

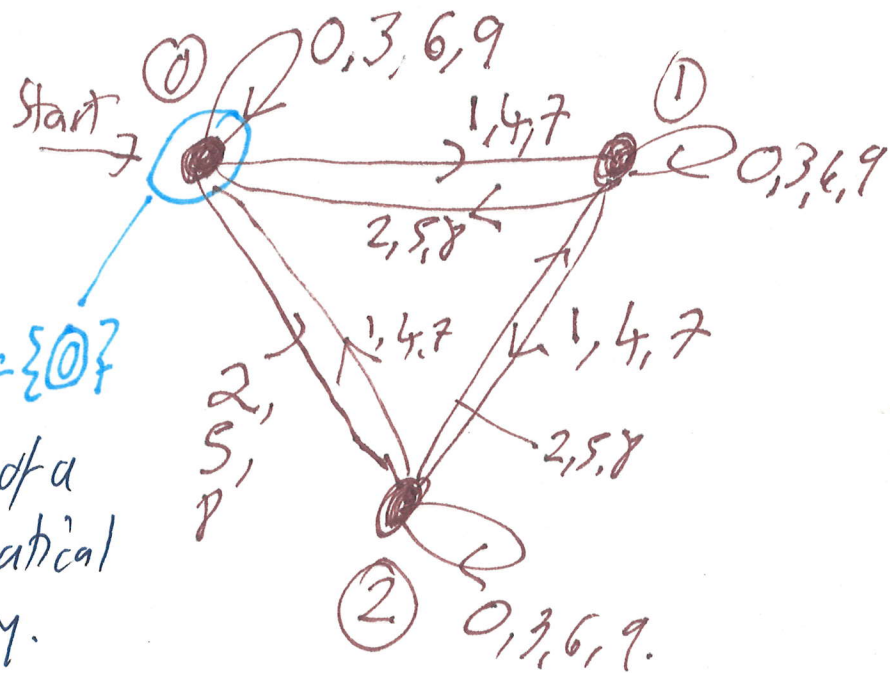
Intuition (or (deterministic) Finite Automata

- Problem Solving With Finitely Many Possible "States of Mind". E.g.

- 0 mod 3
- 1 mod 3
- 2 mod 3

$$F = \{0\}$$

This is a complete picture of a DFA. The formal mathematical definition will come Wednesday.



The language of this DFA is the set of decimal whole numbers (with leading 0s allowed) that are multiples of 3. The DFA actually carries out the trick that this is true if and only if the sum of the digits is a multiple of 3. (Note that zero counts as a multiple of 3. According to this DFA, the empty string ϵ also counts as one. Hummmmm-----