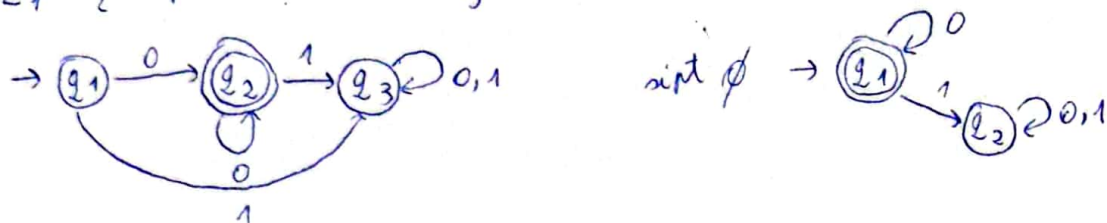


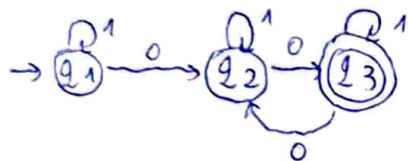
Seminar II

1. $\Sigma = \{0, 1\}$. Construiți DFA pt:

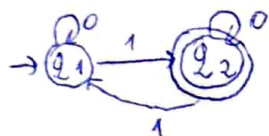
a) $L_1 = \{w \mid w \text{ conține doar } 0\}$



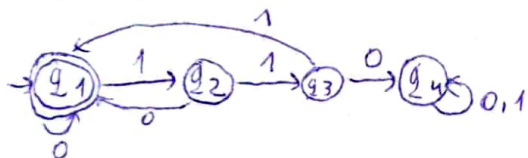
b) $L_2 = \{w \mid w \text{ conține un nr par de } 0\text{-uri}\}$



c) $L_3 = \{w \mid w \text{ conține un nr. impar de } 1\text{-uri}\}$



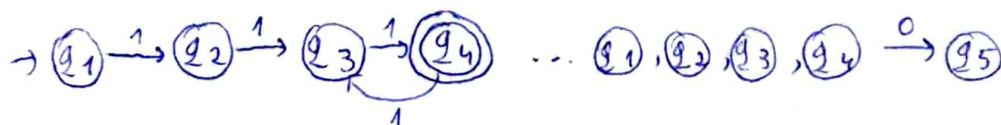
d) $L_4 = \{w \mid w \text{ nu conține } 110\}$



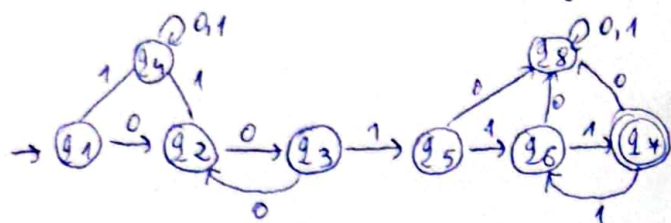
e) $L_5 = \{0^{2n} \mid n \geq 1\}$



f) $L_6 = \{1^{2n+1} \mid n \geq 1\}$



④ $L_7 = \{0^{2n}, 1^{2m+1}, n, m \geq 1\}$



② Dem. fără a construi explicit automate că :

$L_1, L_7 \in REG$

$L_8 = \{w \mid |w|_0 \in 2\mathbb{Z} \text{ sau } |w|_1 \in 2\mathbb{Z} + 1\} \in REG$

prop: $L_1, L_2 \in REG \Rightarrow \begin{cases} L_1 \cup L_2 \in REG \\ L_1 L_2 \in REG \end{cases}$

$L \in REG \Rightarrow L^* \in REG$

$L_1 \in \{0\}^* \Rightarrow L_1 \in REG$
 \downarrow
 $\in REG$

$L_7 = L_5 L_6 \mid \begin{matrix} L_5 \in REG \\ L_6 \in REG \end{matrix} \Rightarrow L_7 \in REG$

$L_8 = L_2 \cup L_3 \mid \begin{matrix} L_2 \in REG \\ L_3 \in REG \end{matrix} \Rightarrow L_8 \in REG$

3. scrieți un DFA care recunoaște comentariile bine-finite peste alfabetul $\Sigma = \{a, b, \backslash, +\}$
 un comentariu este un cuvânt care: începe cu \backslash și se termină cu $+$

