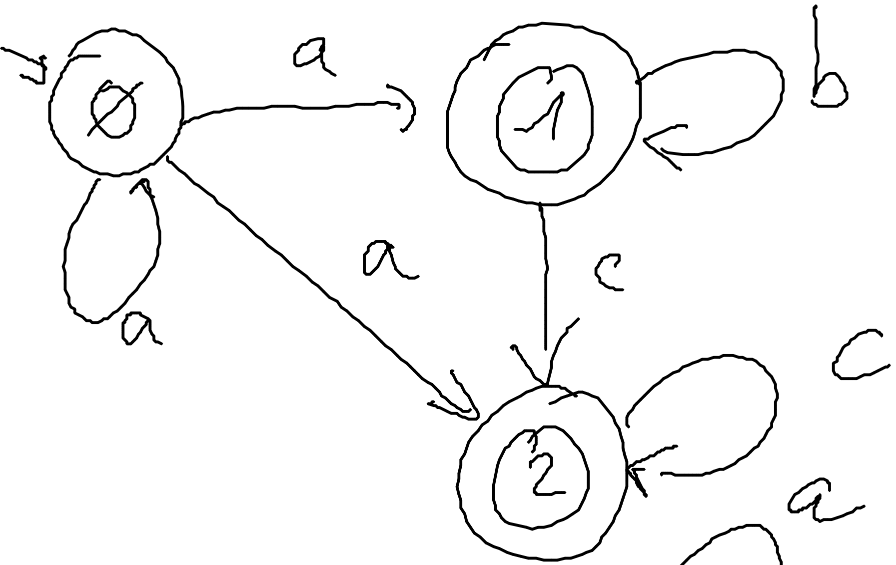

$$L = \{ a^n b^m c^k \mid n > 0,\ m, k \geq 0 \}$$

$$\cup \{ a^n c^k \mid n > 0,\ k \geq 0 \}$$

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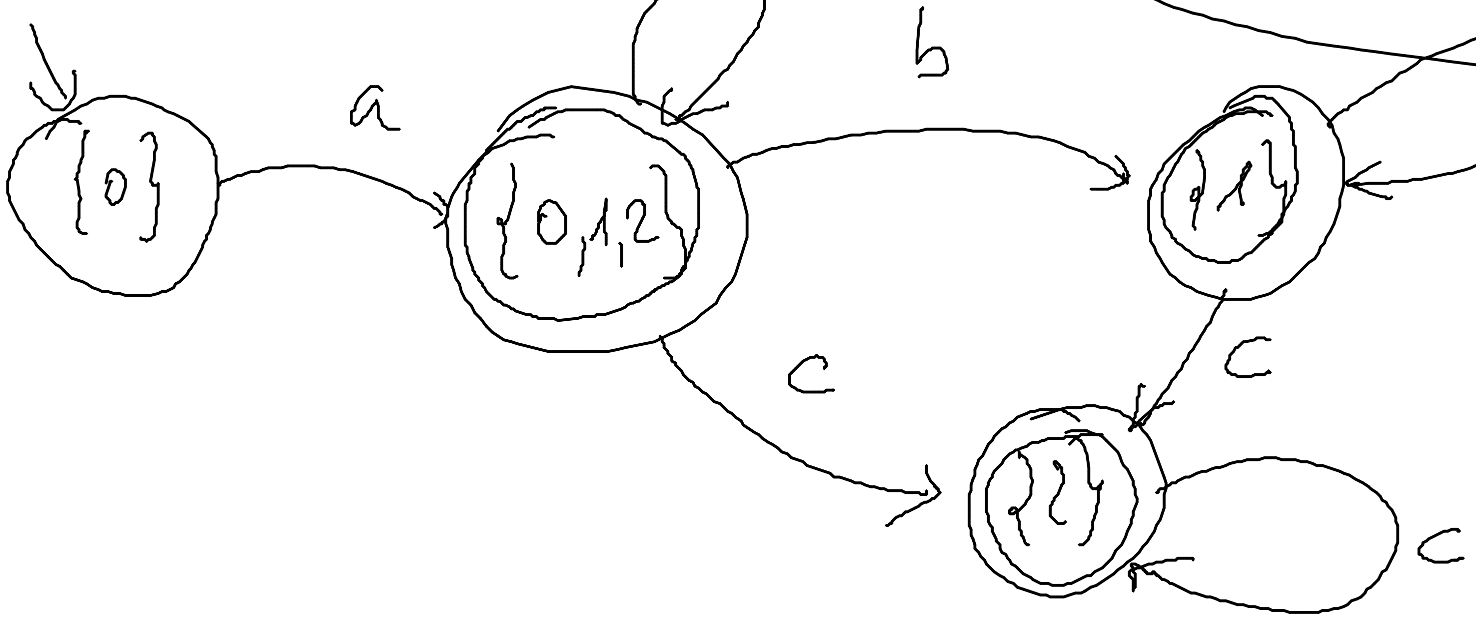
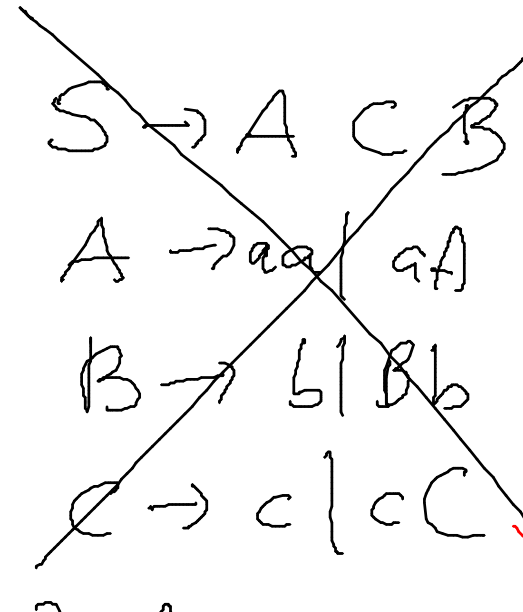


$S \to A \mid B$

$A \to aaCb \mid aA \mid aAb$

$B \to aCbb \mid Bb \mid aBb$

$C \to c \mid cC$



$S^0 = \{\}$ $S^1 = \{\}$ $S^2 = \{\}$ $S^3 = \{aacb, acbb\}$

$A^0 = \{\}$ $A^1 = \{\}$ $A^2 = \{aacb\}$ $A^3 = \{aacb, aaccb, aaacb, aaaccb\}$

$B^0 = \{\}$ $B^1 = \{\}$ $B^2 = \{acbb\}$ $B^3 = \dots$

$C^0 = \{\}$ $C^1 = \{c\}$ $C^2 = \{c, cc\}$ $C^3 = \dots$

(n, m) $\quad$ (n, m)

$(n-2, m)$

$(n-4, m)$

$(0, m)$ $\quad$ $(1, m)$

n par $\quad$ n impar

$$f(n,m) = \begin{cases} 3*m & \text{se } n=0 \\ 1+3*m & \text{se } n=1 \\ \\ 2+f(n-2,m) & \text{se } n>1 \end{cases}$$

$$f(n,m) = n + 3m$$

$$\underbrace{f(n,m) = n + 3m \Longrightarrow}_{\text{Up mult}} \quad f(n+2,m) = (n+2) + 3m$$

$$= \{ \text{def } f, 3^{\circ} \text{ conv} \}$$

$$f(n+2, m)$$

$$= \{ \text{def } f, 3^{\circ} \text{ conv} \}$$

$$2 + f(n,m)$$

$$= \{ \text{ip. ind} \}$$

$$2 + n + 3m$$

$$= \{ \text{calcolo} \}$$

$$n + 2 + 3m$$

```
let rec f l x y = match l with
    [] -> []
  | w::ws when w = x -> y :: f ws x y
  | w::ws when w <> x -> w :: f ws x y ;;
```