CPU-Scheduling

The Illusion of Multitasking

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Part I Introduction / Forewords

- what is CPU scheduling - why do we need it - how does a CPU work / why isnt there multitasking - What is the goal of my project - bit of an overview over the whole report

Part II The ABCs of CPU Scheduling

Introduction to Part 1

1.1 Metrics

- turnaround time (performance) - response time (performance) - fairness

Definition 1.1: Turnaround Time

The turnaround time is It is calculated as follows:

 $T_{Turnaround} = T_{Completion} - T_{Arrival}$

Basic Algorithms

2.1 Optimized for Performance

- 2.1 First In, First Out (FIFO)
- 2.1 Shortest Job First (SJF)
- 2.1 Shortest Time-to-Completion (STCF)
- 2.2 Optimized for Fairness
- 2.2 Round Robin (RR)

Part III

The Industry Standard of CPU-Scheduling

Multi-Level Feedback Queue

Lottery and Stride Scheduling

Part IV Examples

My Implementation

Solaris Scheduling

Linux 2.6 Fair Scheduler

Part V conclusion