Automata on Infinite Structure
Fall 2018

Exercice Sheet 5

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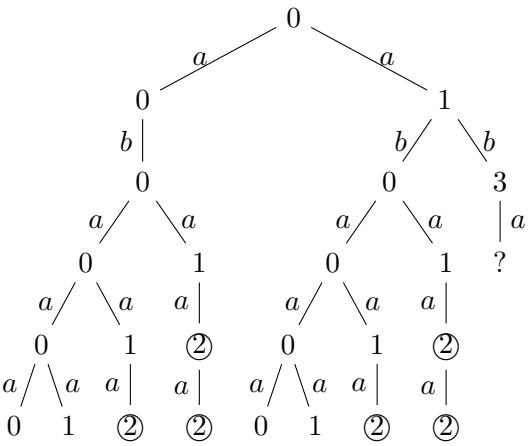
Exercice 1

We assume that the right most state is labeled 3 and not 2.

abaaa



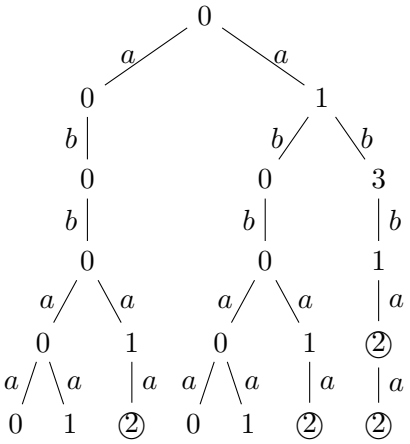
The accepting runs are :

$$\{000012, 000122, 010122, 010012\}$$

The greedy runs are :

$$\{000122, 010122\}$$

abbaa



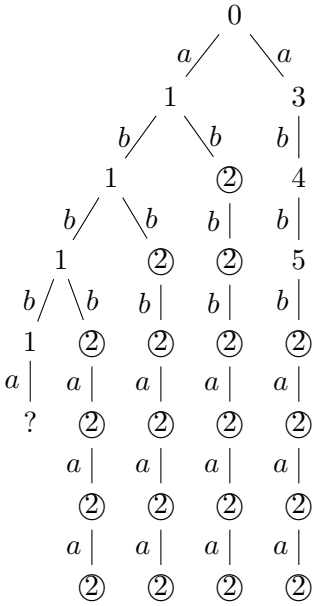
The accepting runs are :

$$\{000012, 010012, 013122\}$$

The greedy runs are :

$$\{013122\}$$

abbbaaa



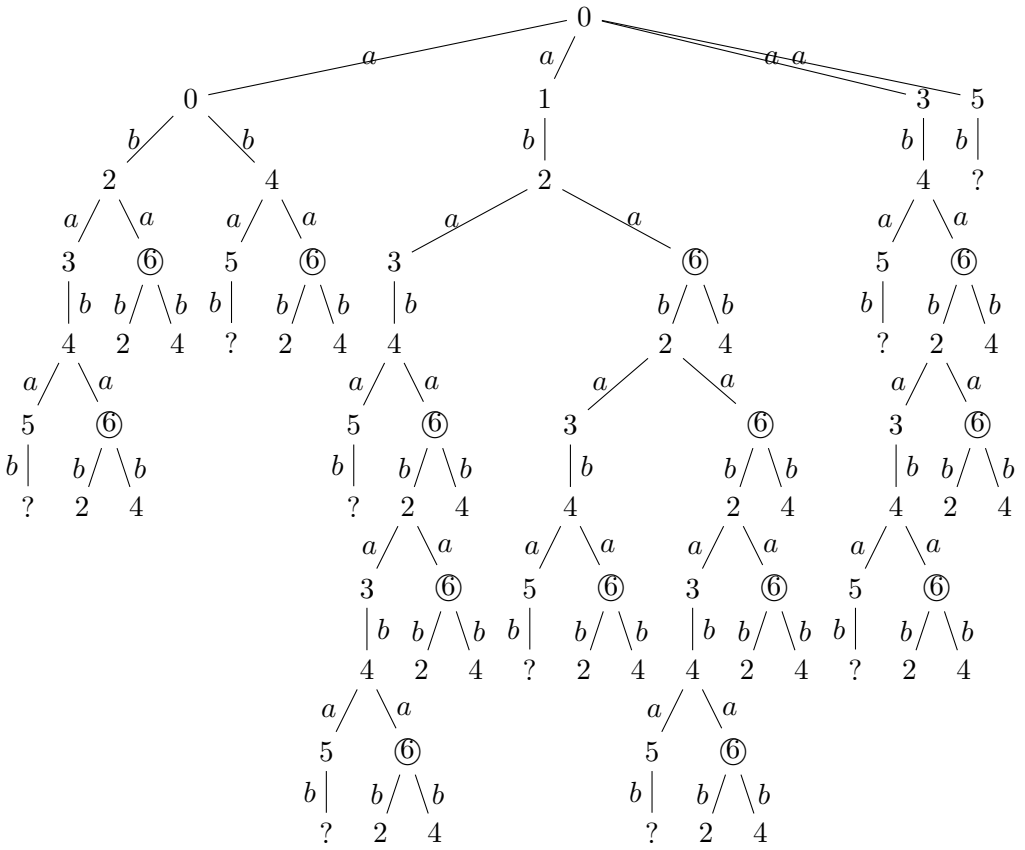
The accepting runs are :

$$\{01112222, 01122222, 01222222, 03452222\}$$

The greedy runs are :

$$\{01222222\}$$

Exercice 2



The structures of the accepting runs is :

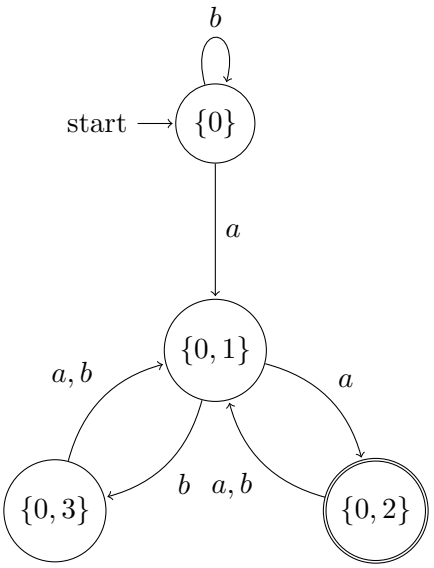
$$(00|12|34)(2(346|6))^{\omega}$$

Note : it's a regular expression to represent the accepting run of the automaton.
The greedy runs are :

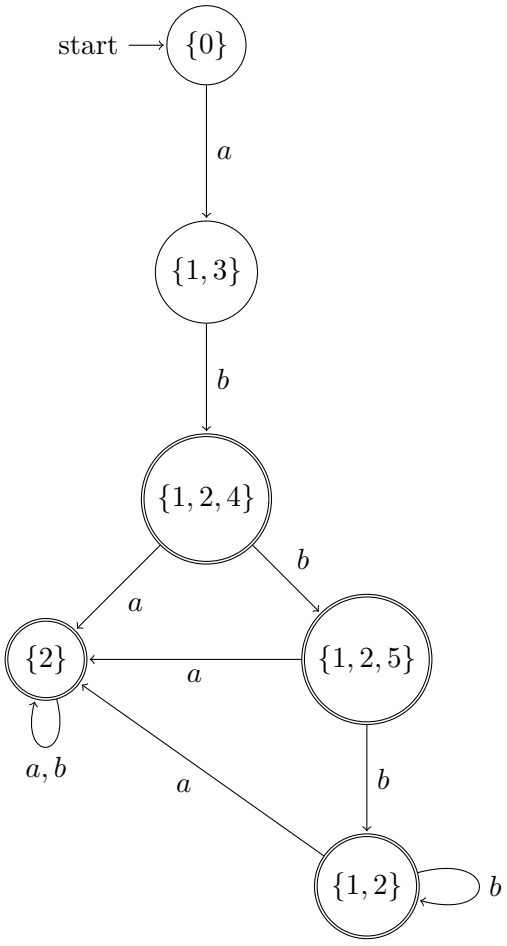
$$\{0046\ldots, 0026\ldots, 0126\ldots, 0346\ldots\}$$

Exercice 3

$A_1 =$



$A_2 =$



$A_3 =$