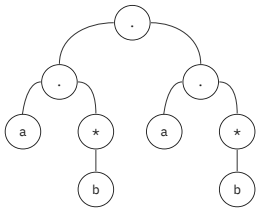
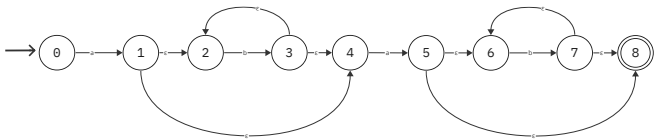
Expresión: ab*ab*



Autómata finito no determinista



Autómata finito determinista

Símbolos: {a, b}

e-closure({0}) = {0} = A
  move(A, a) = {1}
e-closure({1}) = {1,2,4} = B
  move(A, b) = {} = E

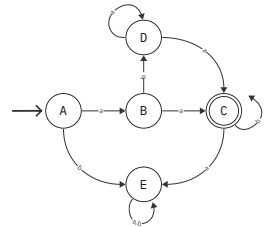
  move(B, a) = {5}
e-closure({5}) = {5,6,8} = C
 move(B, b) = {3}
e-closure({3}) = {2,3,4} = D

 move(C, a) = {} = E
 move(C, b) = {7}
e-closure({7}) = {6,7,8} = C

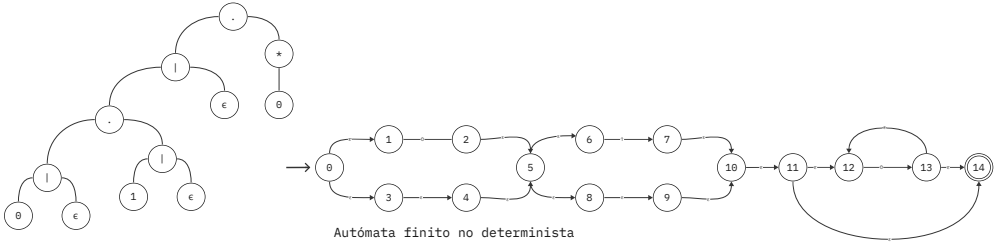
 move(D, a) = {5}
e-closure({5}) = {5,6,8} = C
 move(D, b) = {3}
e-closure({3}) = {2,3,4} = D

move(E, a) = {} = E
move(E, b) = {} = E

D-State
A
B
C
D
E



Expresión: 0?(1?)?0*
Reescribiendo:
0|ϵ(1|ϵ)|ϵ0*

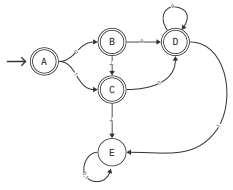


Autómata finito no determinista

Autómata finito determinista
Símbolos: {0, 1}

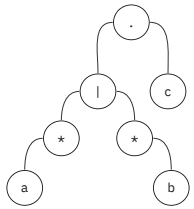
e-closure({0}) = {0,1,3,4,5,6,8,9,10,11,12,14} = A
  move(A, 0) = {2,13}
e-closure({2,13}) = {2,5,6,8,9,10,11,12,13,14} = B
  move(A, 1) = {7}
e-closure({7}) = {7,10,11,12,14} = C
 move(B, 0) = {13}
e-closure({13}) = {12,14} = D
 move(B, 1) = {7}
e-closure({7}) = {7,10,11,12,14} = C
 move(C, 0) = {13}
e-closure({13}) = {12,14} = D
 move(C, 1) = {}
e-closure({}) = {} = E
 move(D, 0) = {13}
e-closure({13}) = {12,14} = D
 move(D, 1) = {}
e-closure({}) = {} = E

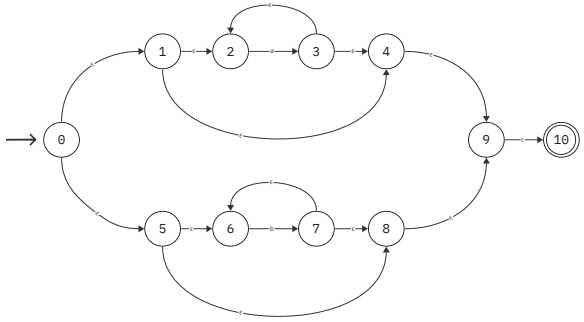
D-State
A



Autómata finito determinista

Expresión: (a*|b*)c

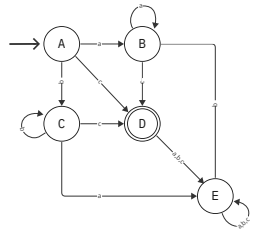




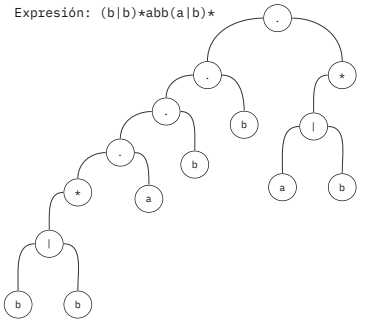
Autómata finito no determinista

Autómata finito determinista
Símbolos: {a,b,c}

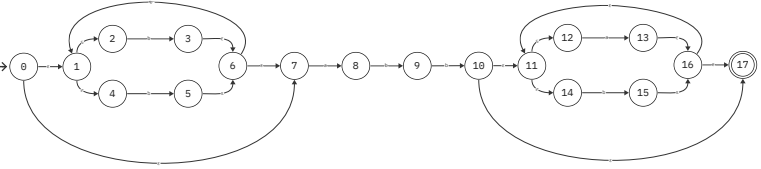
e-closure({0}) = {0,1,2,4,5,6,8,9} = A
  move(A, a) = {3}
e-closure({3}) = {2,3,4,9} = B
 move(A, b) = {7}
e-closure({7}) = {6,7,8,9} = C
 move(A, c) = {10}
e-closure({10}) = {10} = D
 move(B, a) = {3}
e-closure({3}) = {2,3,4,9} = B
 move(B, b) = {}
e-closure({}) = {} = E
 move(B, c) = {10}
e-closure({10}) = {10} = D
 move(C, a) = {}
e-closure({}) = {} = E
 move(C, b) = {7}
e-closure({7}) = {6,7,8,9} = C
 move(C, c) = {10}
e-closure({10}) = {10} = D
 move(D, a) = {} = E
 move(D, b) = {} = E
 move(D, c) = {} = E
 move(E, a) = {} = E
 move(E, b) = {} = E
 move(E, c) = {} = E



Expresión: (b|b)*abb(a|b)*

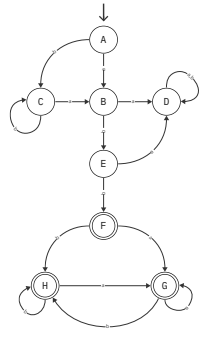


Autómata finito no determinista

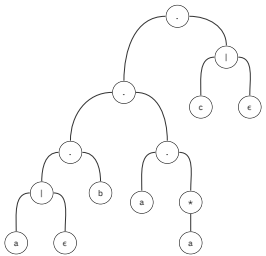


Autómata finito determinista
Símbolos: {a,b}

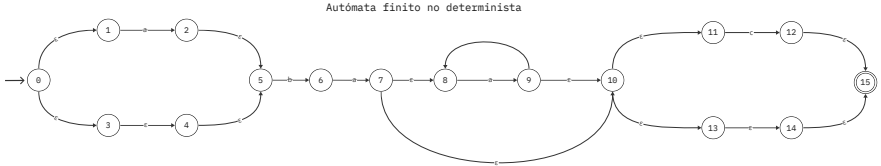
e-closure({0}) = {0,1,2,4,7} = A
  move(A, a) = {8}
e-closure({8}) = {8} = B
 move(A, b) = {3,5}
e-closure({3,5}) = {1,2,3,4,5,6,7} = C
 move(B, a) = {} = D
 move(B, b) = {9}
e-closure({9}) = {9} = E
 move(C, a) = {8}
e-closure({8}) = {8} = B
 move(C, b) = {3,5}
e-closure({3,5}) = {1,2,3,4,5,6,7} = C
 move(D, a) = {} = D
 move(D, b) = {} = D
 move(E, a) = {} = D
 move(E, b) = {10}
e-closure({10}) = {10,11,12,14,17} = F
 move(F, a) = {13}
e-closure({13}) = {11,12,13,14,16,17} = G
 move(F, b) = {15}
e-closure({15}) = {11,12,14,15,16,17} = H
 move(G, a) = {13}
e-closure({13}) = {11,12,13,14,16,17} = G
 move(G, b) = {15}
e-closure({15}) = {11,12,14,15,16,17} = H
 move(H, a) = {13}
e-closure({13}) = {11,12,13,14,16,17} = G
 move(H, b) = {15}
e-closure({15}) = {11,12,14,15,16,17} = H



Expresión: (a|ϵ)b(a+)c?
Reescribiendo:
(a|ϵ)b(aa*)(c|ϵ)

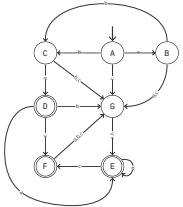


Autómata finito no determinista

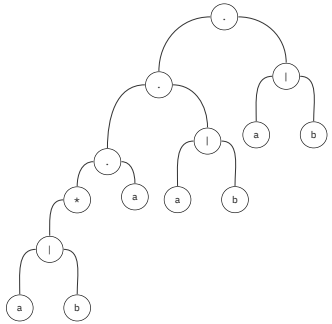


Autómata finito determinista
Símbolos: {a,b, c}

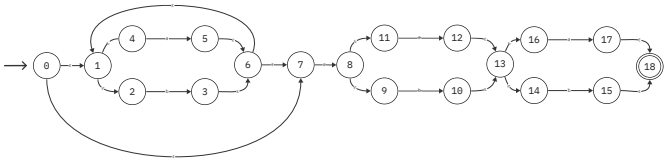
e-closure({0}) = {0,1,3,4,5} = A
  move(A, a) = {2}
e-closure({2}) = {2, 5} = B
  move(A, b) = {6}
e-closure({6}) = {6} = C
  move(A, c) = {} = G
  move(B, a) = {} = G
  move(B, b) = {6}
e-closure({6}) = C
  move(B, c) = {} = G
  move(C,a) = {7}
e-closure({7}) = {7,8,10,11,13,14,15} = D
  move(C, b) = {} = G
  move(C, c) = {} = G
  move(D, a) = {9}
e-closure({9}) = {8, 9, 10, 11, 13, 14, 15} = E
  move(D, b) = {} = G
  move(D, c) = {12}
e-closure({12}) = {12, 15} = F
  move(E, a) = {9}
e-closure({9}) = {8, 9, 10, 11, 13, 14, 15} = E
  move(E, b) = {} = G
  move(E, c) = {12}
e-closure({12}) = {12, 15} = F
  move(F, a) = {} = G
  move(F, b) = {} = G
  move(F, c) = {} = G



Expresión: (a|b)*a(a|b)(a|b)

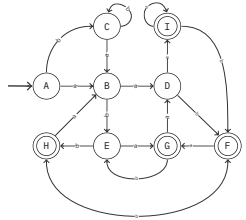


Autómata finito no determinista

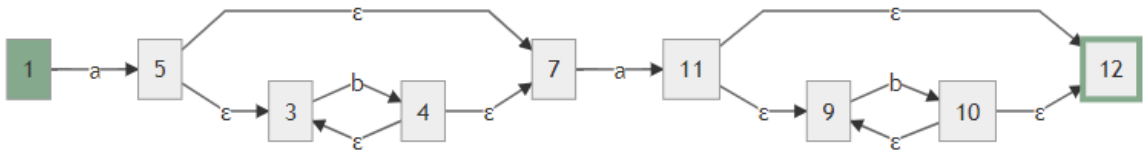


Autómata finito determinista

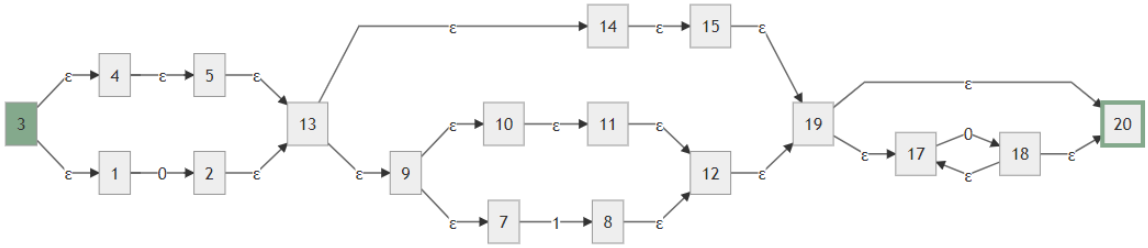
Símbolos: {a, b}



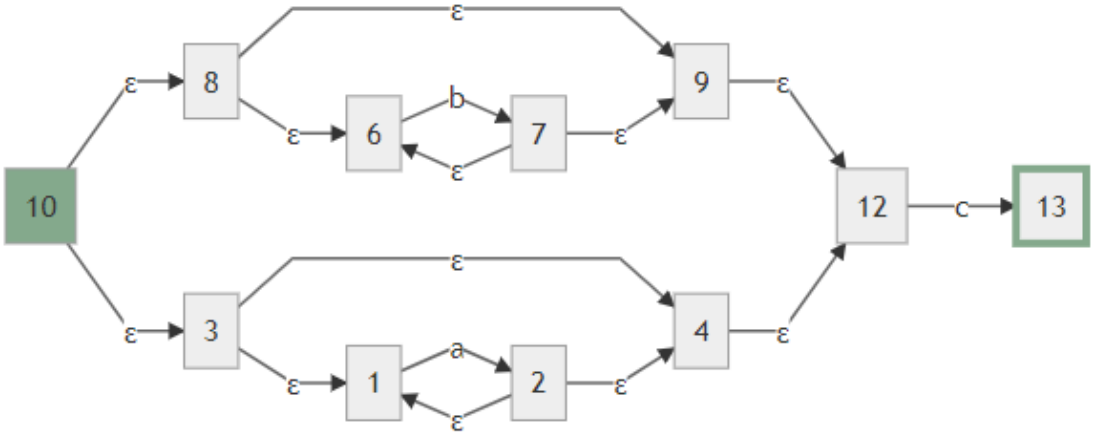
e-closure({0}) = {0,1,2,4,7} = A
move(A, a) = {5,8}
e-closure({5,8}) = {1,2,4,5,6,7,8,9,11} = B
move(A, b) = {3}
e-closure({3}) = {1,2,3,4,6,7} = C
move(B, a) = {5,8,12}
e-closure({5,8,12}) = {1,2,4,5,6,7,8,9,11,12,13,14,16} = D
move(B, b) = {3,10}
e-closure({3,10}) = {1,2,3,4,6,7,10,13,14,16} = E
move(C, a) = {5,8}
e-closure({5,8}) = {1,2,4,5,6,7,8,9,11} = B
move(C, b) = {3}
e-closure({3}) = {1,2,3,4,6,7} = C
move(D, a) = {5,8,12,17}
e-closure({5,8,12,17}) = {1,2,4,5,6,7,9,11,12,13,14,16,17,18} = I
move(D, b) = {3,10,15}
e-closure({3,10,15}) = {1,2,3,4,6,7,10,13,14,15,16,18} = F
move(E, a) = {5,8,17}
e-closure({5,8,17}) = {1,2,4,5,6,7,8,9,11,17,18} = G
move(E, b) = {3,15}
e-closure({3,15}) = {1,2,3,4,6,7,15,18} = H
move(F, a) = {5,8,17}
e-closure({5,8,17}) = {1,2,4,5,6,7,8,9,11,17,18} = G
move(F, b) = {3,15}
e-closure({3,15}) = {1,2,3,4,6,7,15,18} = H
move(G, a) = {5,8,12}
e-closure({5,8,12}) = {1,2,4,5,6,7,8,9,11,12,13,14,16} = D
move(G, b) = {3,10}
e-closure({3,10}) = {1,2,3,4,6,7,10,13,14,16} = E
move(H, a) = {5,8}
e-closure({5,8}) = {1,2,4,5,6,7,8,9,11} = B
move(H, b) = {3}
e-closure({3}) = {1,2,3,4,6,7} = C
move(I, a) = {5,8,12,17}
e-closure({5,8,12,17}) = {1,2,4,5,6,7,9,11,12,13,14,16,17,18} = I
move(I, b) = {3,10,15}
e-closure({3,10,15}) = {1,2,3,4,6,7,10,13,14,15,16,18} = F


1
a
5
ε
3
b
4
ε
ε
ε
7
a
11
ε
9
b
10
ε
ε
ε
12

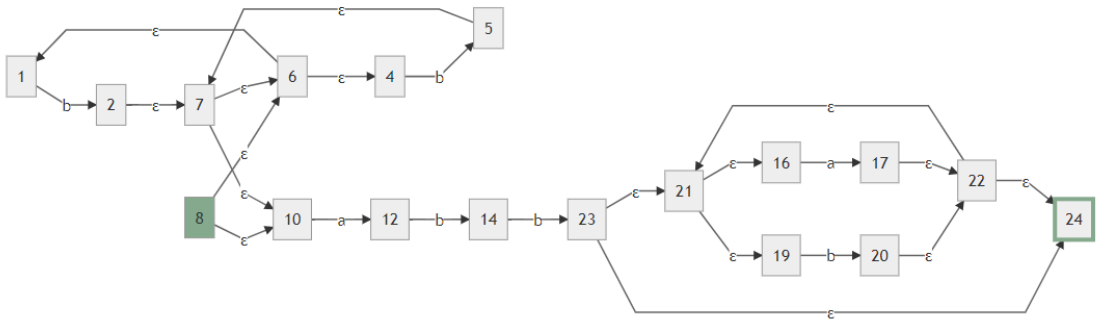
ab*ab*


3
ε
4
ε
5
ε
ε
1
0
2
ε
13
ε
14
ε
15
ε
ε
9
ε
10
ε
11
ε
ε
7
1
8
ε
12
ε
19
ε
ε
17
0
ε
18
ε
20

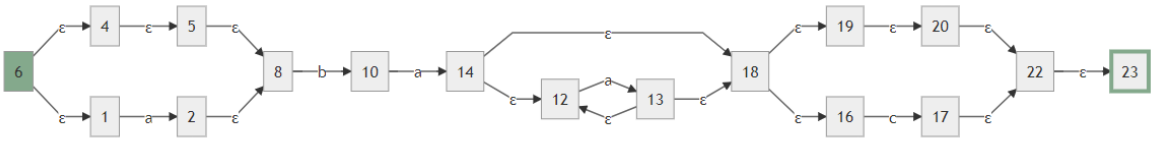
0?(1?)?0*


10
ε
8
ε
ε
6
b
7
ε
ε
ε
9
ε
12
c
13
ε
3
ε
ε
1
a
2
ε
ε
ε
4
ε

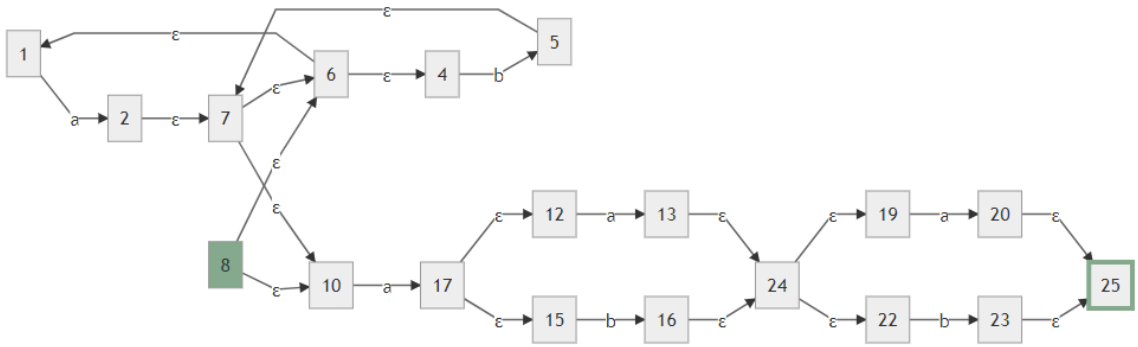
(a*|b*)c



(b|b)*abb(a|b)*



(a|ε)b(a+)c?ε



(a|b)*a(a|b)(a|b)