

Task1:



Task2:



Task3:



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hw 2

if $\text{time_slice} < \text{min_gran}$
then $\text{time_slice} = \text{min_gran}$

Turnaround Time:

$$T_{\text{turnaround}} = T_{\text{completion}} - T_{\text{arrival}}$$

Response Time:

$$T_{\text{response}} = T_{\text{firstrun}} - T_{\text{arrival}}$$

Time slice len:

$$\text{Time_slice} = \frac{\text{sched_latency}}{\# \text{ of processes}}$$

sched latency:

$$\text{sched_latency} = 6\text{ms}(1 + \log(\text{ncpus}))$$

① Completely Fair Scheduler

time slice length \Rightarrow tsc

sched_latency = 6

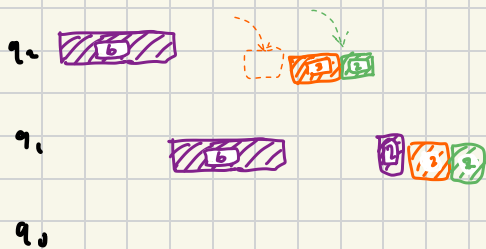
min_granularity = 2

$$\# \text{ processes} = \begin{cases} 0-6:1 & \Rightarrow \text{tsc} = 6/1 = 6 \\ 10-15:2 & \Rightarrow \text{tsc} = 6/2 = 3 \\ 15-30:3 & \Rightarrow \text{tsc} = 6/3 = 2 \\ 30-35:2 & \Rightarrow \text{tsc} = 6/2 = 3 \\ 35-40:1 & \Rightarrow \text{tsc} = 6/1 = 6 \end{cases}$$

this is not accounting for time slice length

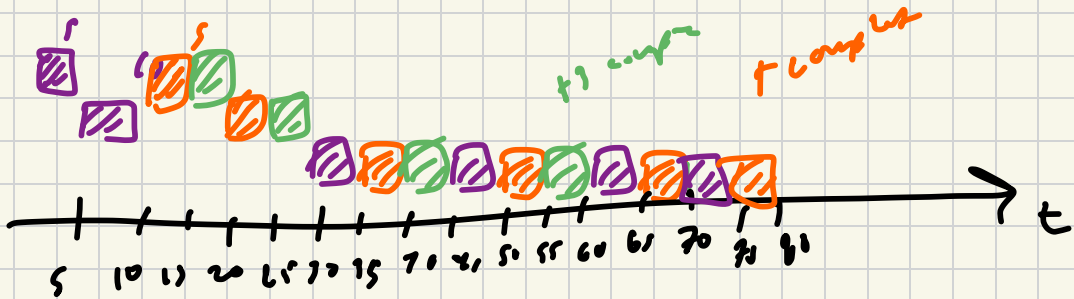
$$\text{avg turnaround} = \frac{6 + 3 + 6}{3} = 5.3$$

$$\text{avg response} = \frac{0 + 0 + 0}{3} = 0$$



② MLFQ

4 queues, 5 ms time slice



$$\text{turnaround} = \frac{75 + 70 + 45}{3} = 63.3$$

$$\text{response} = \frac{0 + 0 + 0}{3} = 0$$