Terminologia:

$\{J_1, \ldots, J_n\}$ PROCESSI APERIODICI

$\forall J_i \rightarrow$ a_i = arrivo

f_i = istante fine

d_i = deadline

c_i = computazione

$L_i = f_i - d_i$ LATENESS

$L_i \leq 0 \rightarrow$ deadline rispettata

$L_i > 0 \rightarrow$ deadline non rispettata

$L_{MAX} = \max_i L_i$ = MASSIMA LATENESS

$L_{MAX} \leq 0$ PROCESSI SONO SCHEDULABILI

$L_{MAX} > 0$ PROCESSI NON SONO SCHEDULABILI

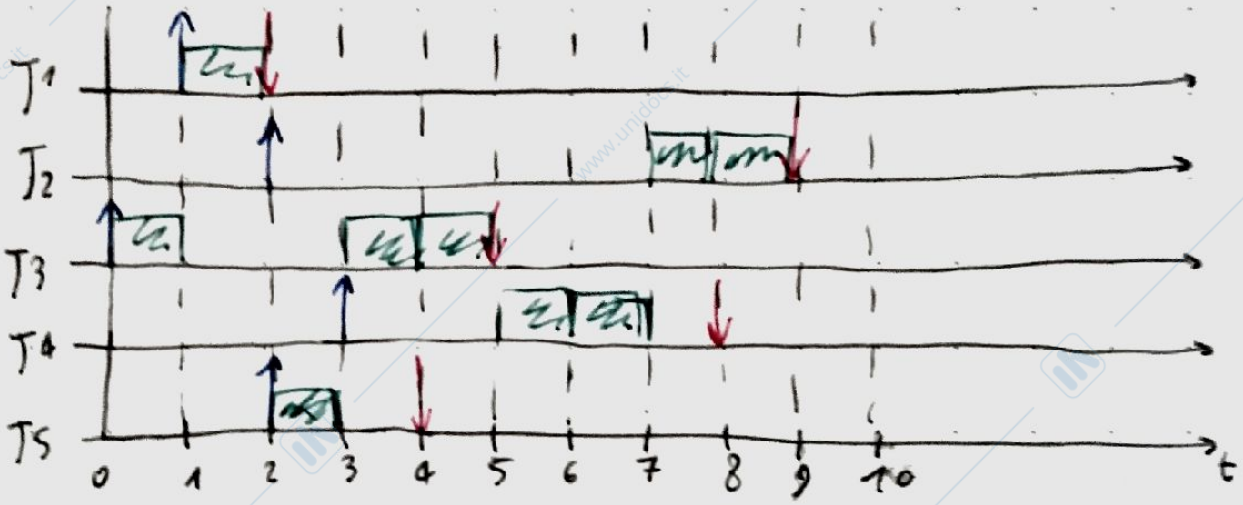
No. ES. SISTEMI INF.

Date 02 · 10 · 19

1. EDF

	J_1	J_2	J_3	J_4	J_5
a_i	1	2	0	3	2
c_i	1	2	3	2	1
d_i	2	9	5	8	4

→ c'è preemption



$L_1 = 0$

$L_2 = 0$

$L_3 = 0$

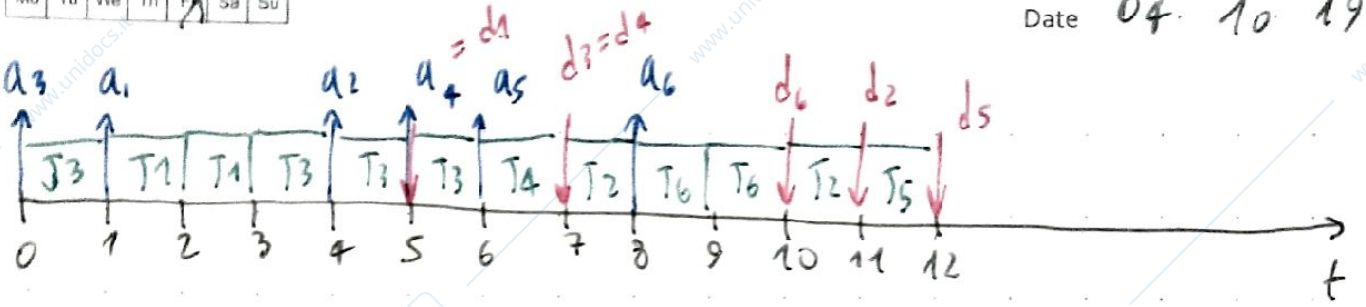
$L_4 = -1$

$L_5 = -1$

→ $L_{max} = 0$

2. EDF

	J_1	J_2	J_3	J_4	J_5	J_6
a_i	1	4	0	5	6	8
c_i	2	2	4	1	1	2
d_i	5	11	7	7	12	10

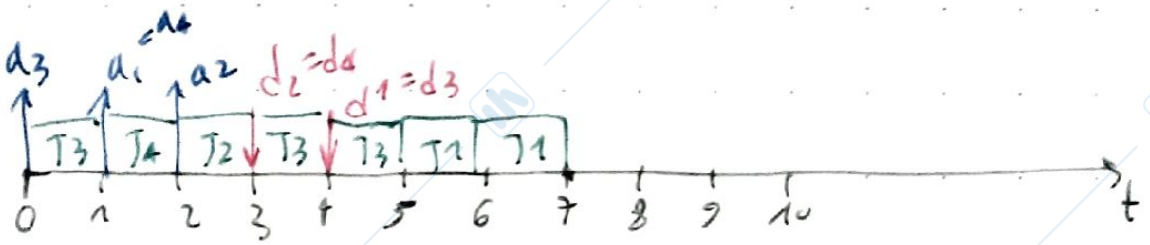


$$\left.\begin{aligned} L_1 &= -2 \\ L_2 &= 0 \\ L_3 &= -1 \\ L_4 &= 0 \\ L_5 &= 0 \\ L_6 &= 0 \end{aligned}\right\} \Rightarrow L_{MAX} = 0$$

3.

EDF

	J_1	J_2	J_3	J_4
a_i	1	2	0	1
c_i	2	1	3	1
d_i	4	3	4	3



$$\left.\begin{aligned} L_1 &= 3 \\ L_2 &= 0 \\ L_4 &= -1 \\ L_3 &= 1 \end{aligned}\right\} \Rightarrow L_{MAX} = 3 \rightarrow \text{NON SCHEDULABILI}$$

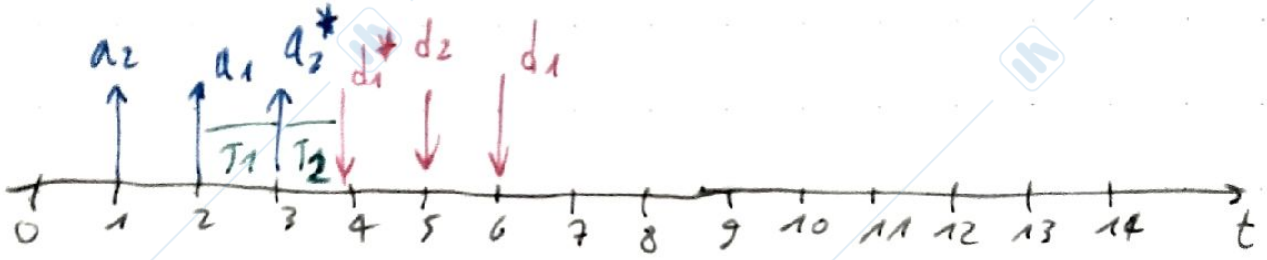
4

No. ES. SISTEMI INF.

Date 04 · 10 · 19

(4) EDF*

$C_1 = 1 \quad C_2 = 1$

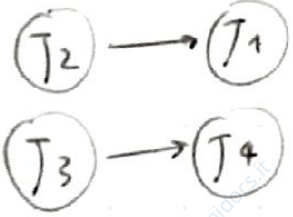


$$a_i^* = \max_{T_k \to T_i} \{ a_i, a_k^* + C_k \}$$

$$d_i^* = \min_{T_i \to T_k} \{ d_i, d_k^* - C_k \}$$

(5) EDF*

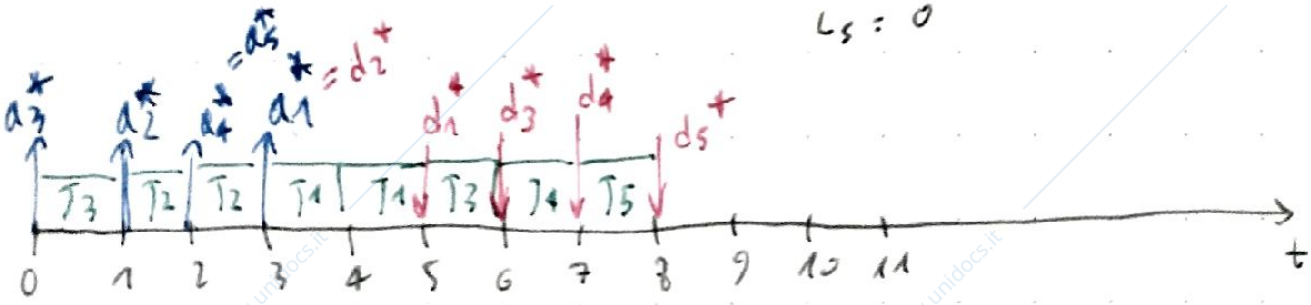
	T_1	T_2	T_3	T_4	T_5
a_i	1	1	0	0	2
C_i	2	2	2	1	1
d_i	5	7	9	7	8
a_i^*	3	1	0	2	2
d_i^*	5	3	6	7	8



$L_i = f_i - d_i$ — non *

↳ $L_1 = 0$
$L_2 = -4$
$L_3 = -3$
$L_4 = 0$
$L_5 = 0$

$\to L_{MAX} = 0$



5

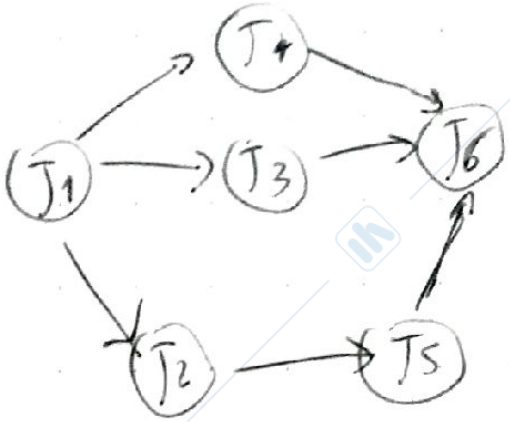
Mo Tu We Th Fr Sa Su

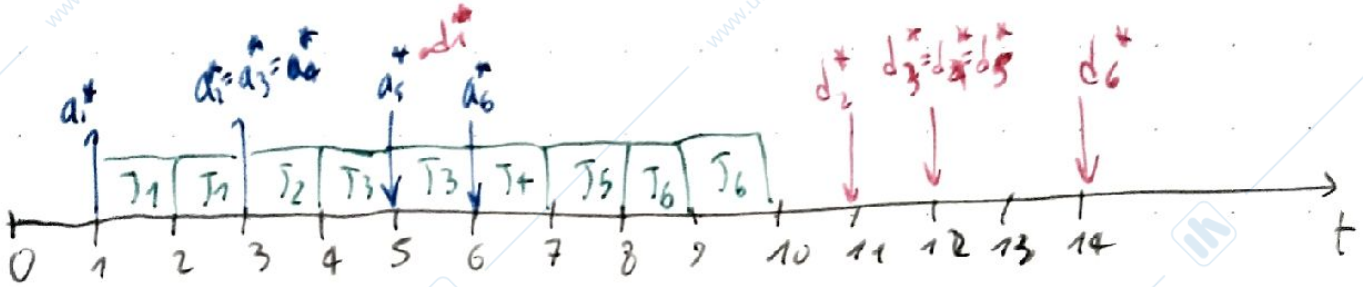
No ES. SISTEMI INF.

Date 04 / 12 / 19

6.

	T_1	T_2	T_3	T_4	T_5	T_6
a_i	1	0	1	3	5	5
c_i	2	1	2	1	1	2
d_i	5	11	12	15	13	14
a_i^*	1	3	3	3	5	6
d_i^*	5	11	12	12	12	14





$$L_1 = -2$$
$$L_2 = -7$$
$$L_3 = -6$$
$$L_4 = -8$$
$$L_5 = -5$$
$$L_6 = -4$$

$$\longrightarrow L_{MAX} = -2$$