

Scheduling

Please use template-Exc-3.ods (moodle) for tasks 1, 2, 5 and 6.

Start with time 0, all tasks are ready at $t=0$.

The template-sheet is automated, so you can use task numbers (1,2,3,4) and get automatically the colors (yellow, blue, red, green.)

Start with defining the deadlines!

$U_i(t_p, i; t_{exec, i})$

$t_r = 0;$

Earliest Deadline First (EDF)

1. A System has 4 periodic tasks $T_i(t_p; t_e)$ with
 $T_1(8; 1); T_2(22; 6); T_3(15; 3)$ and $T_4(20; 4)$.
Construct a schedule using EDF for the System.
2. A System has 3 periodic tasks $T_i(t_p; t_e)$ with
 - a) $T_1(25; 9); T_2(15; 5); T_3(10; 2)$
Construct a schedule using EDF for the System in the interval $[0, 50]$!
 - b) $T_1(12; 5); T_2(15; 4); T_3(10; 2)$
Construct a schedule using EDF for the System in the interval $[0, 50]$!

Rate Monotonic Scheduling (RMS)

3. A System has 4 periodic tasks $T_i(t_p; t_e)$ with
 $T_1(8; 1); T_2(22; 6); T_3(15; 3)$ and $T_4(20; 4)$.
Construct a schedule using RMS in the interval $[0, 50]$!
4. A System has 3 periodic tasks $T_i(t_p; t_e)$ with
 - a) $T_1(25; 9); T_2(15; 5); T_3(10; 2)$
Construct a schedule using RMS in the interval $[0, 50]$!
 - b) $T_1(12; 5); T_2(15; 4); T_3(10; 2)$
Construct a schedule using RMS in the interval $[0, 50]$!
5. Calculate the load of the examples in 3. and 4. .
6. Calculate the schedulability test for the examples in 3. and 4.