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Exercise Sheet 5 (Practice)
(10 Points)

Please note: Solutions must be submitted (individually or in pairs) until 19.11.2018 at 10:00 AM (post box in OH16, basement, in front of room E16). Submitting solutions via mail is *not* possible. Discussion: 21.-23.11.2018.

1 Preparation (3 Points)

Please note: The solution to this assignment must be submitted!

Previous to the exercise session, read chapters 1, 3.2.4 and 3.2.6 of the OIL specifications. Answer the following questions:

- a.) The OIL language is vital to achieve which aspect of the OSEK standard?

- b.) Of which data type are priorities? Which value indicates the lowest priority?

- c.) Which attributes can be defined multiple times per task?

2 OIL Language (7 Points)

In the CI-Lab, choose the virtual machine `es` and log on. Under `media/nfs/es`, the folders `ev3osek` and `05` are located. Copy the folder `ev3osek` to your home directory and the content of the folder `05` into the folder `example`, which is located in `ev3osek`. In the folder `../example/OILExercise`, a .c file is located in which the following three tasks with a runtime of 2 seconds each are defined:

- Task τ_1: The LED flashes in green.

- Task τ_2: The LED flashes in orange.

- Task τ_3: The LED flashes in red.

For the task priorities, it holds: $\tau_1 > \tau_2 > \tau_3$.

Open the file `oiltest.oil` in your text editor of choice and complete it such that the following schedule is realized. Please note that the LED flashes in red while EV3OSEK boots. However, the program starts when it flashes in green.
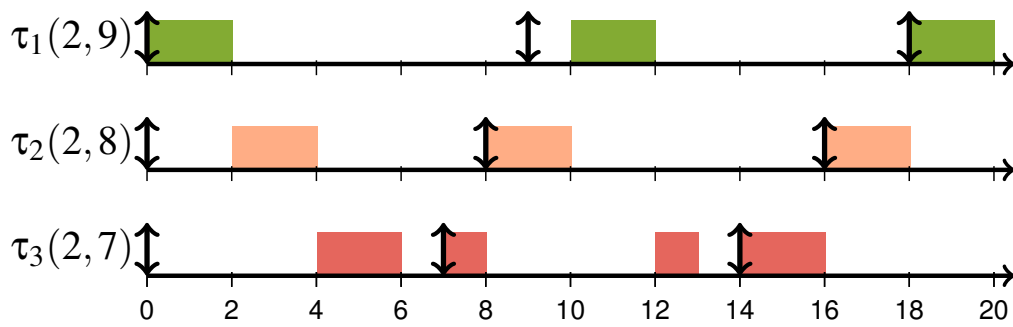
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Abbildung 1: Target schedule. **Please note:** τ_2 is not preempted by τ_1 at time 9, although τ_1 has a higher priority.