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Number of Tasks:

There are **Five** Tasks:

- LCD Task (T1).

- Blood Pressure Sensor Task (T2).

- Heart Beat Sensor Task (T3).

- Temperature Sensor Task (T4).

- Alert Siren Task (T5).

Tasks Parameters:

- T1 → { P : 100 , E : 2   , D : 100 , PRIORITY : 1 } .
- T2 → { P : 12.5 , E : 3   , D : 12.5 , PRIORITY : 2 } .
- T3 → { P : 50   , E : 1.5 , D : 100 , PRIORITY : 2 } .
- T4 → { P : 10   , E : 2 .5, D : 10   , PRIORITY : 2 } .
- T5 → { P : 10   , E : 1   , D : 10   , PRIORITY : 3 } .

System Tick Rate:

The Total execution time for the entire tasks is 10ms, hence the Tick Rate is **15ms**.
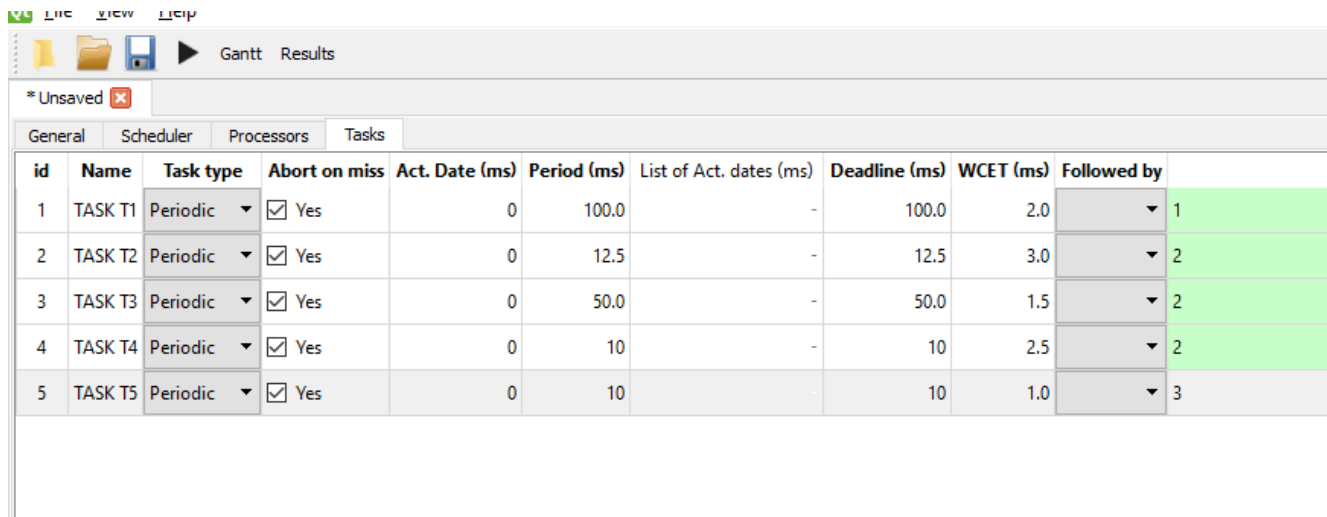
Hyperperiod:

H **= 100 ms.**

CPU Load:

U = R/C = (2+ (3*8) + (1.5*2) + (2.5*10) +10)/100 = 0.64
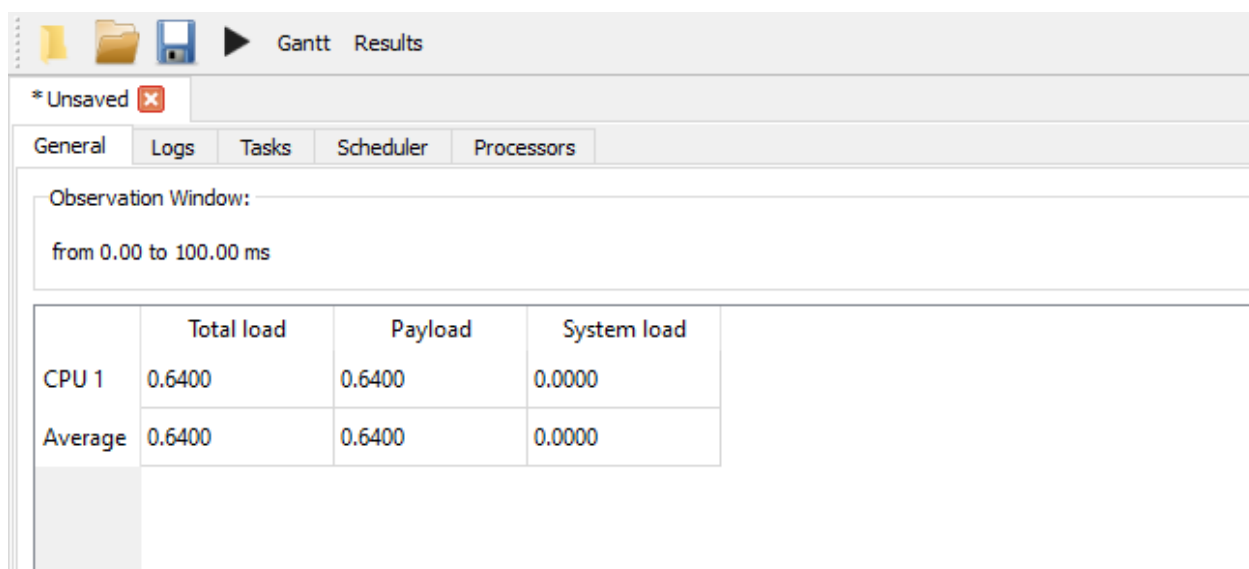
CPU Load is **64%.**

SIMSO Results:

Tasks Parameters:

id	Name	Task type	Abort on miss	Act. Date (ms)	Period (ms)	List of Act. dates (ms)	Deadline (ms)	WCET (ms)	Followed by	
1	TASK T1	Periodic ▼	☑ Yes	0	100.0	-	100.0	2.0	▼	1
2	TASK T2	Periodic ▼	☑ Yes	0	12.5	-	12.5	3.0	▼	2
3	TASK T3	Periodic ▼	☑ Yes	0	50.0	-	50.0	1.5	▼	2
4	TASK T4	Periodic ▼	☑ Yes	0	10	-	10	2.5	▼	2
5	TASK T5	Periodic ▼	☑ Yes	0	10	-	10	1.0	▼	3

CPU load:

File   View   Help

Gantt   Results

*Unsaved ✖

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Observation Window:

from 0.00 to 100.00 ms

	Total load	Payload	System load
CPU 1	0.6400	0.6400	0.0000
Average	0.6400	0.6400	0.0000

Time Line:
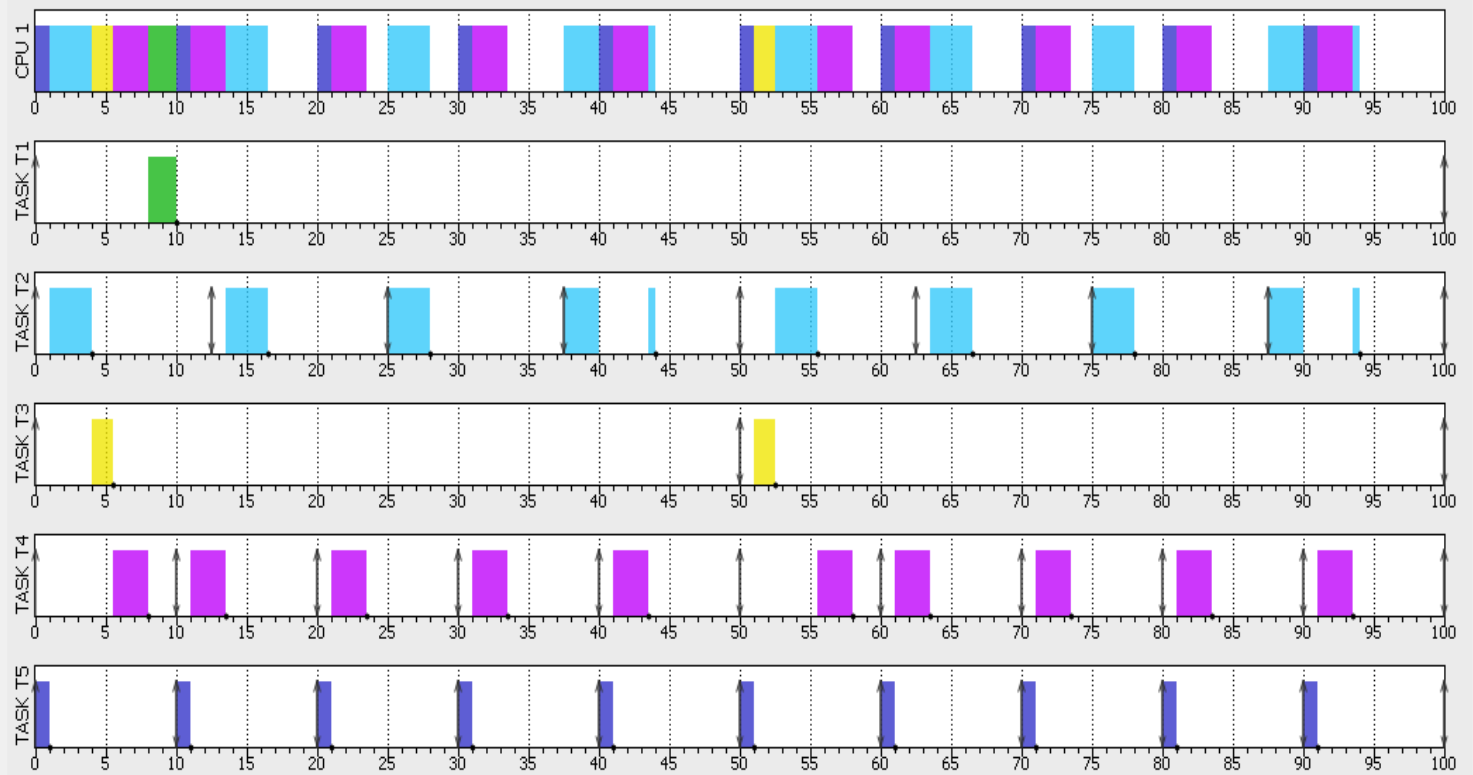
Comments on SIMSO results:

There is no task missed its deadline ,hence the system is schedulable and feasible.

The CPU load is the same as the CPU load manually calculated .