


Midterm Overview

Basic Information

Midterm Information

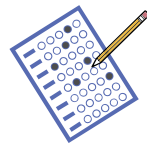
- 90 minutes
- 250 points
- May contain multiple choice and short answer questions
- May have you write some code



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What you need to bring

- Exam booklets will be provided for the midterm
- So, you only need to bring a pen or pencil
- No electronics allowed
- No notes allowed




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What Will Be Covered

- Exam will cover Parts 1 to 5
- All Labs – 1 TO 3
- No question will be asked that is not in the lecture notes or labs
- Download from:
athena.csus.edu/~cookd/35

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Part 1

Data

Part 1 – Important to Understand

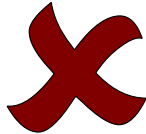
- Binary & hex numbers!
- ASCII
- Integers
- Floating Point Numbers



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Part 1 – Don't Worry About

- All the different ASCII values
- Unicode and EBCDIC
- How to convert ASCII



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Part 2

Computer Processors

Part 2 – Important to Understand

- Privileged mode
- Types of operands
- Types of opcodes
- x64 Registers



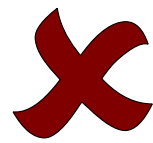
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Part 2 – Don't Worry About

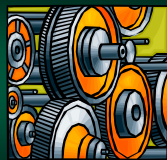
- *Know it all!*



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Part 3

Programs

Part 3 – Important to Understand

- Compilers
- Assemblers
- Linkers
- Assembly concepts
- UNIX



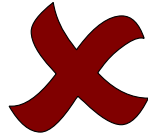
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Part 3 – Don't Worry About

- The UNIX header objects
- Intel vs. AT&T assembly



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Part 4

The ALU

Part 4 – Important to Understand

- Sign-magnitude
- One's complement
- Two's complement
- Multiplication
- Division
- Sign Extension



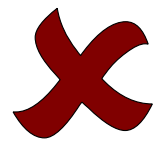
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Part 4 – Don't Worry About

- *Know it all*



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Part 5

Buffers

Part 5 – Important to Understand

- What is memory (address, etc....)
- Endianness
- Buffers
- How arrays work
- Tables
- Buffer overflow



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Part 5 – Don't Worry About

- Big-endian / little-endian example files
- Mario's countless crimes

