Language and computation notes

Lecture 3 - Non-deterministic Finite Automata

Example: Construct DFA over $\sum = 0, 1$ accepting all works were penultimate symbol is 1

Maybe: - q0 initial state - q1 initial Last symbol is 1 - q2 penultimate seen symbol is 1

We define

```
-> (0,1) -> q0 (1) -> q1 (0,1) -> q2
```

Step	Input	State 1	State 2	State 3
0	0	x		
1	1	x	x	
2	1	x	x	x
3	0	x		x
4	0	x		

Defining the achine

A NFA N = {Q,$\sum$,δ, S, F} where

- Q: Finite set of states
- $\sum$: Alphabet
- δ : Transitional function $\delta \in Q. \sum -> P(a)$