EDF Schedular Implementation

Tasks:

* button\_1 (p: 50, D: 50, E: 0.0056)
* button\_2 (p: 50, D: 50, E: 0.0056)
* Periodic\_Transmitter(p: 100, D: 100, E: 0.55).
* Uart\_Receiver(p: 20, D: 20, E: 0.025).
* Load\_1\_Simulation(p: 10, D: 10, E: 5).
* Load\_2\_Simulation(p: 100, D: 100, E: 12).

Hyper-period:

CPU Load:

Schedulability:

URM:

time demand analysis:

starting from the more periodic tasks to the least.

for Load\_1\_Simulation:

for Uart\_Receiver:

for Button\_1:

for Button\_2:

for Periodic\_Transmitter:

for Load\_2\_Simulation:

SIMSO Simulation

Graphical user interface, application, table, Excel

Description automatically generated

Keil simulator:

Graphical user interface, application

Description automatically generated

Conclusion

* all tasks are schedulable and there are no misses for the deadline.
* Idle task takes 36% and the load is 62.6974% so there is a loss of 1.3026% used in context switching.
* the results show that the implementation was successful.