EDF scheduler with FreeRTOS

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Tasks Given in rubrics

task	Periodicity	Deadline
Button 1	50ms	50ms
Button 2	50ms	50ms
Transmitter	100ms	100ms
UART	20ms	20ms
Load 1	10ms	10ms
Load 2	100ms	100ms

➔ **Hyper-period here is 100 ms**
➔ **CPU Load Utilization = 63.414%**
➔ **Rate monotonic 0.63 < 0.73**

Task	Calculation	Schedulable
Button 1	W(50)=30u+(50/20)140u+(50/10)5m= 25.31m 25.31<50	yes
Button 2	W(50)=30u+(50/50)30u+(50/20)140u+(50/10)5m=25.34m 25.34<50	yes
Transmitter	W(100)=(100/50)30u+(100/50)30u+(100/20)140u+(100/10)5m+94u =50.914m 50.914<100	yes
UART	W(20)=140u+(20/10)5m=10.14m 10.14<20	yes
Load 1	W(10)=5m+0=5m 5<10	yes
Load 2	W(100)=(100/50)30u+(100/50)30u+(100/20)140u+(100/10)5m+94u+12.5=63.414m 63.414<100	yes

Screen shoots from simulators