



CHAPTER 3

LECTURE OUTLINE

Computer Science Illuminated, Seventh Edition

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Data Representation

3.1 Data and Computers

Analog and Digital Data

Binary Representations

3.2 Representing Numeric Data

Representing Negative Values

Representing Real Numbers

3.3 Representing Text

The ASCII Character Set

The Unicode Character Set

Text Compression

3.4 Representing Audio Data

Audio Formats

The MP3 Audio Format

3.5 Representing Images and Graphics

Representing Color

Digitized Images and Graphics

Vector Representation of Graphics

3.6 Representing Video

Video Codecs

Summary

Ethical Issues: The Fallout from Snowden's Revelations

Key Terms

Exercises

Thought Questions