

Scheduling (Ch 7.) Discussion Questions

- **Intro**

- What is a workload?
- Why are the initial workload assumptions in 7.1 unrealistic?
- What scheduling metrics are discussed in the book?
 - can you think of others?
 - how can we measure fairness?
 - “ “ proportionality?
- What is the difference between preemptive and non-preemptive schedulers?
 - what are the drawbacks of non-preemptive schedulers?
 - “ “ preemptive schedulers? (answer = context switch overhead)

- **FIFO**

- What is FIFO?
 - what data structures would we use?
- What drawback does FIFO have?
 - what is the convoy effect?
- Does FIFO trade performance for fairness?
- **SJF**
- How does SJF improve over FIFO?
- What are its limitations?
- Is it fair?
- What if there are a lot of small jobs and a few long ones?
- **STCF**
- How does STCF improve over SJF?
- What is response time?
- How well does STCF minimize response time?
- Is STCF fair?

- **RR**
- What is a time slice?
- Why don't we make the time slice really small (1 instruction)?
- How does RR minimize response time?
- What is the max response time for a newly arrived job?
- Is RR fair?
- How does RR perform in terms of turnaround-time?
- If N jobs all arrived simultaneously, which one would finish first?
- I/O
- How does I/O affect our model of CPU scheduling?
- Why should we treat jobs that do I/O as a series of separate jobs?
 - Are there any disadvantages to do this?