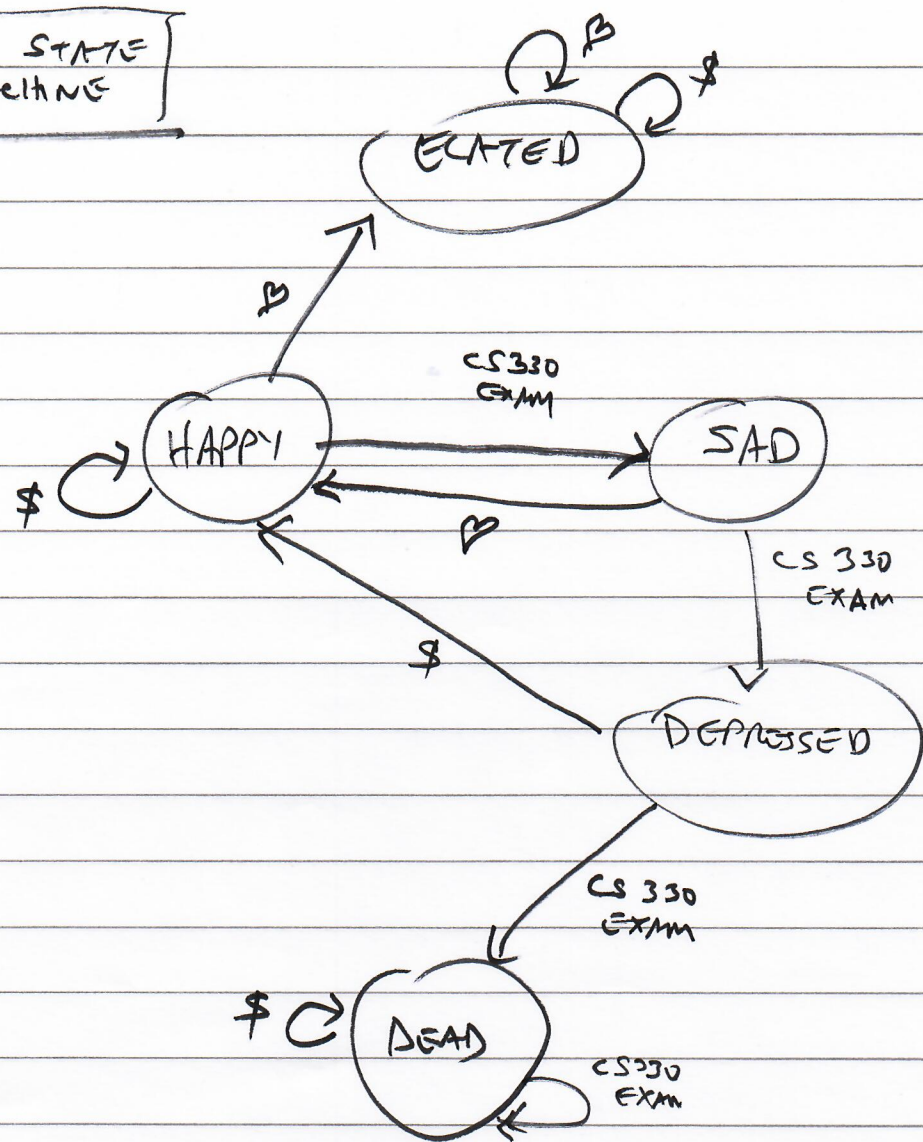
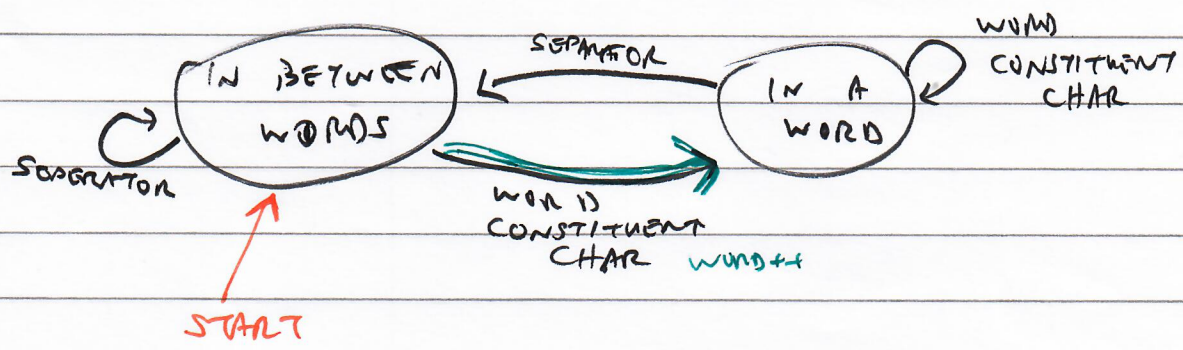


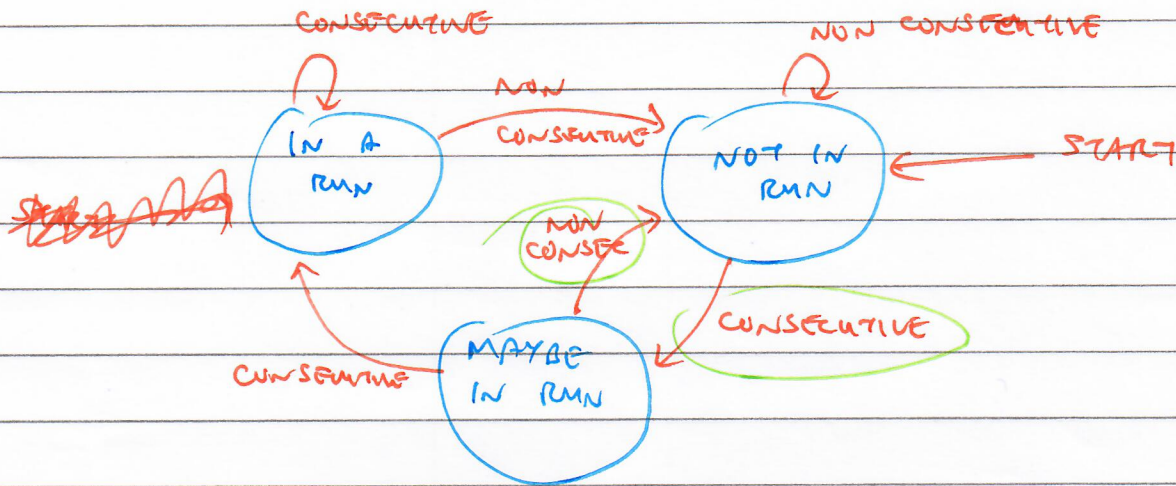
FINITE STATE MACHINE



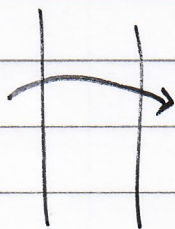
WC - words lines, characters, words



5, 6, 7, 9, 12, 13, 17, 18, 19, 20, 21, 26, 30, 31, 32
⇒ 5-7, 9, 12, 13, 17-21, 26, 30-32

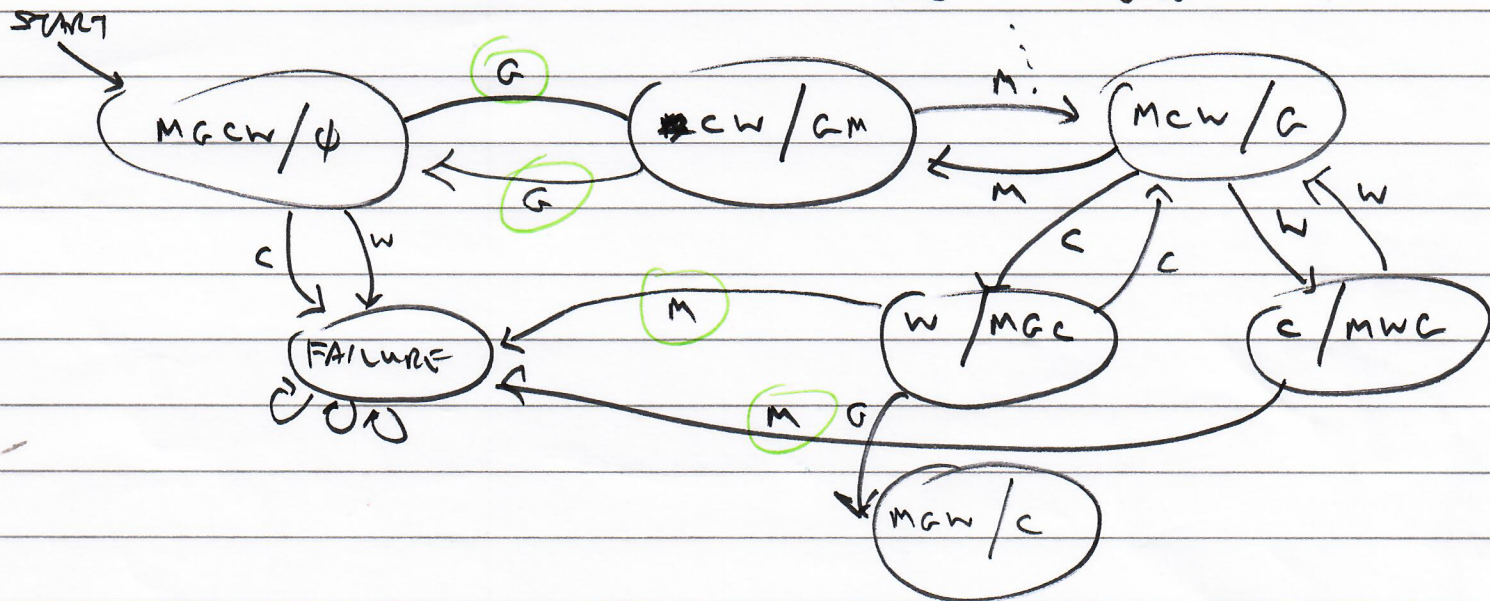


M, G, C, W



State

M, G, C, W \emptyset
M G W C
M C — G W

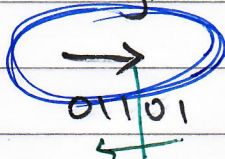


F.S.M - Mathematical objects

- Σ - ^{FINITE} set of input symbols
- S - ^{FINITE} set of states
- $s_0 \in S$ start state
- $F \subseteq S$ final states
- $\delta: S \times \Sigma \rightarrow S$ transition function (next state function)

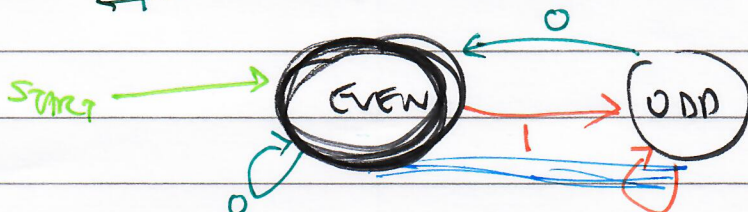
$(\Sigma, S, s_0, F, \delta)$

Binary numbers



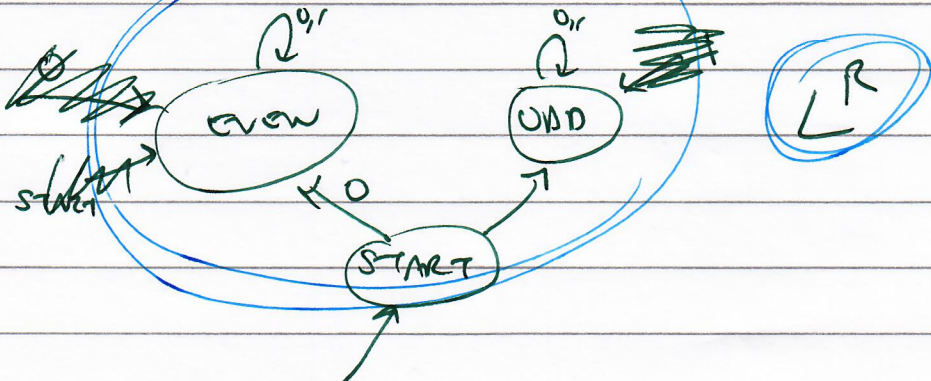
→ ODD
→ even

$L =$ set of binary representations of even numbers



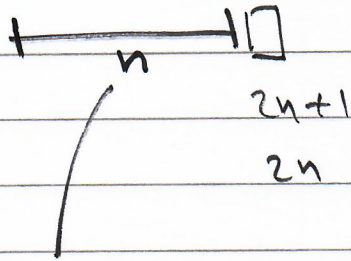
$(\{0,1\}, \{EVEN, ODD\}, EVEN, \{EVEN\},$
 $0 \rightarrow EVEN$
 $1 \rightarrow ODD$)

$R \rightarrow L$



L^R

Multiples of 3 \leftrightarrow 2 in binary



mult of 3

$$3k+1$$

$$3k'+2$$

