1- Tasks

$T_1(P=50, D=50, E=0.012) \rightarrow$ Button-1-Monitor

$T_2(P=50, D=50, E=6.012) \rightarrow$ Button-2-monitor

$T_3(P=100, D=100, E=0.013) \rightarrow$ Periodic-Transmitter

$T_4(P=20, D=26, E=0.012) \rightarrow$ Uart-Receiver

$T_5(P=10, D=10, E=5) \rightarrow$ Load-1-Simulation

$T_6(P=100, D=100, E=12) \rightarrow$ Load-2-Simulation
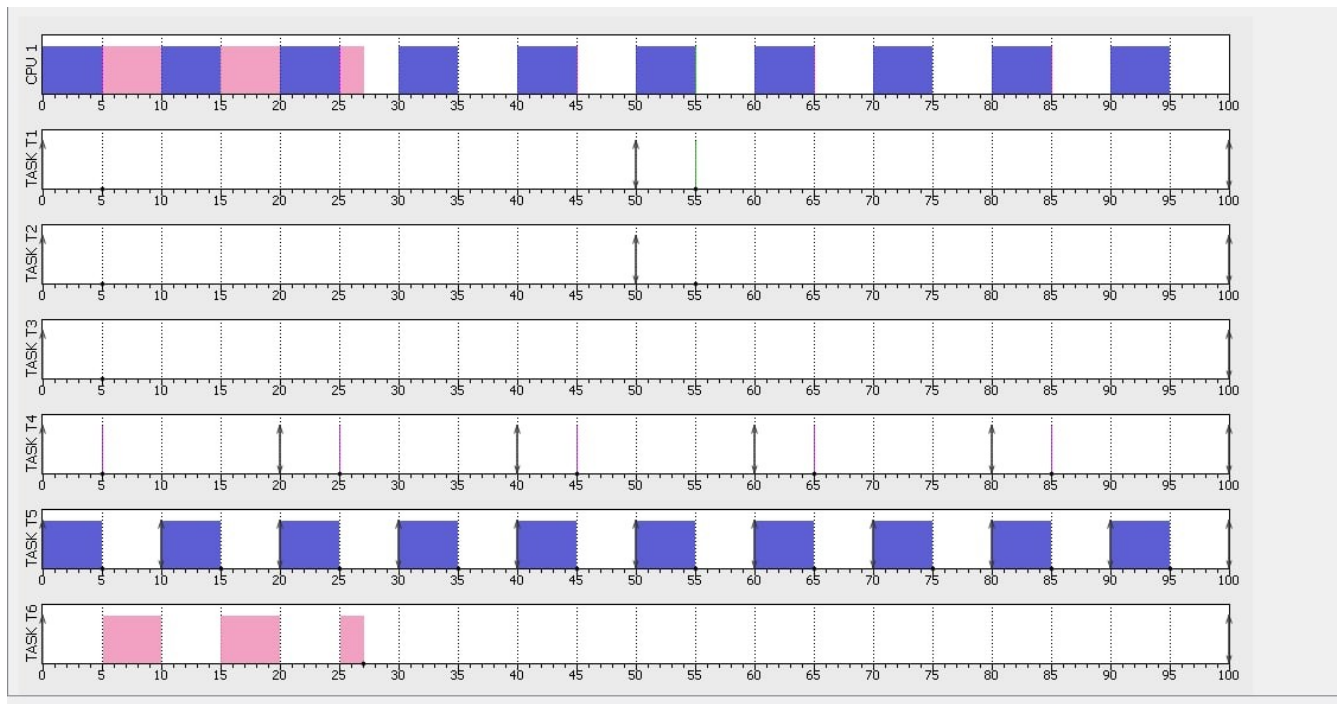
2- Hyper Period → 100 ms

3- Calculating CPU Load

    * Manual

$$CPU\ Load = \sum_{i=1}^{6} \frac{E_i}{P_i}$$

$$= \frac{0.012}{50} + \frac{0.012}{50} + \frac{0.013}{100} + \frac{0.012}{20}$$

$$+ \frac{5}{10} + \frac{12}{100} = 0.62121 = 62.121\%$$
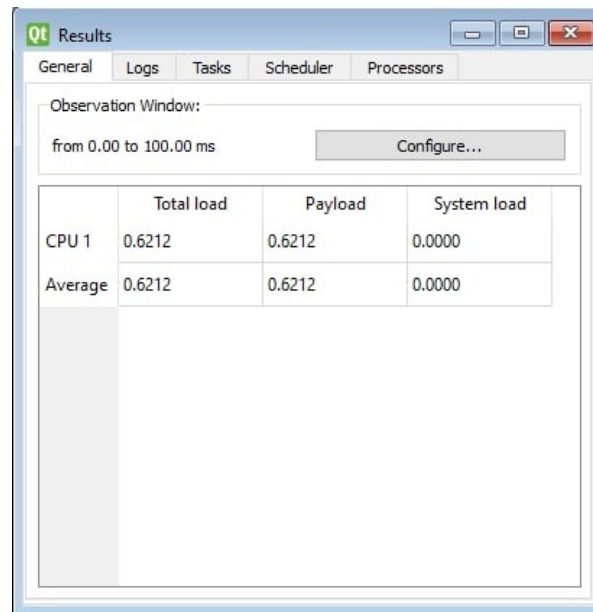
* Simso

Simso Gant Chart

* Keil Simulation

       - Pin 16: Tick
       - Pin 17: Button_1_Monitor
       - Pin 18: Button_2_Monitor
       - Pin 19: Periodic_Transmitter
       - Pin 20: Uart_Receiver
       - Pin 21: Load_1_Simulation
       - Pin 22: Load_2_Simulation