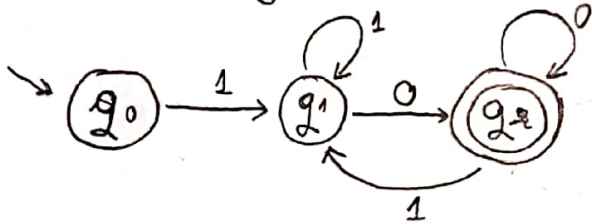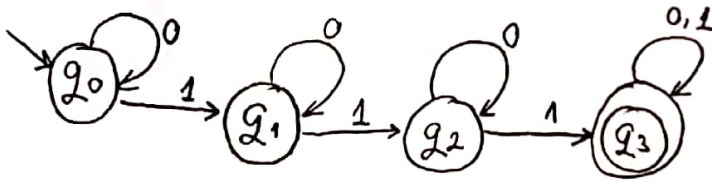Laborator 2

Tema realizată de:
- Cordun Diana -Alexandra
- Postolache Andreea - Miruna
- Sandu Raluca -Ioana

Ex. 2: (Create configuration files for DFAs from ex. 1.6 Sipser)
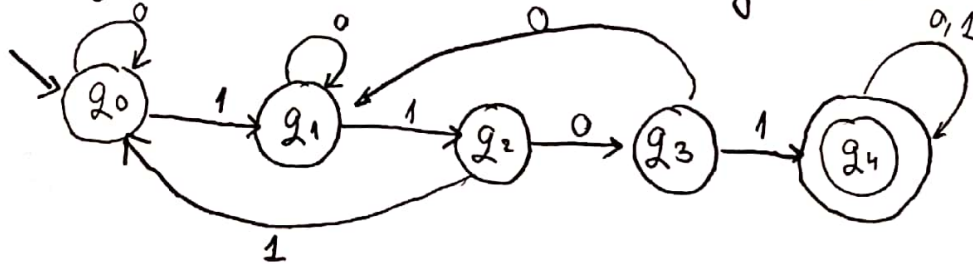First, we draw the DFAs recognizing the following languages:
a) $\{w \mid w$ begins with a 1 and ends with a 0$\}$

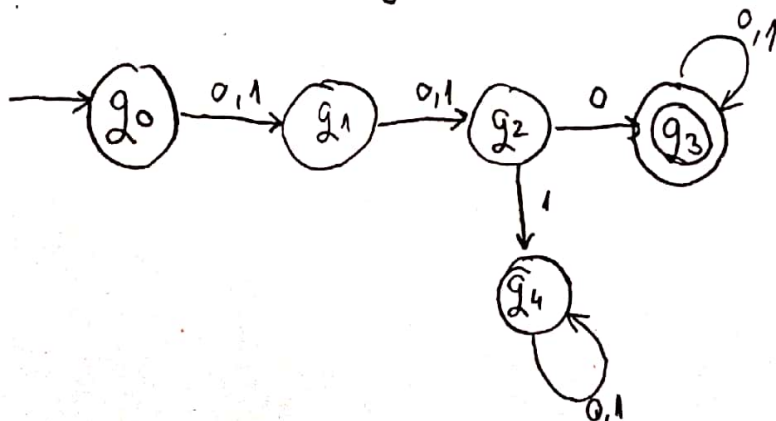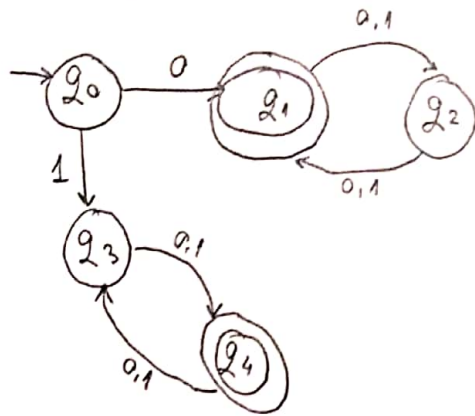b) $\{w \mid w$ contains at least 3 1s$\}$
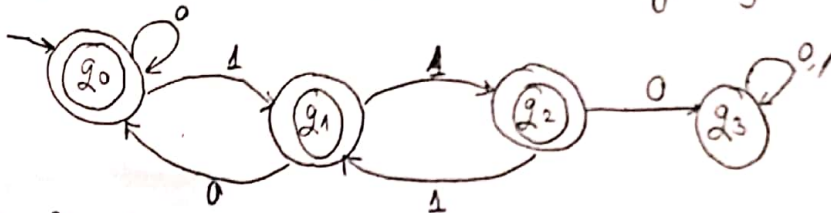

c) $\{w \mid w$ contains the substring 0101$\}$

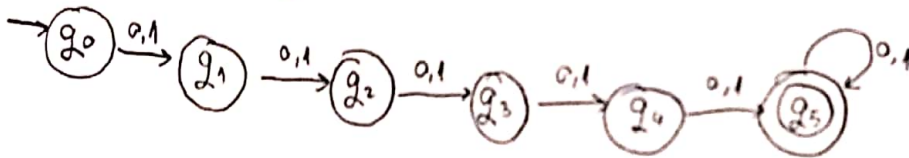d) $\{w \mid w$ has length at least 3 and its 3rd symbol is a 0$\}$

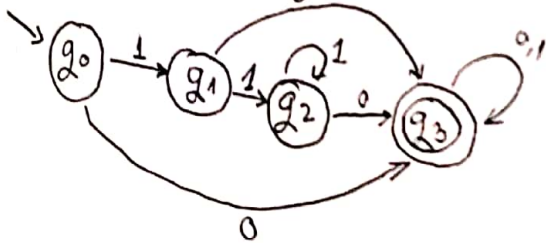e) {w | w starts with 0 and has odd length or starts with 1 and has even length}
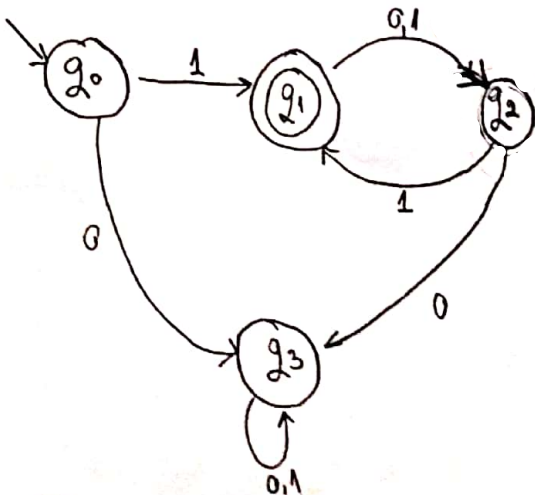

f) {w | w doesn't contain the substring 110}

g) {w | the length of w is at most 5}

h) {w | w is any string except 11 and 111}

i) {w | every odd position of w is a 1}
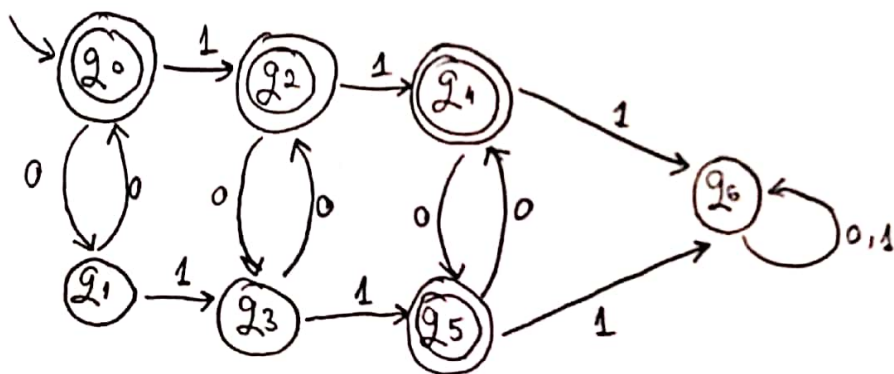
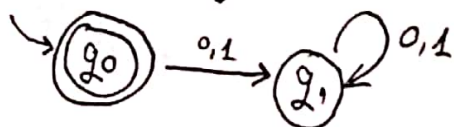j) $\{w \mid w$ contains at least two os and at most one 1$\}$
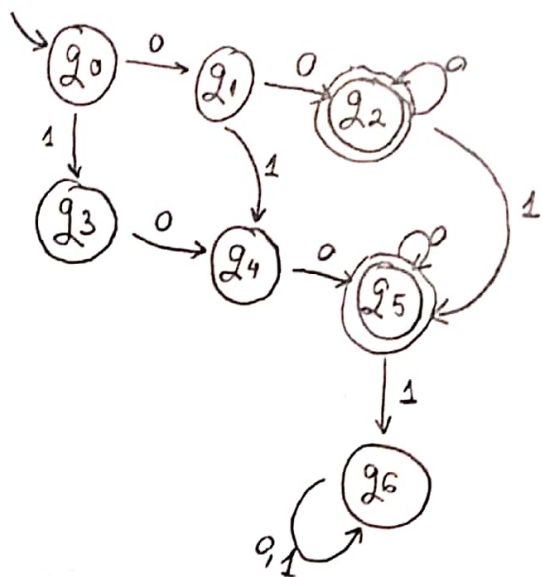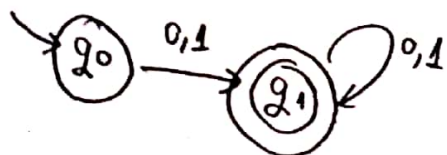

k) $\{\varepsilon, 0\}$
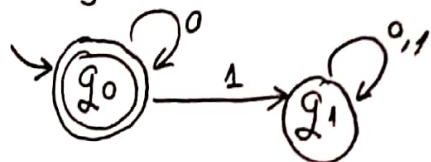
l) $\{w \mid w$ contains an even number of os, or contains exactly two 1s$\}$
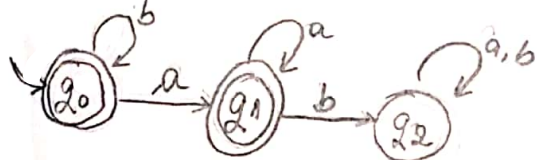

m) The empty set

n) Any string except the empty string
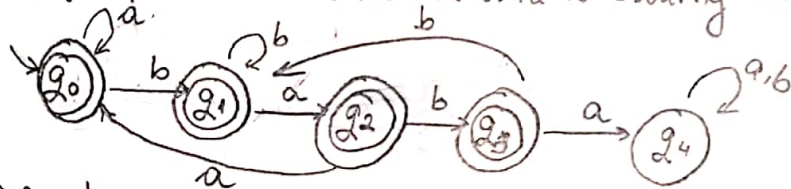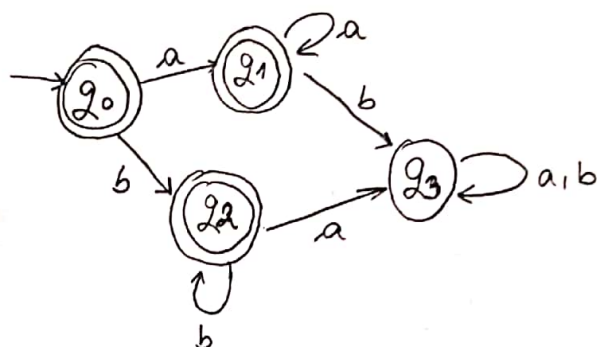
1.5. Sipser

a) $\{w \mid w$ does not contain the substring $ab\}$

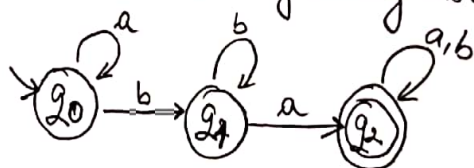**b)** $\{w \mid w$ does not contain the substring $baba\}$

c) $\{w \mid w$ contains neither the substrings ab nor $ba\}$

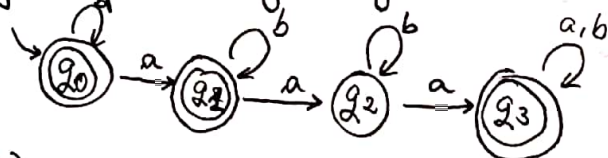**d)** $\{w \mid w$ is any string not in $a^*b^*\}$

e) $\{w \mid w$ is any string not in $(ab^+)^*\}$
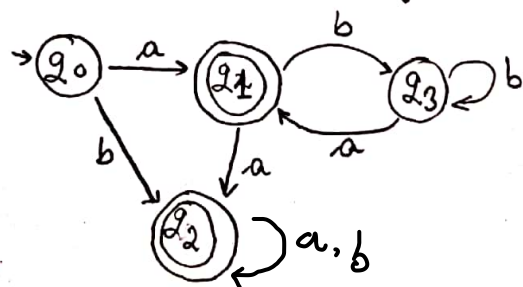
f) $\{w \mid w$ is any string that doesn't contain exactly 2 a's$\}$

h) $\{w \mid w$ is any string except a and $b\}$