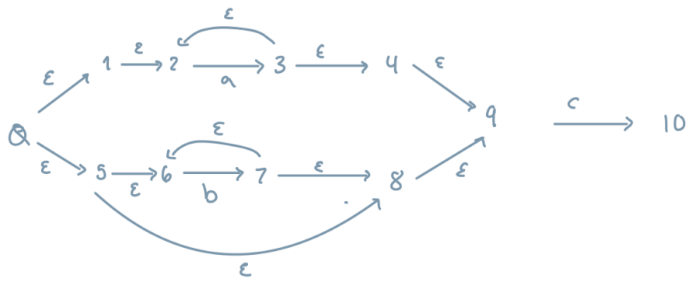
Kenneth Galvez
Rebecca Smith
Andrea Lam
Luis Pedro González Aldana
Pre Lab B

(a*|b*)c*

(a*|b*)c

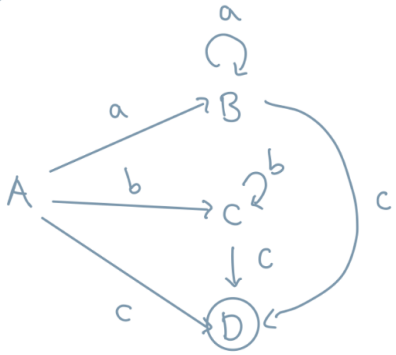
AFN



AFN -> AFD

	a	b	c
A {0,1,2,3,4,5,6,7,8,9}	B	C	D
B {2,3,4,9}	B	—	D
C {6,7,8,9}	—	C	D
D {10}	—	—	—

AFD



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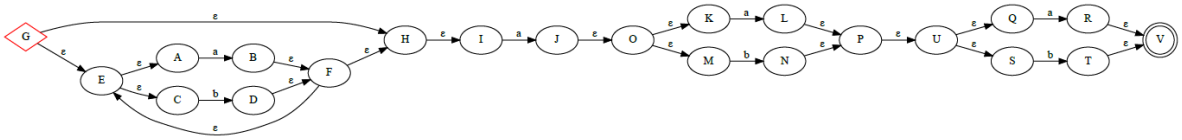
Pre Lab B

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

```
5
6   regex = "(a|b)*a(a|b)(a|b)"
7
8   posfix, error, alphabet = infix_to_posfix(regex)
9   afn = generate_afn_from_posfix(posfix, alphabet)
10  afn.draw_afn()
11  afn.find_cerradura()
12  afd: AFD = afn.to_afd()
13  afd.draw_afd()
```

AFN:




```
transitions: {'A': {'ε': [...], 'a': [...], 'b': [...]}, 'B': {'ε': [...], 'a': [...], 'b': [...]}, 'C': {'ε': [...], 'a':
  special variables
  function variables
  'A': {'ε': [], 'a': ['B'], 'b': []}
  'B': {'ε': ['F'], 'a': [], 'b': []}
  'C': {'ε': [], 'a': [], 'b': ['D']}
  'D': {'ε': ['F'], 'a': [], 'b': []}
  'E': {'ε': ['A', 'C'], 'a': [], 'b': []}
  'F': {'ε': ['H', 'E'], 'a': [], 'b': []}
  'G': {'ε': ['E', 'H'], 'a': [], 'b': []}
  'H': {'ε': ['I'], 'a': [], 'b': []}
  'I': {'ε': [], 'a': ['J'], 'b': []}
```

```
  'J': {'ε': ['O'], 'a': [], 'b': []}
  'K': {'ε': [], 'a': ['L'], 'b': []}
  'L': {'ε': ['P'], 'a': [], 'b': []}
  'M': {'ε': [], 'a': [], 'b': ['N']}
  'N': {'ε': ['P'], 'a': [], 'b': []}
  'O': {'ε': ['K', 'M'], 'a': [], 'b': []}
  'P': {'ε': ['U'], 'a': [], 'b': []}
  'Q': {'ε': [], 'a': ['R'], 'b': []}
  'R': {'ε': ['V'], 'a': [], 'b': []}
  'S': {'ε': [], 'a': [], 'b': ['T']}
  'T': {'ε': ['V'], 'a': [], 'b': []}
  'U': {'ε': ['Q', 'S'], 'a': [], 'b': []}
```

```
  'V': {'ε': [], 'a': [], 'b': []}
  len(): 22
```

AFD:

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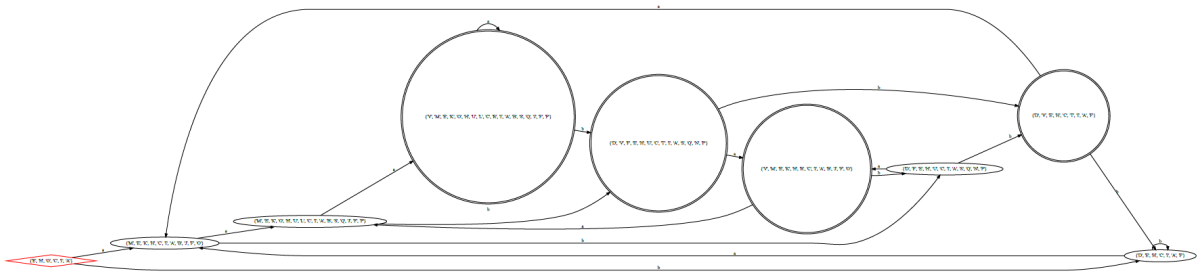
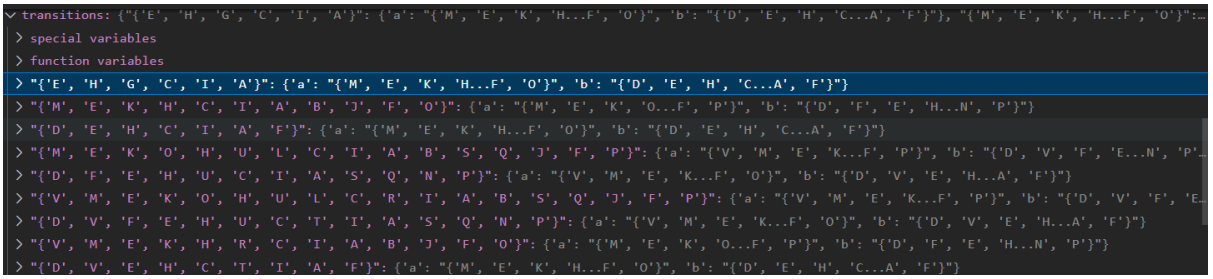
Pre Lab B





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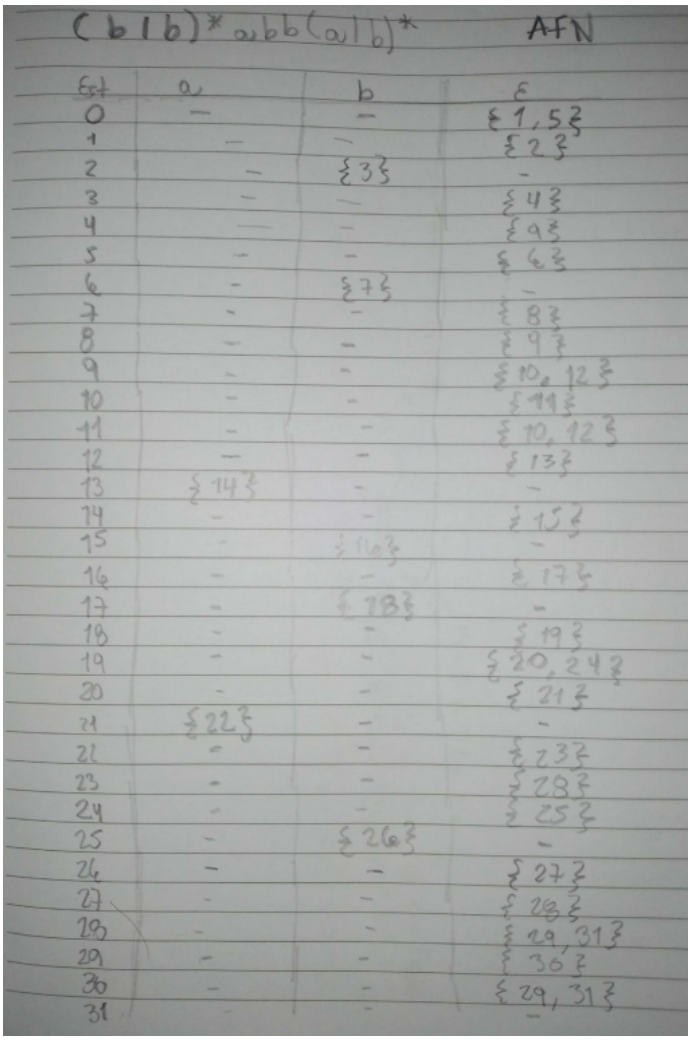
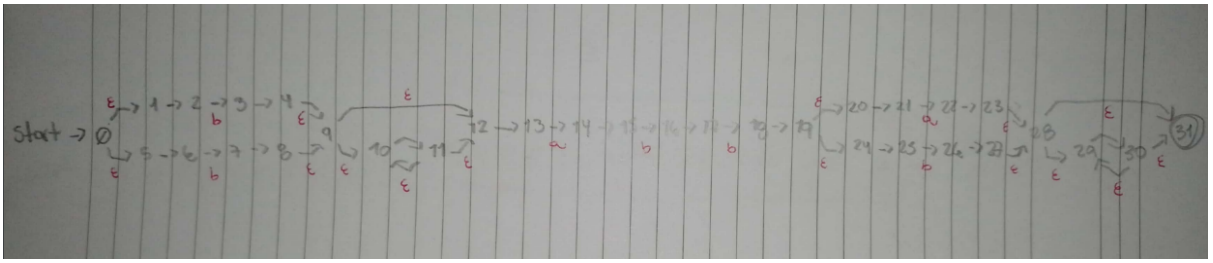
Pre Lab B

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

AFN:





AFD:

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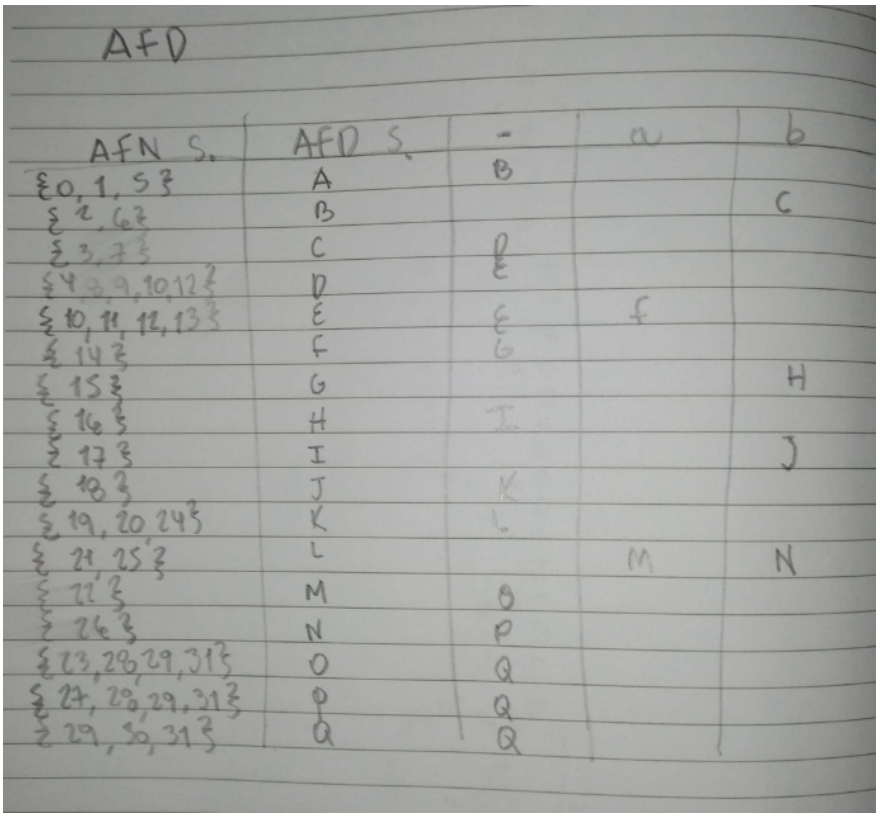
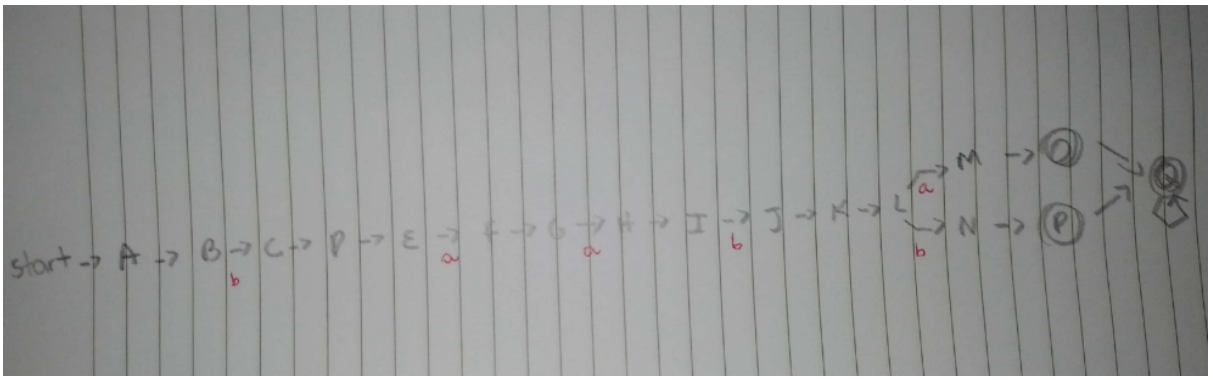
Pre Lab B





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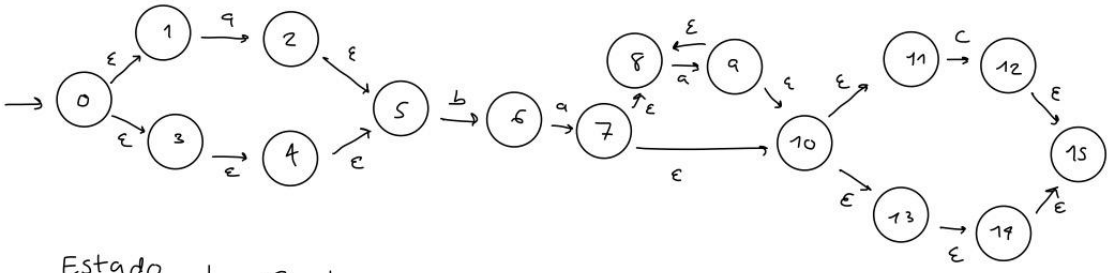
Pre Lab B

(a|E)b(a+)c?

(a|ε)b(a+)c?

AFN



Estado	ε	a	b	c
0	1, 2	—	—	—
1	—	2	—	—
2	5	—	—	—
3	4	—	—	—
4	5	—	—	-
5	—	—	6	—
6	—	7	—	—
7	8, 10	—	—	—
8	—	9	—	—
9	8, 10	—	—	—
10	11, 13	—	—	—
11	—	—	12	—
12	15	—	—	—
13	14	—	—	—
14	15	-	—	—
15	-	—	—	—

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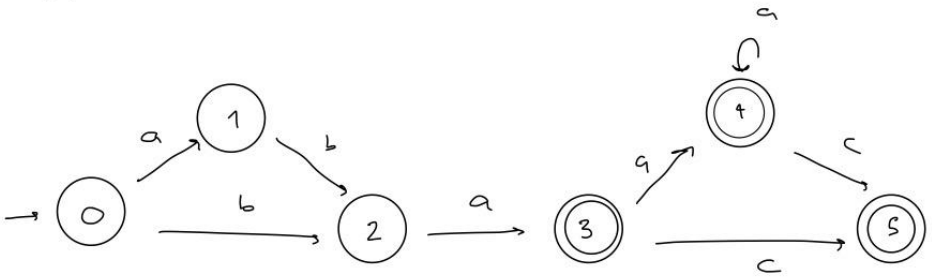
AFD S



Estado	a	b	c
0	1	2	—
1	—	2	—
2	3	—	—
3	4	—	—
4	4	—	5
5	—	—	—