CS 208

M 8 Jan 2024
Bit: "binary digit"

□ can contain either a zero or a one

All computer data is stored and transmitted as sequences of bits.
Byte = 8 bits

Fred Brooks

\[ 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2 = 2^8 = 256 \text{ states} \]
Memory

Smallest addressable unit is a byte.

We're using "64-bit addressing architecture."
You can store any of 256 concepts in one byte.

e.g. integers 0, 1, ..., 255

characters ... ?? ...
char *s1 = argv[1];

s1[8008] \rightarrow \text{"cat"}