# Multimodal Learning

*unleashing the human memory*

Dave Cohen, Oct 2023

# Why this talk?

*Question: what should people learn in an age of chatgpt?*

# What we’ll explore

The state of learning today, how we got stuck on a narrow way of learning (text)

How multimodal memory techniques can broaden how we learn; make it more fun and efficient

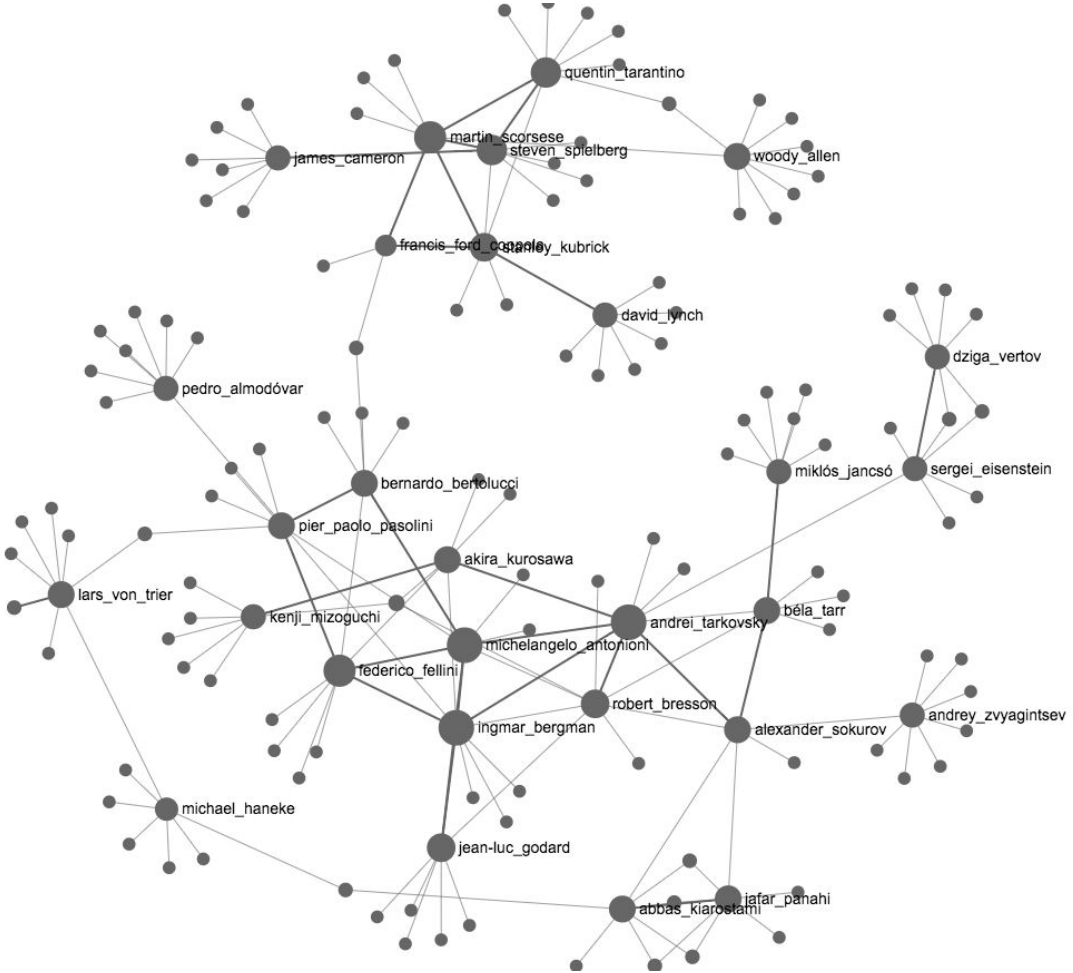
# My story

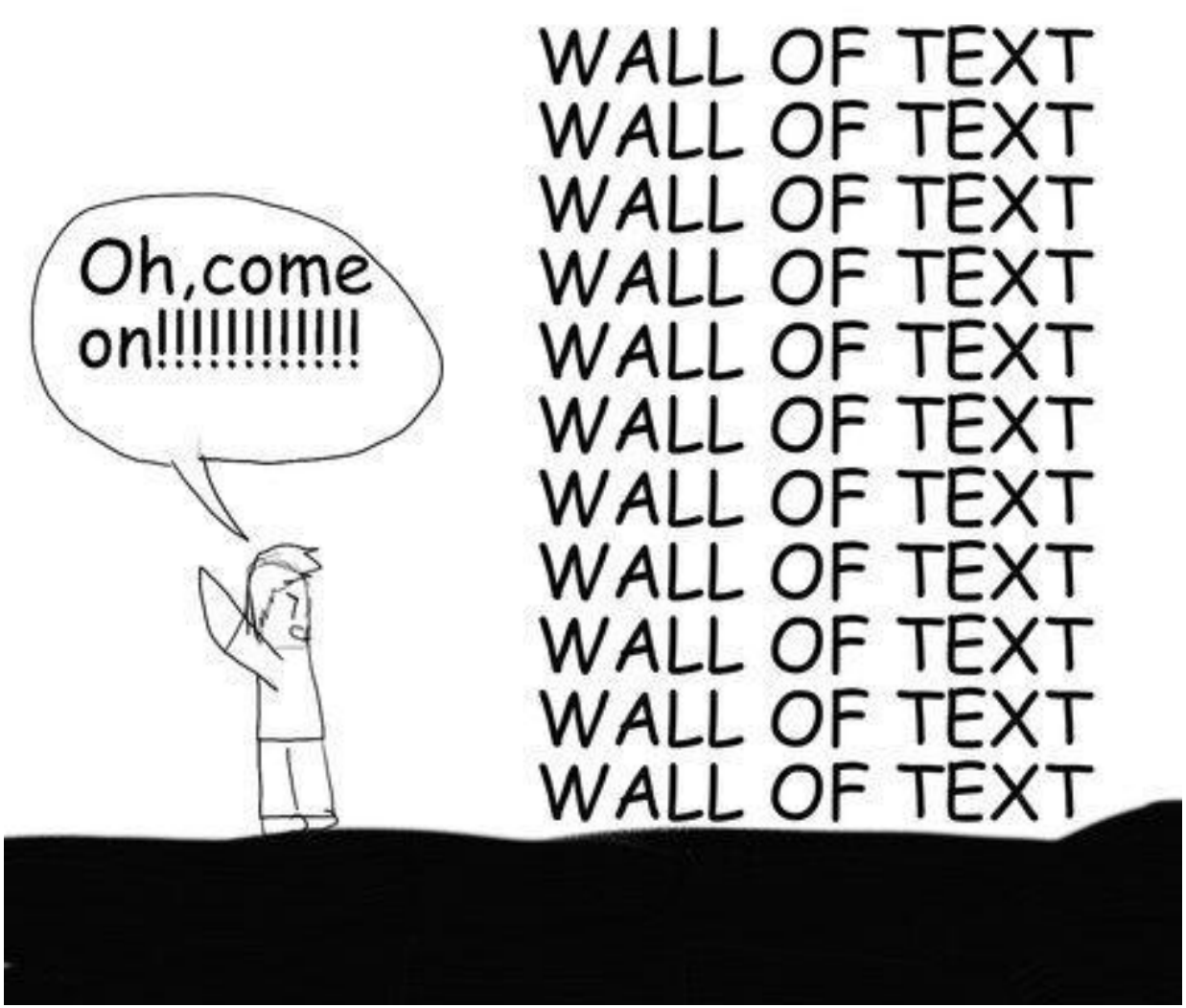
[How I'm Building My Second Brain]

```
// big .md notes collection

Projects
[[how-to-x]]
[[how-to-y]]

x
[[all-about-x1]]
[[all-about-x2]]
```




Oh,come on!!!!!!!!!!!!
WALL OF TEXT
WALL OF TEXT
WALL OF TEXT
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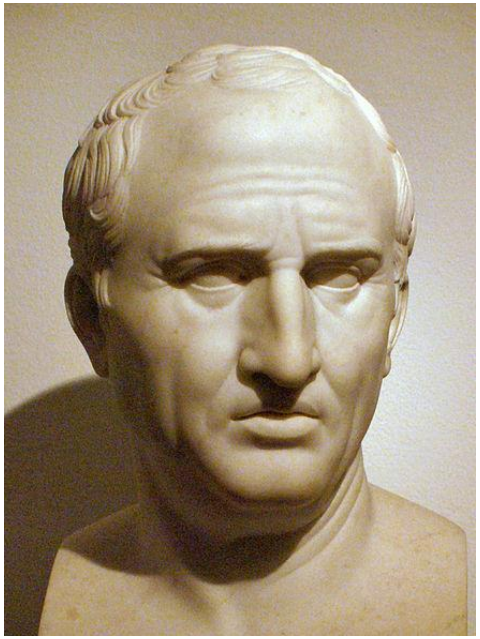
WALL OF TEXT
WALL OF TEXT

# Rote learning takes up to **160 repetitions**

~Rote Memorization and Alternatives to Learn Faster and More - A Tutor

A picture is worth **1000** words

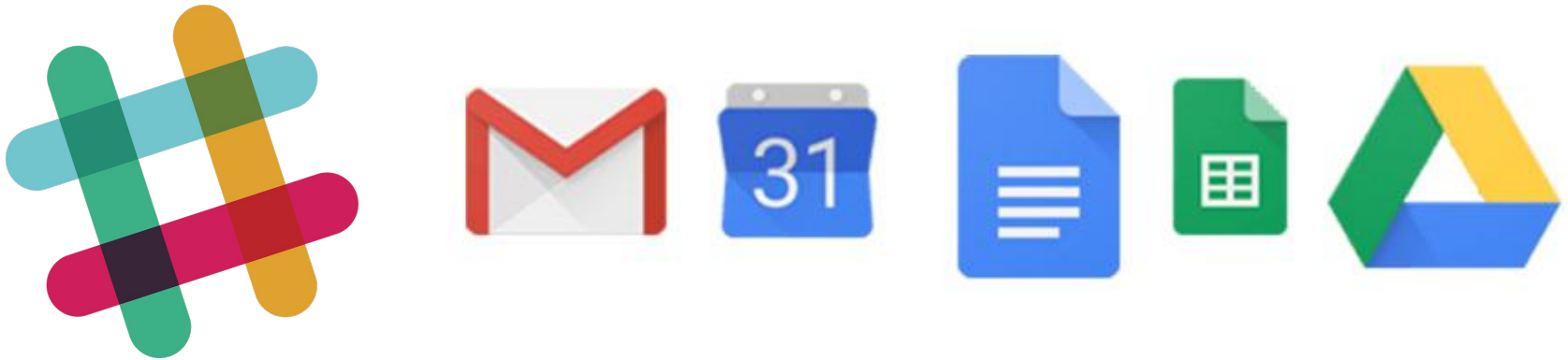
**50%** of our brains are visual



*Ars Memoriae*

**2500** year old memory techniques

# So, why is text the default?



question

ChatGPT

answer

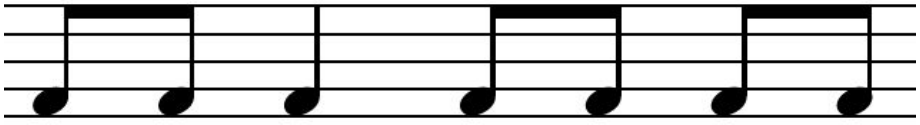
Text is the end result

Thinking benefits from going beyond text

# Imaginative powers - senses, faces, time, spaces

*b. 2005*

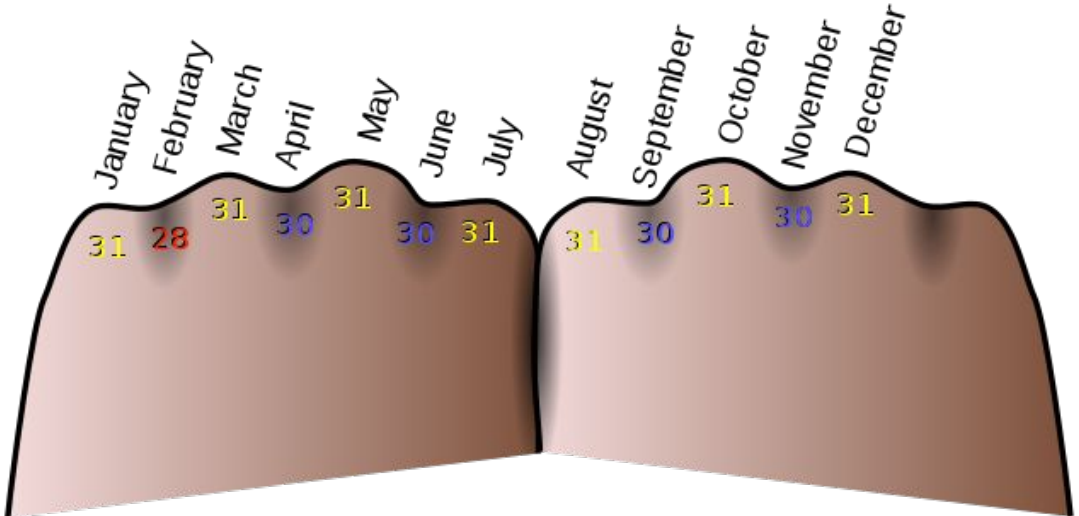
# Mnemonics



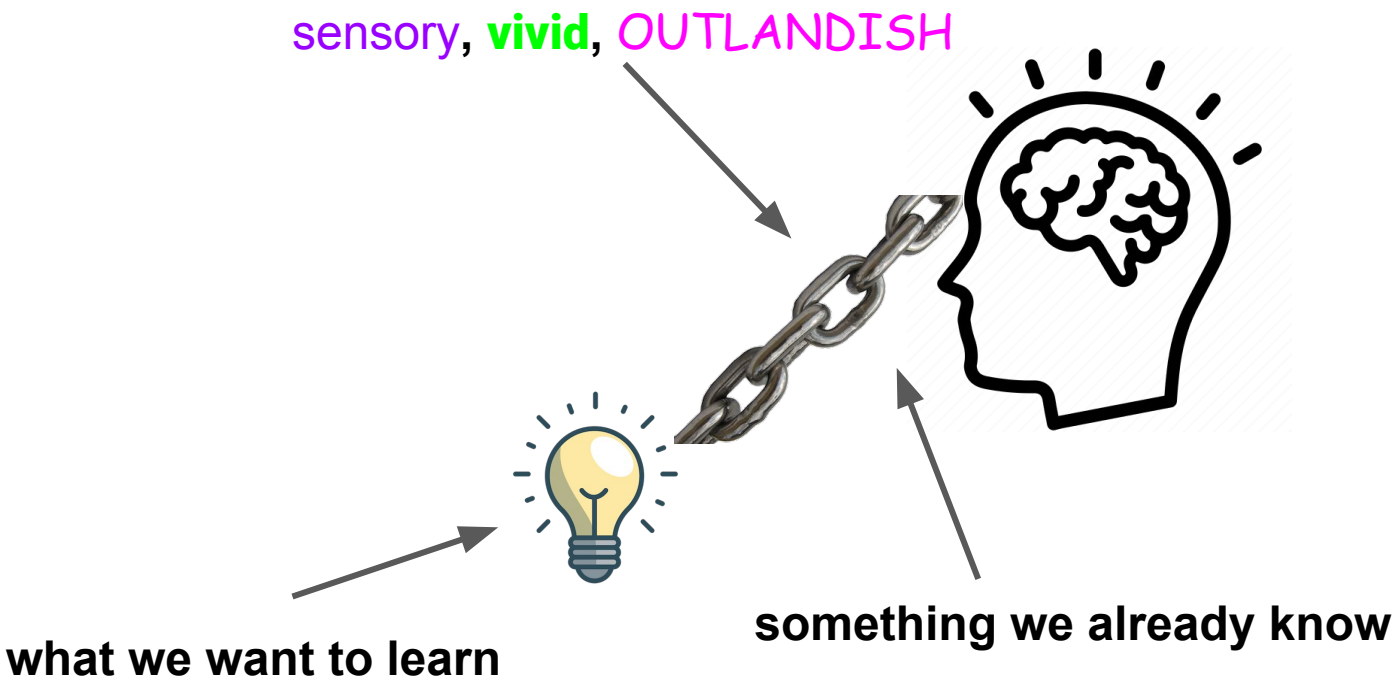
thir - ty days have Sep - tem - ber

September
April
June
November

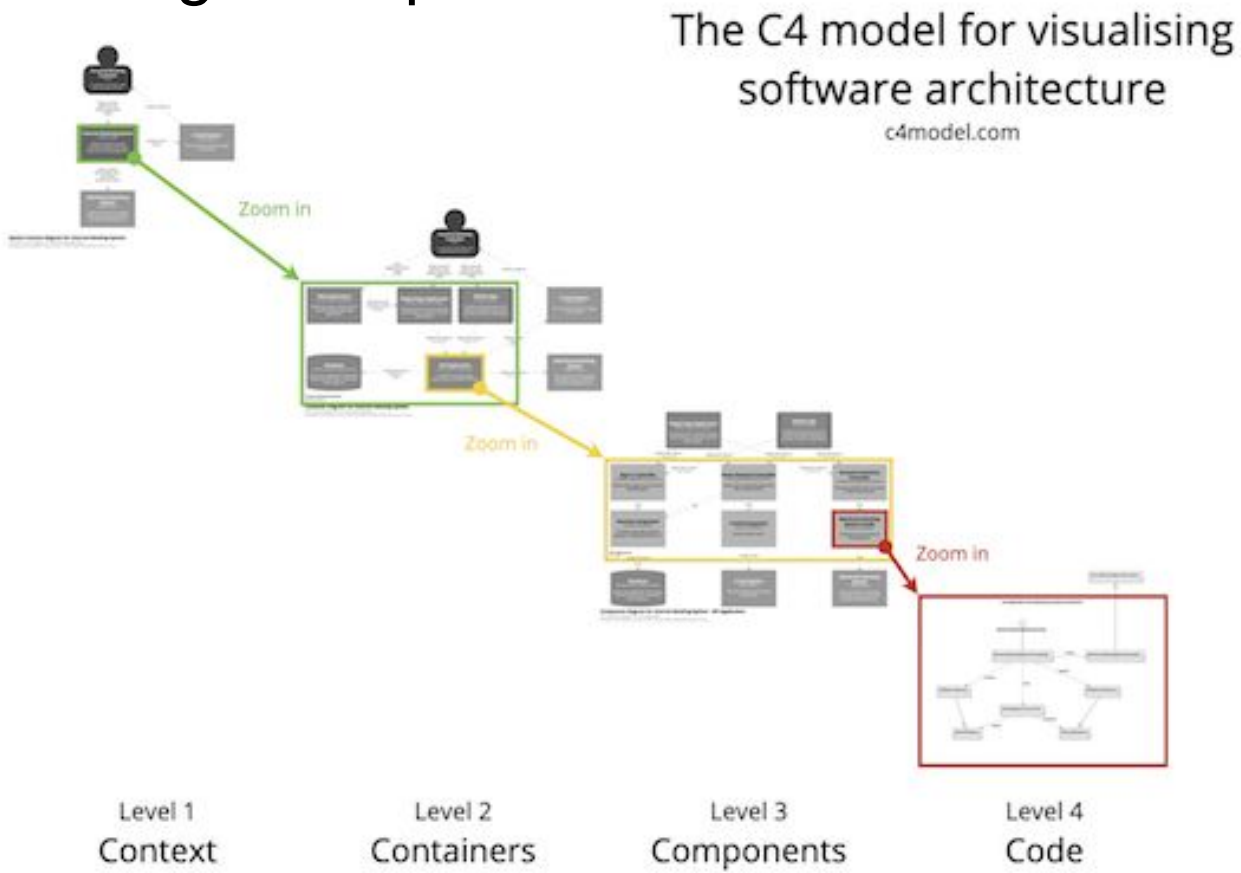
= SAN-J(une)



# Elaborative Encoding

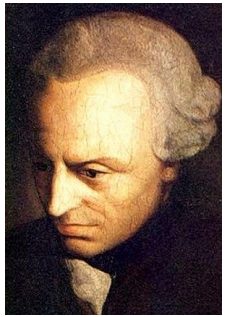


# Elaborative Encoding Example



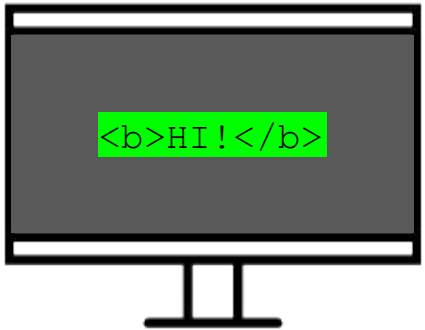
# Elaborative Encoding Example

*1. Context*
**Kant text**



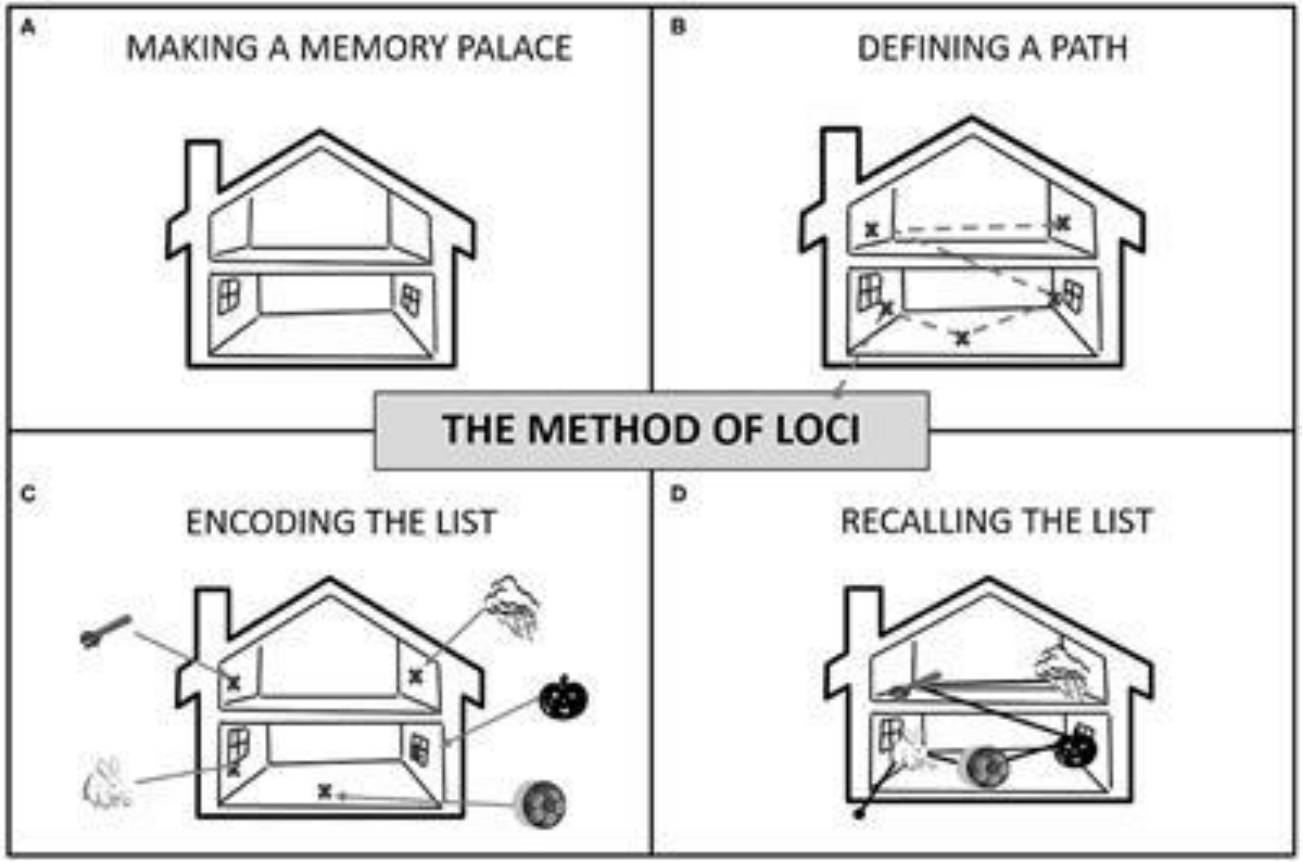
*2. Container*
**Kant-ainer**

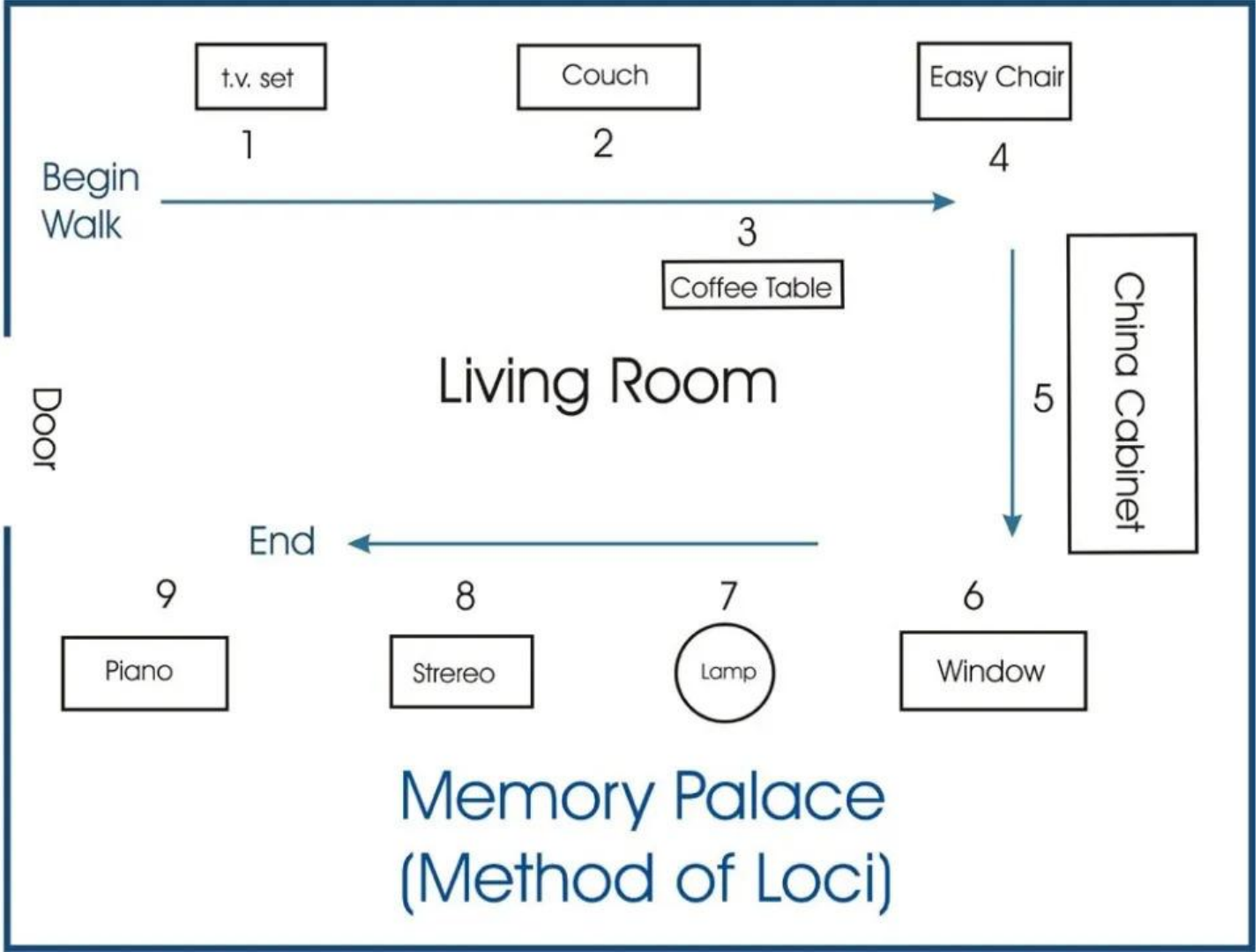
*3. Component*
**Computer parts**

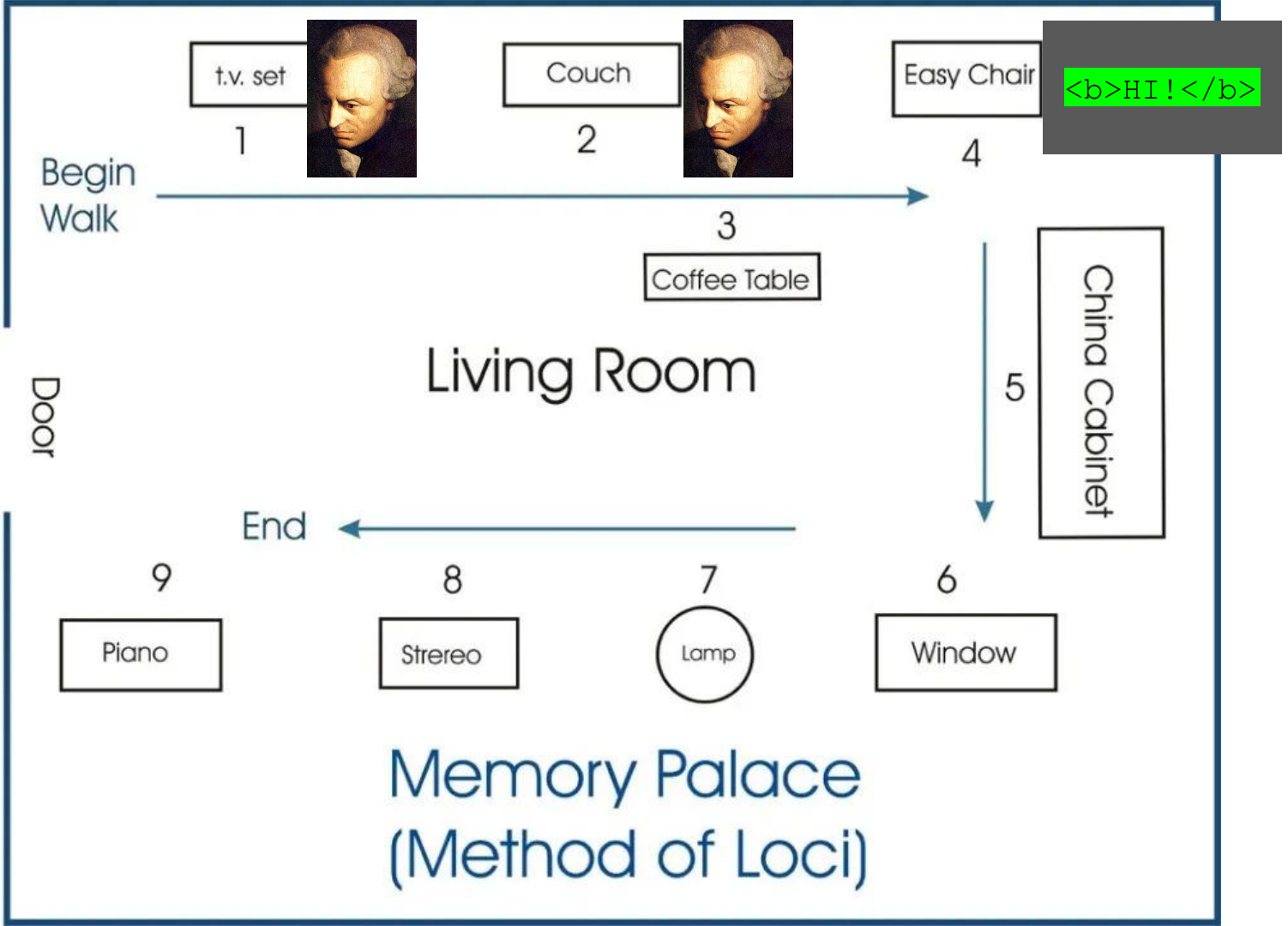



*4. Code*
**Code**

# Method of Loci - Walking through a *memory palace*




t.v. set
Couch
Easy Chair
1
2
4
Begin
Walk
3
Coffee Table
China Cabinet
Living Room
Door
5
End
9
8
7
6
Piano
Strereo
Lamp
Window
Memory Palace
(Method of Loci)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Memory Palace
(Method of Loci)

# Choosing memory palaces

Places you're very familiar with:
Childhood home(s)

Places you associate with learning:
School
⭐ Coding bootcamp

Street routes
Famous places
Fictitious places
…should have interesting spatial qualities for easy recall

# Final thoughts

**Learning this way is fun, engaging, and motivating.**

It’s personalized and creative, not just text on a page or screen.

**You’ll learn more, faster:**

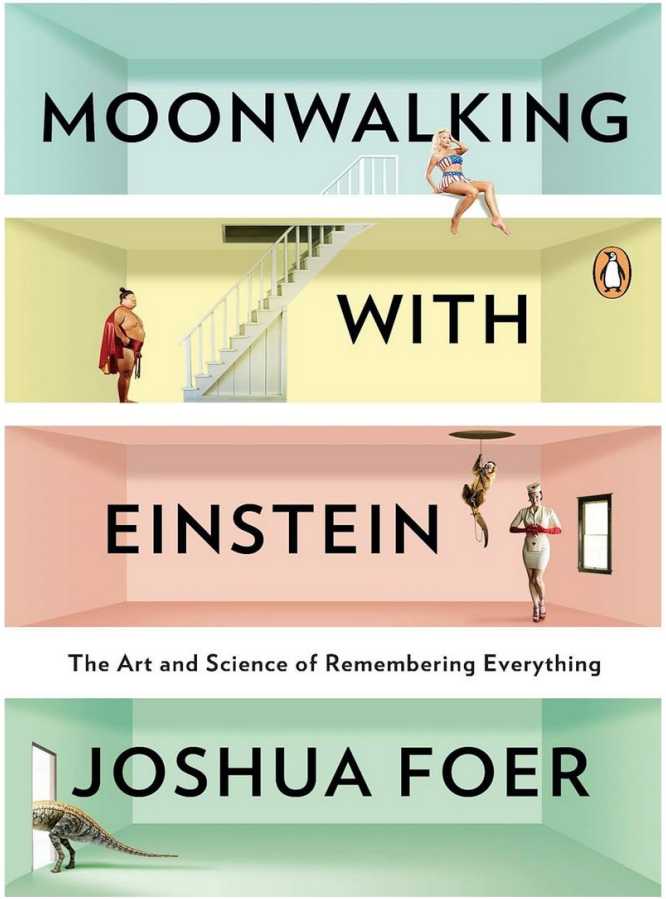
- you’ll use more of your brain (>50%)
- less time re-reading (160x faster)
- 1 picture, 1000 words (1000x more efficient)

Thank you 🙏

# Questions?

*NEW YORK TIMES* BESTSELLER

# MOONWALKING WITH EINSTEIN



The Art and Science of Remembering Everything

JOSHUA FOER

# Appendix

# FAQs

- Does memorization indicate you’re not learning deeply enough?
- How do you memorize more than 10 things?
- How do you memorize numbers?
- What about visual vs auditory vs kinesthetic learners?
- What should I learn?
- What about spaced repetition tools like Anki?
- What about project-based learning?

# Resources

Memorization / Learning

Moonwalking with Einstein: The Art and Science of Remembering Everything by Joshua Foer

WorkLife with Adam Grant: How to remember anything | TED Talk

How to Build a Memory Palace | Art of Memory

Mnemonic - Wikipedia

Elaborative Encoding - Wikipedia

Method of Loci - Wikipedia

Studying with a Memory Palace in Medical School - TheMDJourney

Best Memorization Techniques For Professionals: Better Memory

# Resources

Integration

Integrating Sweep Picking With Other Techniques | Wizard of Shred

https://en.wikipedia.org/wiki/Meaningful_learning

https://en.wikipedia.org/wiki/Integrative_learning

https://en.wikipedia.org/wiki/Interdisciplinarity

https://en.wikipedia.org/wiki/Deeper_learning

# Resources

Visualization

What is Visual Learning? | Presentation Guru

15 Visualization Techniques To Help You Achieve Your Goals | Indeed.com

3 Effective Visualization Techniques to Change Your Life | Psychology Today

Huberman Lab, Science-Based Mental Training & Visualization for Improved Learning (Podcast)

Comprehension

Toastmasters, Aristotle, and the Essential Art of Rhetoric | The Art of Manliness (Podcast)

The Art of Manliness, Beyond Lazy Learning — The Keys to Gaining and Retaining Knowledge (Podcast)

# Resources

Motivation

https://supermemo.guru/wiki/Pleasure_of_learning

Book Summary: Drive by Daniel H. Pink | Sam Thomas Davies

The Pathless Path (Paul Millerd) - Summary, Notes & Review - Aseem Thakar

Other

The C4 model for visualising software architecture

Guitar Chord Finder | oolimo.com

Essentialism by Greg McKeown - Summary & Notes

Steven L. Franconeri - Faculty - Kellogg School of Management - Courses - Visualization for Persuasion

[How I'm Building My Second Brain | scraggo.com]

# Example: The chapters of Essentialism, by Greg McKeown

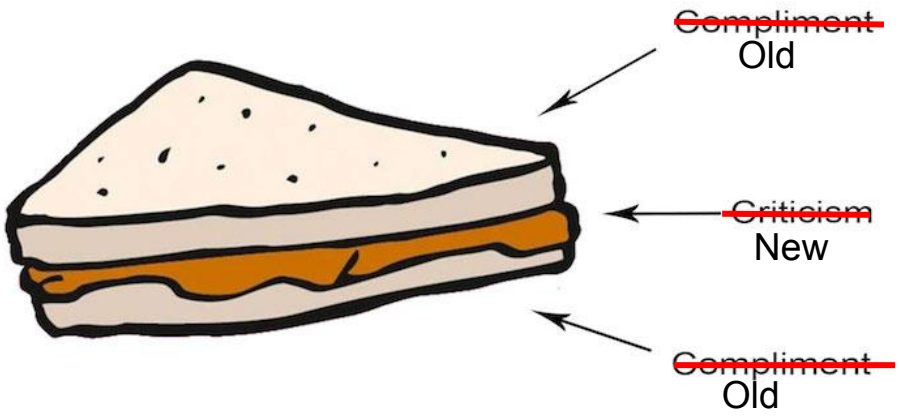
# Practicing guitar without the guitar

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| e | F | F# | G | G# | A | A# | B | C | C# | D | D# | E |
| B | C | C# | D | D# | E | F | F# | G | G# | A | A# | B |
| G | G# | A | A# | B | C | C# | D | D# | E | F | F# | G |
| D | D# | E | F | F# | G | G# | A | A# | B | C | C# | D |
| A | A# | B | C | C# | D | D# | E | F | F# | G | G# | A |
| E | F | F# | G | G# | A | A# | B | C | C# | D | D# | E |

# Integration

“Whenever you learn something new it's very important that you spend time integrating it with what you already know.”

~Claus Levin, the Wizard of Shred [Integrating Sweep Picking With Other Techniques]



# Imaginative powers - using the mind’s eye/ear/etc.

The "pseudo-reality in one’s imagination can be so convincing that it can have unexpected effects on the physical body.”

~Marisa Brook, The Science of Mental Fitness

🎸 Increasing skills (music, etc)
💪 Building muscle
🤕 Pain management
☺ Relaxation