

Midterm Review

History of Computation

- Not responsible for: dates, names
- Responsible for:
 - What motivated the development of computational machines?
 - What changed about these computers over time physically?

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Data Representation

- Convert from binary to decimal and vice-versa
- Do arithmetic in binary
- Know how text is stored
- Hexadecimal, octal (conversion)

3

Computer Architecture

- CPU
 - Fetch-execute cycle
 - Von Neumann Bottleneck
- Storage
 - RAM vs HD, Cache, ROM
 - Other computer parts

4

File Formats

- Data Compression
 - Compressing the triangle
 - Lempel-Ziv
- Sound & Images
 - Lossy vs. lossless compression
 - RGB
 - Digitizing images + sound
 - What motivates compression?

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Networks

- What's a protocol?
- Layered communication
- IP, TCP, UDP
- Routing, DNS
- Peer-to-Peer, Client Server
- Domain names
- HTTP, HTML
- STMP, POP, MIME
- Data transfer measures

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About the Midterm

- Held: next Thursday at 8:35 am in Trottier 0070
- Bring: yourself, writing tools, watch
- Duration: 1h 20min
- Format:
 - numerical problems
 - quick short answers
 - longer answers

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About the Midterm

- Some suggestions
 - don't get stuck on a question (budget your time)
 - ask me questions if needed by raising your hand
 - some questions will be more difficult than others

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Studying

- Make sure you can do the homework questions
- Come to office hours (TAs, me)
- Last year's course very different
- Extra office hours next Tuesday?