

## Chapter 6 - CPU Scheduling

- Process execution cycle: I/O and CPU bound tasks
- Preemptive scheduling
  - When does scheduling take place?
  - Disadvantages of non-preemptive scheduling?
  - Disadvantages of preemptive scheduling
- Role of the dispatcher
- Scheduling criteria

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## Chapter 6 - FCFS scheduling

- Simple algorithm
- Implemented using FIFO queue
- Average waiting time fluctuates
- Does not perform well in a dynamic environment

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## Chapter 6 - SJF scheduling

- Improved average waiting time
- Works well if execution time of all processes are known: batch processing
- Application for short term scheduling?
- Approximation of execution time: Prediction and history

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## Chapter 6 - Priority scheduling

- Definition of priorities
- Preemptive and non-preemptive
- Starvation: Why?

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## Chapter 6 - RR scheduling

- RR is preemptive FCFS scheduling
- Suitable for time sharing systems
- Timeslice allocated to every process
- What impact does this have on average waiting time and turn around time?
- Impact on context switching?

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## Chapter 6 - Multilevel queue-scheduling

- Processes divided into groups based on characteristics
- System implements a number of queues
- Different algorithm for each queue
- Processes can not migrate between queues

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## Chapter 6 - Multilevel feedback queue scheduling

- More complex to implement than previous algorithms
- Processes can migrate between queues
- Each level assigned a priority
- What happens if all the processes migrate to the bottom level queue and no new processes are created?

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## Chapter 6 - Realtime scheduling

- Earliest deadline first
- Rate monotonic
- Priority inversion

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## Chapter 6 - Evaluation of Algorithms

- Deterministic modelling
- Queuing models
- Simulation