Correction Exercice 2 TD 3

1. $L_1 = \{a^n b^n / \ n > 0 \ \}$

G= ({S}, {a,b}, S, R)

R={ S→ aSb|ab }

ab : le plus petit mot accepté par L_1

2. $L_2 = \ \{a^n b^{2n} / \ n \geq 0 \ \}$

G= ({S}, {a,b}, S, R)

R={ S→ aSbb|ε}

ε : le plus petit mot accepté par L_2

3. $L_3 = le\ langage\ des\ mots\ palindromes\ sur\ \{a, b\}$

G= ({S}, {a,b}, S, R)

R={ S→ aSa| bSb| a| b| ε}

4. $L_4 = \{a^n b^m c^n / \ m \geq 0\ n \geq 1\ \}$

G= ({S}, {a,b,c}, S, R)

R={ S→ aSc| aAc
A→ Ab| ε}

ac : le plus petit mot accepté par L_4

5. $L_5 = \{a^m b^n c^p / \ m+n = p \ \}$

G= ({S}, {a,b,c}, S, R)

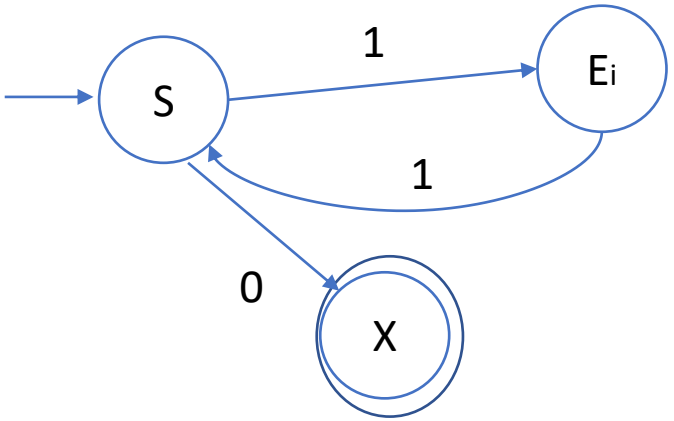
R={ S→ aSc| A

A→ bAc | ε}

$c^p = c^{n+m} = c^n c^m$

$a^m b^n c^p = a^m b^n c^n c^m$

Correction Exercice 3 TD 3



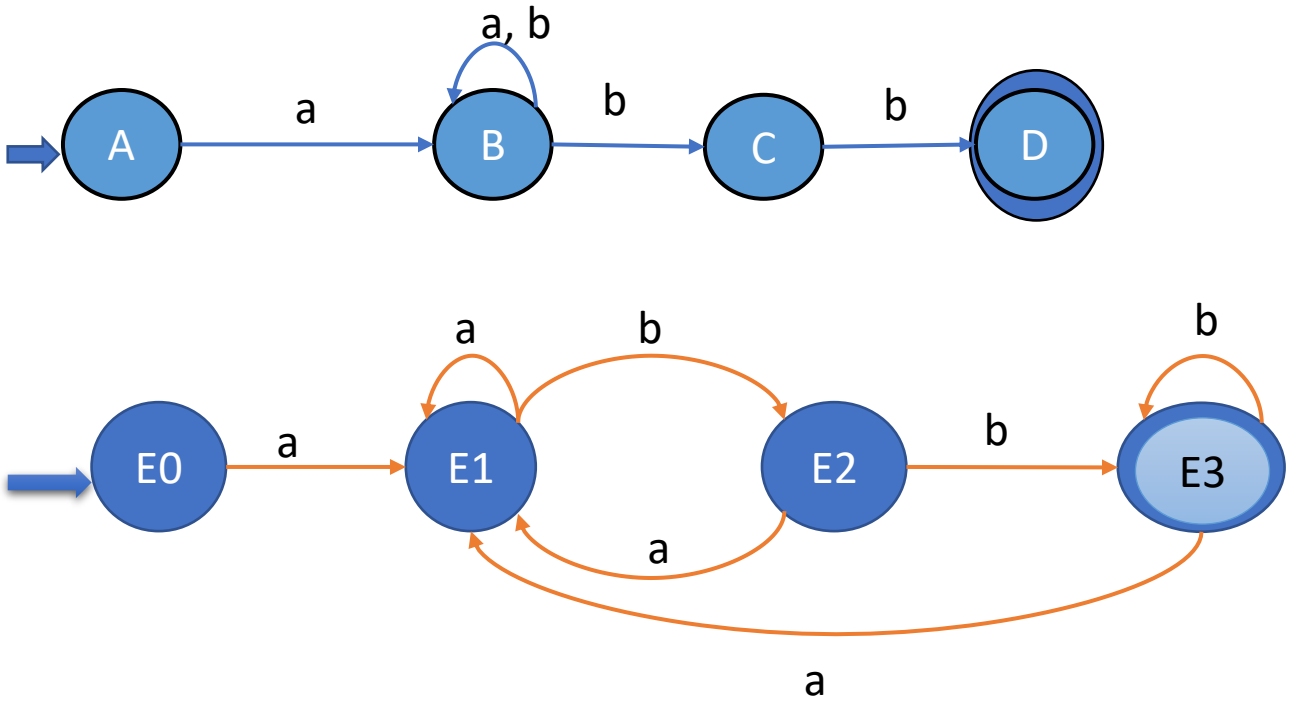
D'une manière générale :

$N1 \longrightarrow t_1\ t_2 N2$

$N1 \longrightarrow t_1 N_i$

$N_i \longrightarrow t_2\ N2$

Correction Exercice 4 TD 3



	a	b
{A} =E0	{B}=E1	-
{B}=E1	{B}=E1	{B,C}=E2
{B,C}=E2	E1	{B,C,D}=E3
E3	E1	E3

G=< E0, N={E0 , E1 ,E2 , E3}, T={a,b},
R={E0->aE1 , E1->aE1|bE2 , E2->aE1|bE3,
E3->aE1|bE3|eps}>