Memory

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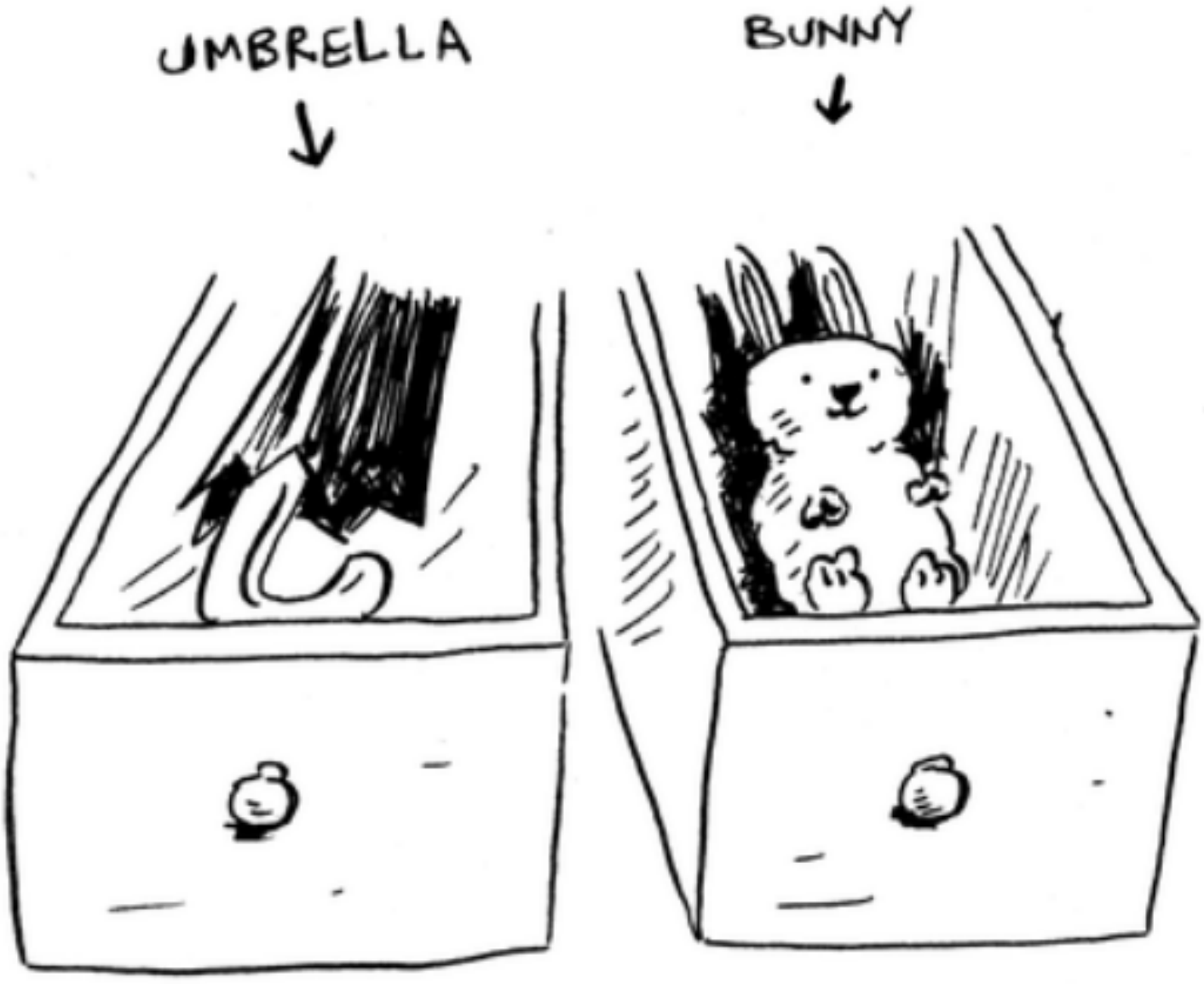
22 January 2024

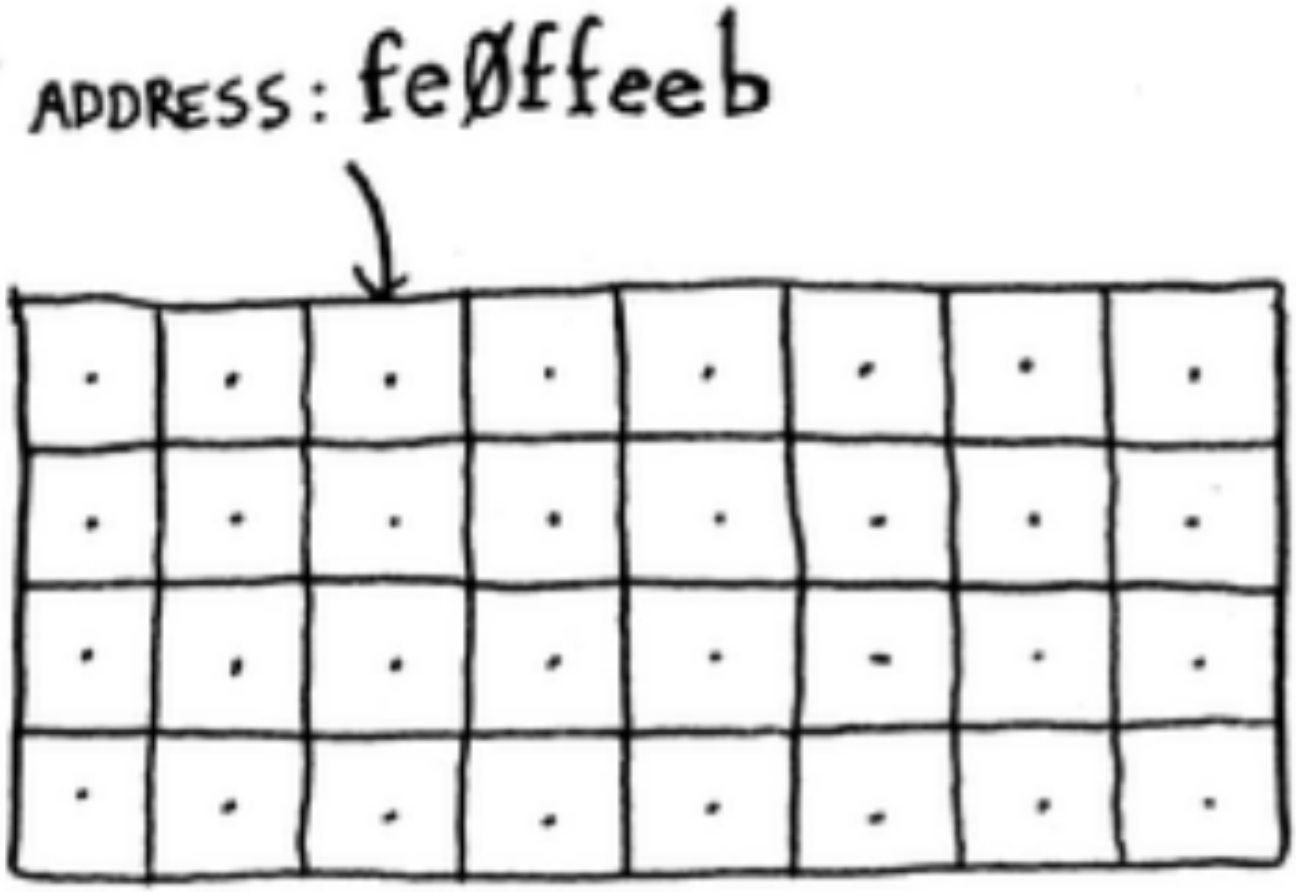
Memory is like a drawer

Programs ask to use memory

Programs use memory



A more typical illustration of memory



Grokking Algorithms

Each **slot** has an address, written in hexadecimal.

Slots are **Bytes**

- A **bit** is just a 0 or 1.
- A **byte** is a collection of 8 bits.
- A "slot" in memory is a **byte** (usually).

A laptop with 16 GB of RAM has roughly

- **1.6 billion** bytes (= "slots" in memory), or
- **12.8 billion** zeros and ones.

Bytes all the way down

Practical examples [edit]

Unit	Approximate equivalent
bit	a Boolean variable indicating true (1) or false (0).
byte	a basic Latin character.
kilobyte	text of "Jabberwocky"
	a typical favicon
megabyte	text of *Harry Potter and the Goblet of Fire*[61]
gigabyte	about half an hour of video[62]
	CD-quality uncompressed audio of *The Lamb Lies Down on Broadway*
terabyte	the largest consumer hard drive in 2007[63]
	75 hours of video, encoded at 30 Mbit/second
petabyte	2000 years of MP3-encoded music[64]
exabyte	global monthly Internet traffic in 2004[65]
zettabyte	global yearly Internet traffic in 2016 (known as the *Zettabyte Era*)[66]

Wikipedia "Byte"