


Midterm 1 Overview

Basic Information

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Midterm Information

- 50 minutes
- 150 points
- May contain multiple choice and short answer questions




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Exam Format

- Available on **Canvas** during normal class time
- Canvas supports multiple choice and fill in the blank
- So, I will create a variety of questions




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Exam Format

- For Fill-In-The-Answer questions, use lowercase (they are case sensitive)
- Bring scratch paper!




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Canvas & Apple Safari

- Apple Safari is an excellent web browser, *however...*
- Malfunctions have been reported when using Canvas – *images don't work properly*
- Please use either Chrome, Firefox, or Edge



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What Will Be Covered


- Exam will cover Parts 1 to 5
- Lab 1
- No question will be asked that is not in the lecture notes
- Download from: athena.csus.edu/~cookd/35

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Exam Format

- You can enter the Zoom lecture during the exam
- This is also so I can talk to the class if necessary and you can ask questions
- You don't have to be on camera



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Processor Basics

Part 1

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Part 1 – Important to Understand

- Binary numbers
- Hexadecimal numbers
- How text is stored
- Control Logic Unit
- Execution Unit




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Part 1 – Important to Understand

- ALU
- Registers
- Encoding basics
- The Clock




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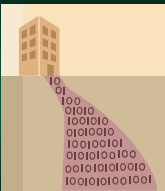
Part 1 – Don't Worry About

- Evolution of ASCII
(still, its good to know why something is the way it is!)
- EBCDIC and the details of Unicode
- ASCII character code values



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Memory Basics

Part 2

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Part 2 – Important to Understand

- Memory is an array
- Addresses
- von Neuman Architecture
- Accessing Data:
 - load
 - store
 - transfer




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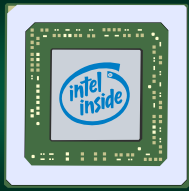
Part 2 – Don't Worry About

- Example processors



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Introduction to the x64

Part 3

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Part 3 – Important to Understand

- x64 registers
- The basic x64 instructions
 - mov
 - lea
 - etc...




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Part 3 – Don't Worry About

- History of the Intel x86



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Programs

Part 4

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Part 4 – Important to Understand

- Program language generations
- Compilers
- Assemblers
- Linkers
- Assembly basics
- UNIX



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Part 4 – Don't Worry About

- AT&T vs Intel syntax



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Buffers & Direct Addressing

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Part 5 – Important to Understand

- Buffers
- Directives that create storage (buffers)



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Part 5 – Don't Worry About

- Know it all – we just covered the first part!



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