Exame 2014/2015

sexta-feira, 18 de junho de 2021 14:26

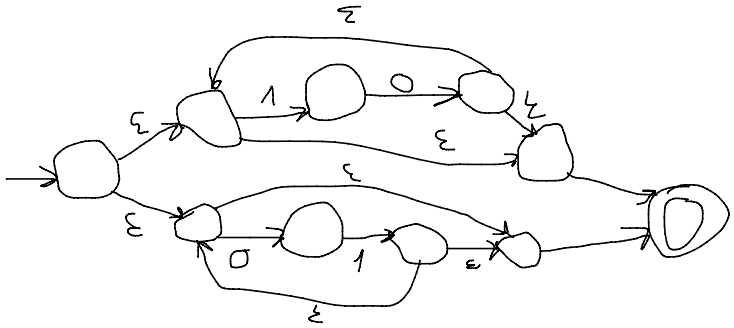
Grupo I

1.

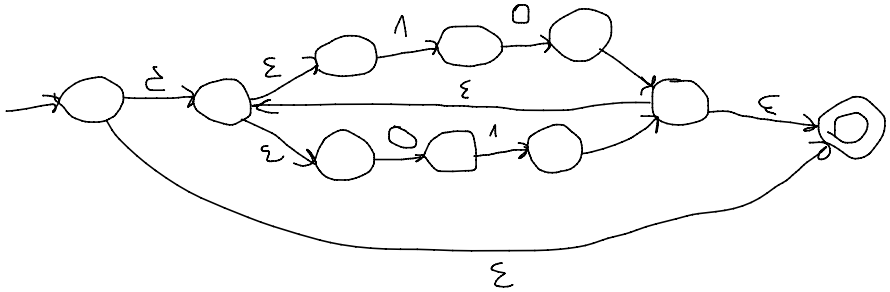
L (r) = (10)* + (01)*

L (s) = (10 + 01)*

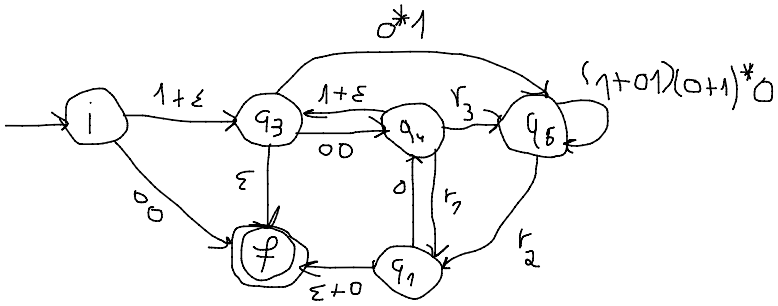
r :



s :



2.

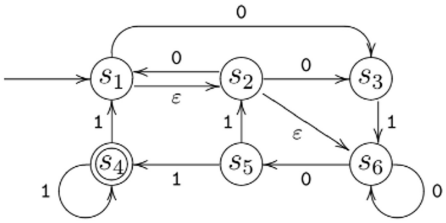


$r_1 = 11(0+1)^*(00)^*$

$r_2 = (11+01)(0+1)^*(00)^*$

$r_3 = 11(0+1)^*0 + 10$

4.



	0	1
q_1	q_2	{}
q_2	q_2	q_3
{}	{}	{}
q_3	q_2	q_4
q_4	q_2	q_4

$F_\varepsilon(S_1) = \{1,2,6\} = q_1$

$F_\varepsilon(S_2) = \{2,6\}$

$F_\varepsilon(S_3) = \{3\}$

$F_\varepsilon(S_4) = \{4\}$

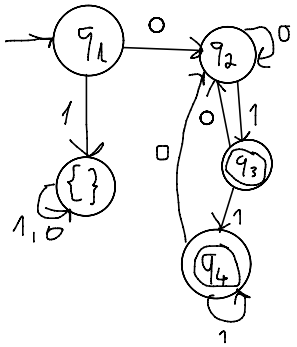
$F_\varepsilon(S_5) = \{5\}$

$F_\varepsilon(S_6) = \{6\}$

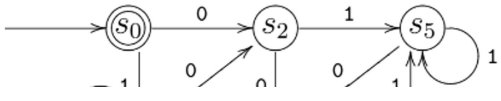
$q_2 = \{1,2,3,5,6\}$

$q_3 = \{2,4,6\}$

$q_4 = \{1,2,6,4\}$

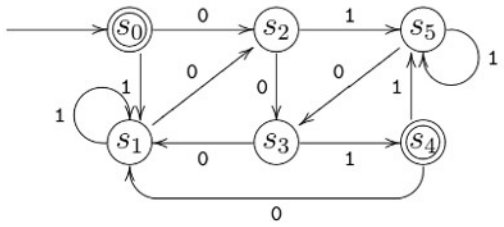


5.

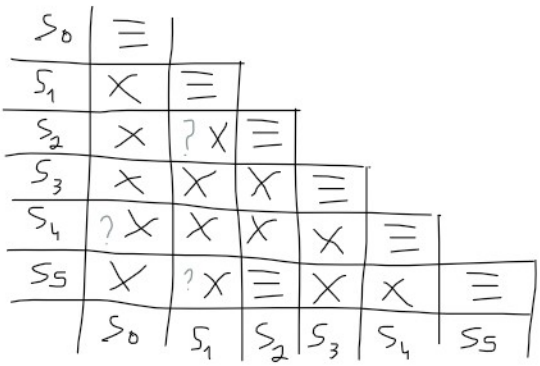


	0	1

5.



	0	1
s_0*	2	1
s_1	2	1
s_2	3	5
s_3	1	4
s_4*	1	5
s_5	3	5



? $s_4 \equiv s_0 \Rightarrow s_1 \equiv s_2 \wedge s_1 \equiv s_5$
$s_1 \equiv s_5 \Rightarrow s_2 \equiv s_3$
$s_1 \equiv s_2 \Rightarrow s_2 \equiv s_3 \wedge s_1 \equiv s_5$ } F

Grupo II

6.

Y -> aYa
Y -> a
Y -> XX
X -> bbX
X -> ccX
X -> b

1. Aaccbbaa

$Y \Rightarrow aYa \Rightarrow aaYaa \Rightarrow aaXXaa \Rightarrow aaccXXaa \Rightarrow aaccXbaa \Rightarrow aaccbbaa$
$Y \Rightarrow aYa \Rightarrow aaYaa \Rightarrow aaXXaa \Rightarrow aaccXXaa \Rightarrow aaccbXaa \Rightarrow aaccbbaa$
$Y \Rightarrow aYa \Rightarrow aaYaa \Rightarrow aaXXaa \Rightarrow aaXbaa \Rightarrow aaccXbaa \Rightarrow aaccbbaa$

3 derivações

b)

$Y \rightarrow a \mid aYa \mid XX$
$X \rightarrow bb \mid ccX \mid bbX$

$a^n ((cc+bb)^* b (cc+bb)^* b) a^n$