

Graduation Project: RTOS

Implement and Test EDF Scheduler

The system consists of 3 main tasks, every task has empty to simulate virtual load:

Task priorities:

Task 1:

Period = 80

Deadline = 80

Priority = Dynamic

Excution Time = 16.2 ms

Task 1:

Period = 50

Deadline = 50

Priority = Dynamic

Excution Time = 12.7 ms

Task 1:

Period = 30

Deadline = 30

Priority = Dynamic

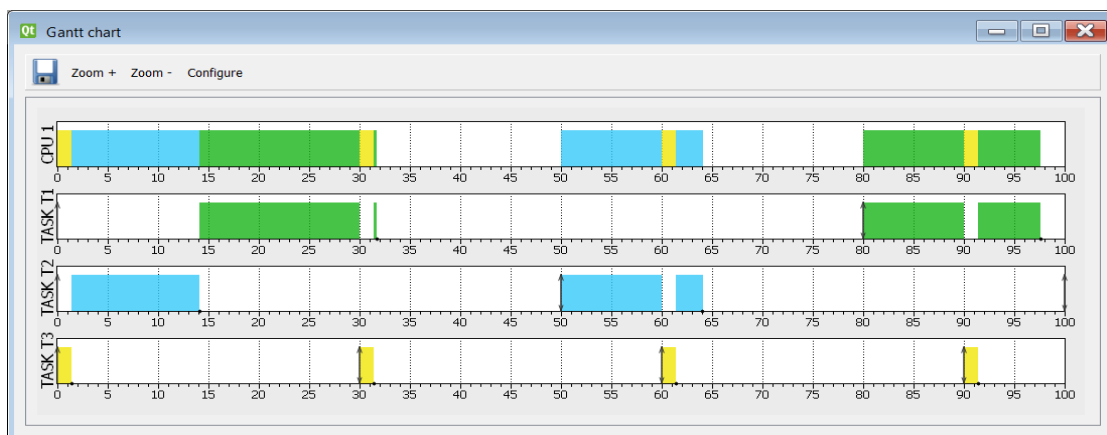
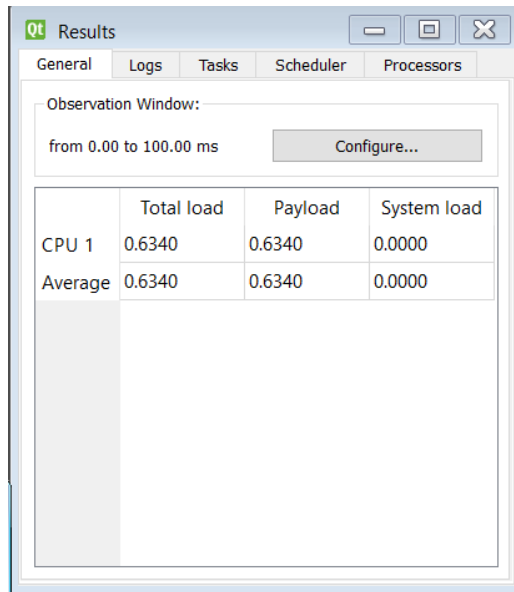
Excution Time = 1.4 ms

System Schedulability:

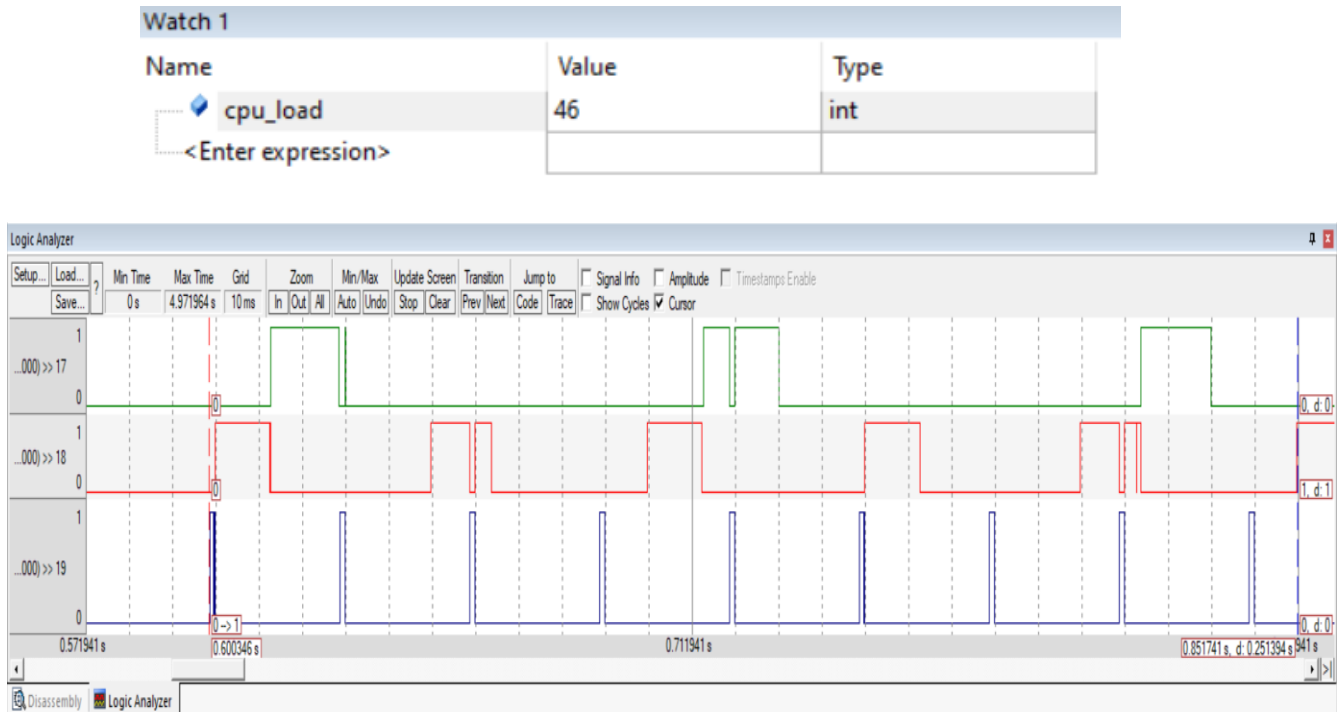
$$U = \sum_{i=1}^N \frac{C_i}{T_i} \leq 1$$

$$U = \frac{16.2}{80} + \frac{12.7}{50} + \frac{1.4}{30} = 0.50 \leq 1$$

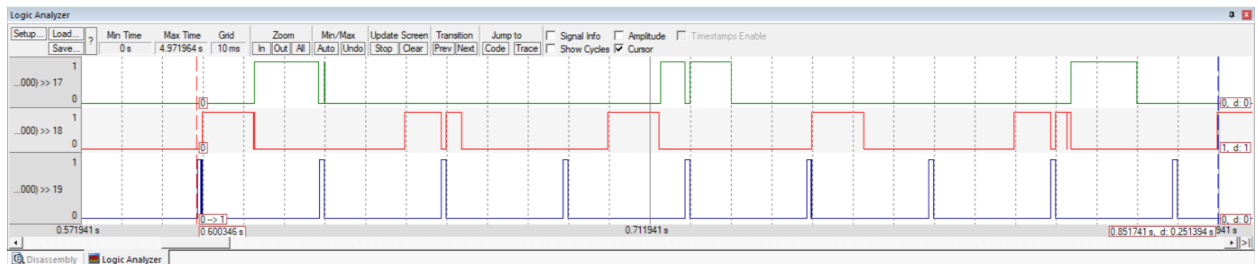
Offline Simulator:




Runtime Analysis:



The system works well and efficiently.



Watch 1

Name	Value	Type
 cpu_load	46	int
<Enter expression>		

