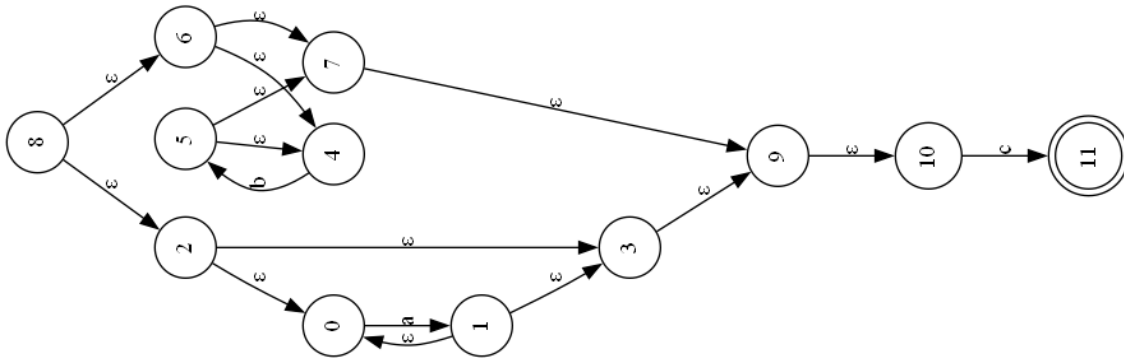


El pre laboratorio se realizó con el programa realizado por mi persona:

- $(a^* | b^*)c$
 - AFN



AFN a partir de la Expresión Regular -->

Símbolos: a, b, c

Estados: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11

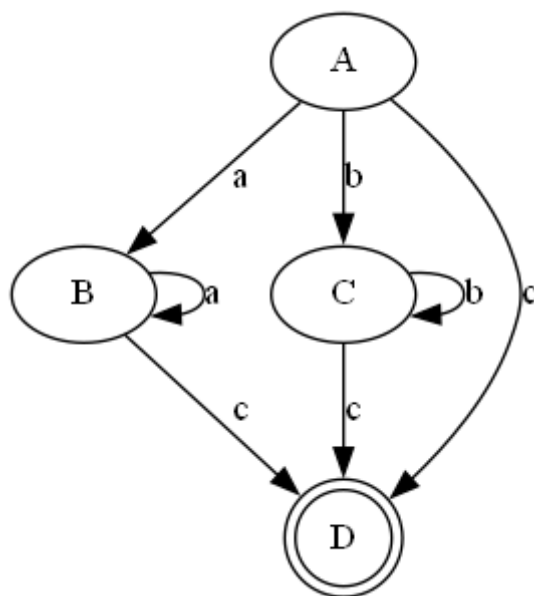
Estado inicial: { 8 }

Estados de aceptación: { 11 }

Transiciones: (0 - a - 1), (1 - ε - 0), (1 - ε - 3), (2 - ε - 0), (2 - ε - 3), (4 - b - 5), (5 - ε - 4), (5 - ε - 7), (6 -

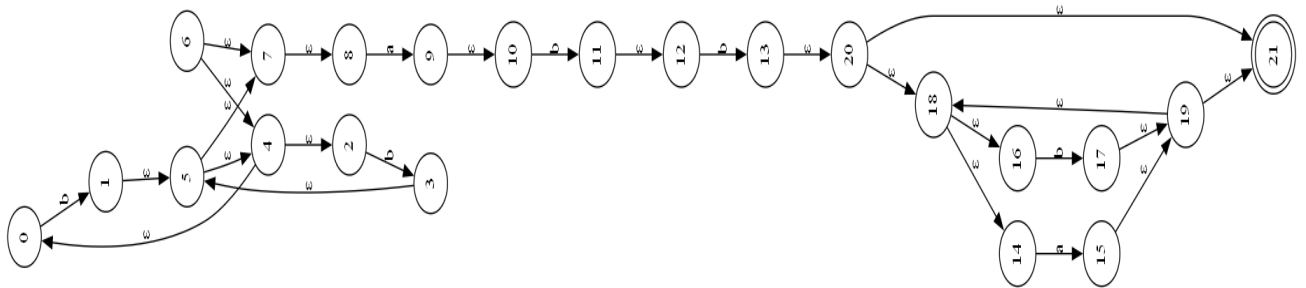
	a	ε	b	c
0	1.0	NaN	NaN	NaN
1	NaN	(0, 3)	NaN	NaN
2	NaN	(0, 3)	NaN	NaN
3	NaN	9	NaN	NaN
4	NaN	NaN	5.0	NaN
5	NaN	(4, 7)	NaN	NaN
6	NaN	(4, 7)	NaN	NaN
7	NaN	9	NaN	NaN
8	NaN	(2, 6)	NaN	NaN
9	NaN	10	NaN	NaN
10	NaN	NaN	NaN	11.0
11	NaN	NaN	NaN	NaN

- AFD



```
AFD a partir de la Expresión Regular -->
Símbolos: a, b, c
Estados: [[8, 2, 6, 4, 7, 9, 10, 0, 3], [1, 0, 3, 9, 10], [5, 4, 7, 9, 10], [11]]
Estado inicial: { A }
Estados de aceptación: { ['D'] }
Transiciones: [[(0, 'a', 1), (0, 'b', 2), (0, 'c', 3), (1, 'a', 1), (1, 'c', 3), (2, 'b', 2), (2, 'c', 3)]]
```

- $(b|b)^*abb(a|b)^*$
 - AFN



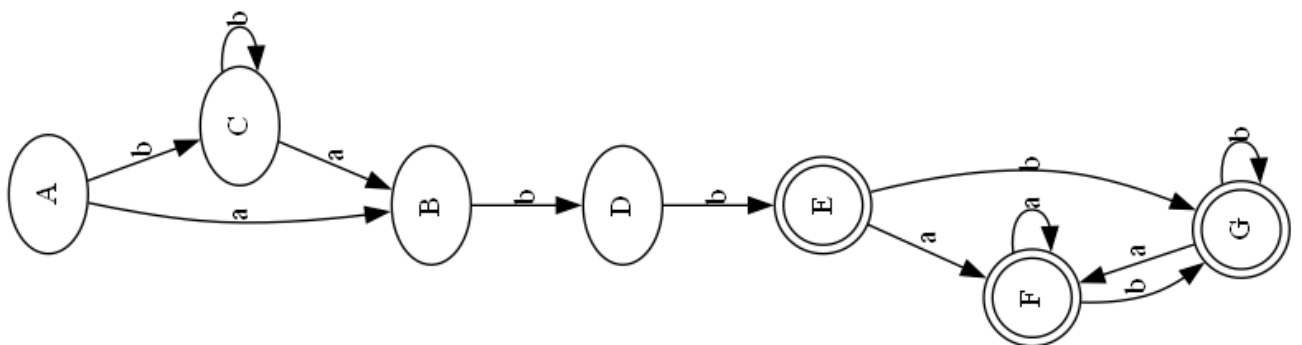
```

AFN a partir de la Expresión Regular -->
Símbolos: b, a
Estados: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21
Estado inicial: { 6 }
Estados de aceptación: { 21 }
Transiciones: (0 - b - 1), (2 - b - 3), (4 - ε - 0), (4 - ε - 2), (3 - ε - 5), (1 - ε - 5), (5 - ε - 4), (5 - ε - 7), (6 - ε - 4), (6 - ε - 7), (8 - a - 9),

```

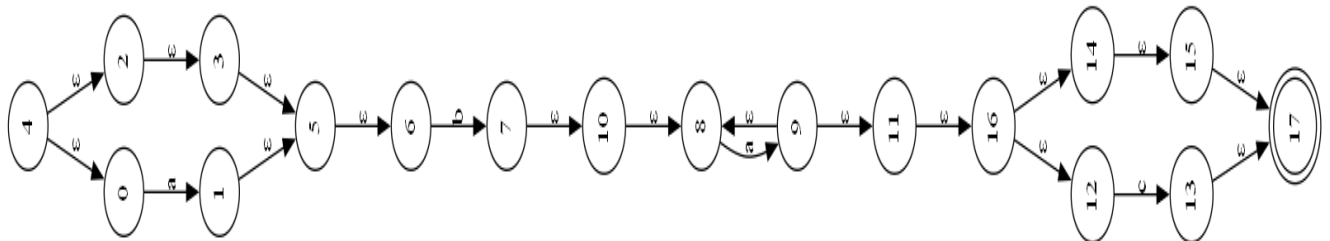
	b	ε	a
0	1.0	NaN	NaN
1	NaN	5	NaN
2	3.0	NaN	NaN
3	NaN	5	NaN
4	NaN	(0, 2)	NaN
5	NaN	(4, 7)	NaN
6	NaN	(4, 7)	NaN
7	NaN	8	NaN
8	NaN	NaN	9.0
9	NaN	10	NaN
10	11.0	NaN	NaN
11	NaN	12	NaN
12	13.0	NaN	NaN
13	NaN	20	NaN
14	NaN	NaN	15.0
15	NaN	19	NaN
16	17.0	NaN	NaN
17	NaN	19	NaN
18	NaN	(14, 16)	NaN
19	NaN	(18, 21)	NaN
20	NaN	(18, 21)	NaN
21	NaN	NaN	NaN

- AFD



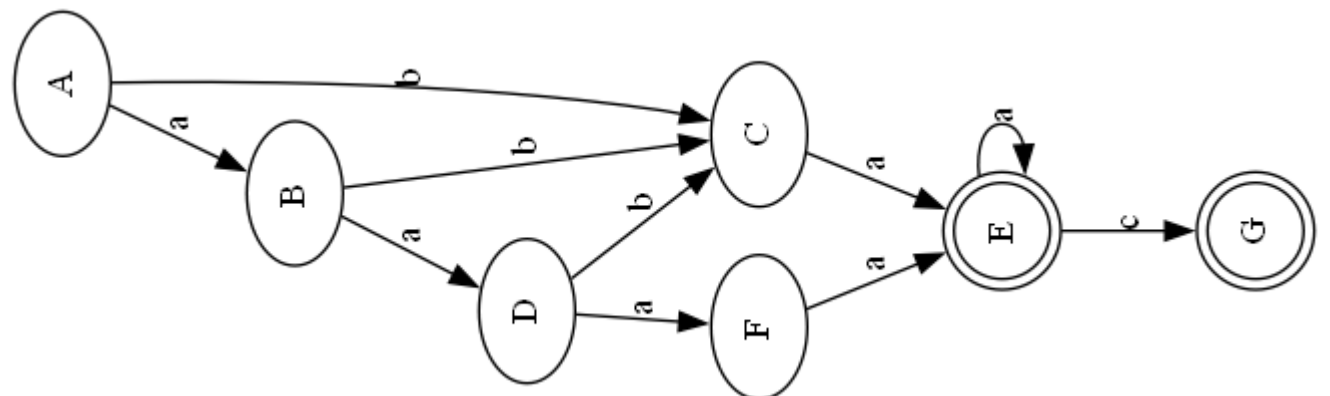
AFD a partir de un AFN -->
 Símbolos: a, b
 Estados: [[6, 4, 7, 8, 0, 2], [9, 10], [3, 5, 4, 7, 8, 0, 2], [11, 12], [13, 20, 18, 21, 14, 16], [15, 19, 18, 21, 14, 16], [17, 19, 18, 21, 14, 16]]
 Estado inicial: { A }
 Estados de aceptación: { ['E', 'F', 'G'] }
 Transiciones: [(0, 'a', 1), (0, 'b', 2), (1, 'b', 3), (2, 'a', 1), (2, 'b', 2), (3, 'b', 4), (4, 'a', 5), (4, 'b', 6), (5, 'a', 5), (5, 'b', 6), (6, 'a', 5), (6, 'b', 6)]

- $(a | \epsilon) b (a^+) c ?$
 - AFN



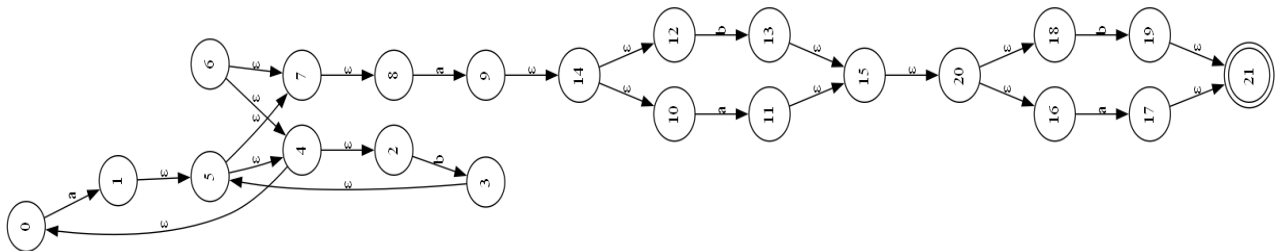
AFN a partir de la Expresión Regular -->
 Símbolos: b, a
 Estados: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21
 Estado inicial: { 6 }
 Estados de aceptación: { 21 }
 Transiciones: (0 - b - 1), (2 - b - 3), (4 - ε - 0), (4 - ε - 2), (3 - ε - 5), (1 - ε - 5), (5 - ε - 4), (5 - ε - 7), (6 - ε - 4), (6 - ε - 7), (8 - a - 9), (7 - ε - 10), (10 - a - 8), (8 - ε - 9), (9 - ε - 10), (11 - a - 12), (12 - a - 13), (13 - a - 14), (14 - a - 15), (15 - a - 16), (16 - a - 17), (17 - a - 18), (18 - a - 19), (19 - a - 20), (20 - a - 21), (21 - a - 21)

- AFD



AFD a partir de un AFN -->
 Símbolos: a, b, c, ε
 Estados: [[4, 0, 2, 3, 5, 6], [1, 5, 6], [7, 10, 8], [6], [9, 8, 11, 16, 12, 14, 15, 17], [8], [13, 17]]
 Estado inicial: { A }
 Estados de aceptación: { ['E', 'G'] }
 Transiciones: [(0, 'a', 1), (0, 'b', 2), (1, 'a', 3), (1, 'b', 2), (2, 'a', 4), (3, 'a', 5), (3, 'b', 2), (4, 'a', 4), (4, 'c', 6), (5, 'a', 4)]

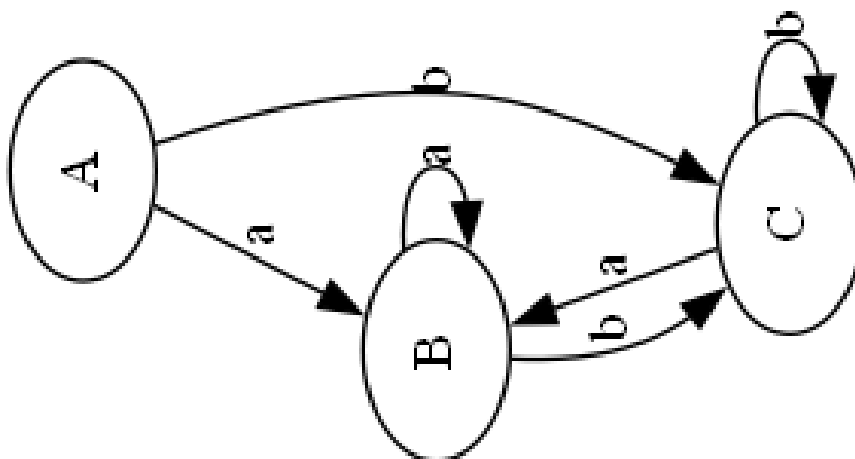
- $(a|b)^* a (a|b)(a|b)$
 - AFN



```
AFN a partir de la Expresión Regular -->
Símbolos: a, b
Estados: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21
Estado inicial: { 0 }
Estados de aceptación: { 21 }
Transiciones: (0 - a - 1), (2 - b - 3), (4 - ε - 0), (4 - ε - 2), (3 - ε - 5), (1 - ε - 5), (5 - ε - 4), (5 - ε - 7), (6 - ε - 4), (6 - ε - 7), (8 - a - 9), (7 -
```

	a	ε	b
0	1,0	NaN	NaN
1	NaN	5	NaN
2	NaN	NaN	3,0
3	NaN	5	NaN
4	NaN	(0, 2)	NaN
5	NaN	(4, 7)	NaN
6	NaN	(4, 7)	NaN
7	NaN	8	NaN
8	9,0	NaN	NaN
9	NaN	14	NaN
10	11,0	NaN	NaN
11	NaN	15	NaN
12	NaN	NaN	13,0
13	NaN	15	NaN
14	NaN	(10, 12)	NaN
15	NaN	20	NaN
16	17,0	NaN	NaN
17	NaN	21	NaN
18	NaN	NaN	19,0
19	NaN	21	NaN
20	NaN	(16, 18)	NaN
21	NaN	NaN	NaN

- AFD



```
AFD a partir de un AFN -->
Símbolos: a, b
Estados: [[6, 4, 7, 8, 0, 2], [1, 5, 4, 7, 8, 0, 2], [3, 5, 4, 7, 8, 0, 2]]
Estado inicial: { A }
Estados de aceptación: { [] }
Transiciones: [(0, 'a', 1), (0, 'b', 2), (1, 'a', 1), (1, 'b', 2), (2, 'a', 1), (2, 'b', 2)]
```