F, D, a, H, a, J, \lambda]$, $E = [a, H]$, $F = [a, I]$, $G = [a, J, \lambda]$, $A = [F, A]$, $B = [F, B]$, $S = [F, A, F, B, F, C, D]$, $C = [F, C]$, $H = [b, E]$, $I = [b, F]$, $J = [b, G]$

-	S	A	B	C	D	E	F	G	H	I	J
S	-	-	-	-	X	-	X	-	-	-	-
A	-	-	-	-	-	-	X	-	-	-	-
B	-	-	-	-	-	-	X	-	-	-	-
C	-	-	-	-	-	-	X	-	-	-	-
D	-	-	-	-	-	-	X	-	-	-	-
E	-	-	-	-	-	-	-	-	-	-	-
F	-	-	-	-	-	-	-	-	-	-	-
G	-	-	-	-	-	-	-	-	-	-	-
H	-	-	-	-	-	-	-	-	-	-	-
I	-	-	-	-	-	-	-	-	-	-	-
J	-	-	-	-	-	-	-	-	-	-	-

Gramática

Variables: [S, A, B, C, D, E, F, G, H, I, J]

Variable Inicial: S

Simbolos Terminales: [a, b]

Producciones: $D=[F,D, a,H, a,J, \lambda]$, $E=[a,H]$, $F=[a,I]$, $G=[a,J, \lambda]$, $A=[F,A]$, $B=[F,B]$, $S=[F,A, F,B, F,C, F,D, a,H, a,J, \lambda]$, $C=[F,C]$, $H=[b,E]$, $I=[b,F]$, $J=[b,G]$

-	S	A	B	C	D	E	F	G	H	I	J
S	-	-	-	-	-	-	X	-	-	-	-
A	-	-	-	-	-	-	X	-	-	-	-
B	-	-	-	-	-	-	X	-	-	-	-
C	-	-	-	-	-	-	X	-	-	-	-
D	-	-	-	-	-	-	X	-	-	-	-
E	-	-	-	-	-	-	-	-	-	-	-
F	-	-	-	-	-	-	-	-	-	-	-
G	-	-	-	-	-	-	-	-	-	-	-
H	-	-	-	-	-	-	-	-	-	-	-
I	-	-	-	-	-	-	-	-	-	-	-
J	-	-	-	-	-	-	-	-	-	-	-

Gramática

Variables: [S, A, B, C, D, E, F, G, H, I, J]

Variable Inicial: S

Simbolos Terminales: [a, b]

Producciones: $D=[a,I,D, a,H, a,J, \lambda]$, $E=[a,H]$, $F=[a,I]$, $G=[a,J, \lambda]$, $A=[a,I,A]$, $B=[a,I,B]$, $S=[a,I,A, a,I,B, a,I,C, a,I,D, a,H, a,J, \lambda]$, $C=[a,I,C]$, $H=[b,E]$, $I=[b,F]$, $J=[b,G]$

-	S	A	B	C	D	E	F	G	H	I	J
S	-	-	-	-	-	-	-	-	-	-	-
A	-	-	-	-	-	-	-	-	-	-	-
B	-	-	-	-	-	-	-	-	-	-	-
C	-	-	-	-	-	-	-	-	-	-	-
D	-	-	-	-	-	-	-	-	-	-	-
E	-	-	-	-	-	-	-	-	-	-	-
F	-	-	-	-	-	-	-	-	-	-	-
G	-	-	-	-	-	-	-	-	-	-	-
H	-	-	-	-	-	-	-	-	-	-	-
I	-	-	-	-	-	-	-	-	-	-	-
J	-	-	-	-	-	-	-	-	-	-	-

Gramática final simplificada

Variables: [S, A, B, C, D, E, F, G, H, I, J]

Variable Inicial: S

Simbolos Terminales: [a, b]

Producciones: $D \rightarrow [a, I, D, a, H, a, J, a, I]$, $E \rightarrow [a, H]$, $F \rightarrow [a, I]$, $G \rightarrow [a, J]$, $A \rightarrow [a, I, A]$, $B \rightarrow [a, I, B]$, $S \rightarrow [a, I, A, a, I, B, a, I, C, a, I, D, a, H, a, J, \lambda, a, I]$, $C \rightarrow [a, I, C]$, $H \rightarrow [b, E]$, $I \rightarrow [b, F]$, $J \rightarrow [b, G, b]$