The
SOFTWARE
ESSENTIALIST

Metaphysics & Mental Models

essentialist.dev

What comes up in your mind when you hear this word

DOG

What do you imagine when you hear and read this word?

RED

Internal representations

Why does this matter?

And how does it affect the way you think about and write code?

What we'll cover

- *Metaphysics, mental models & how they affect the way you write code*
- *The key to excellent mental models*
- *How we'll develop the mental models that will give us the most success*

What are the metaphysics?

“the branch of philosophy that helps us define reality and our understanding of it”

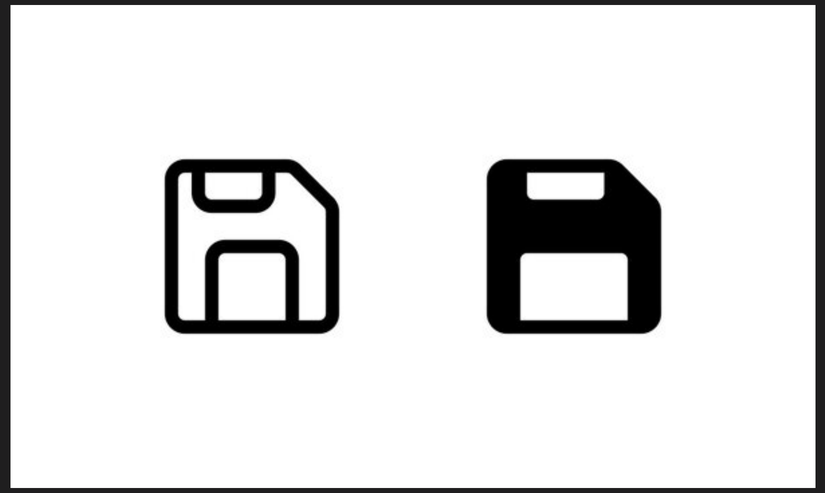
“cause & effect”
“you kick the ball, it moves”

deriving meaning

the mind is obsessed with making sense of things

What are mental models?

“Grand simplifications — shortcuts of the world — that ideally help us better discover & understand how to take action in the future”



it is important to take ownership of how your subconscious is programmed;

bad mental models are ones that are not founded in reality; they don't help you get the outcomes you want

Examples

- The graphic designer that just wants to have fun and do their art style, but no one is buying their art

- The coder that just wants to write code, experiment & try out new tech, but no one is hiring them

A mental model is good based on how closely it maps to reality

> ***Truth - more precisely, an accurate understanding of reality - is the essential*** foundation for producing good outcomes.' — Ray Dalio

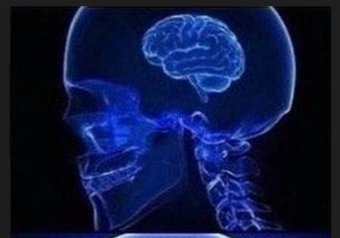
I struggled to write scalable code for a long time...

... because I didn't understand how things worked in reality

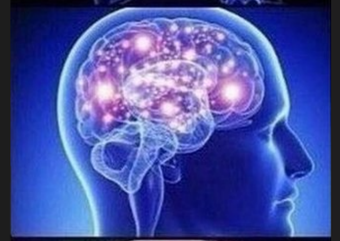
API-First

Database Model-First

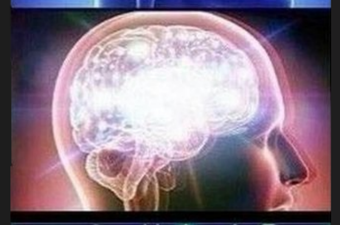
Code-First



Best Practices



Pattern First



Responsibility-First

Value-First

Code-First = “I use frameworks and libraries to solve problems”

Best Practice-First = “I use best practices to solve problems”

Pattern-First = “I use patterns to solve problems”

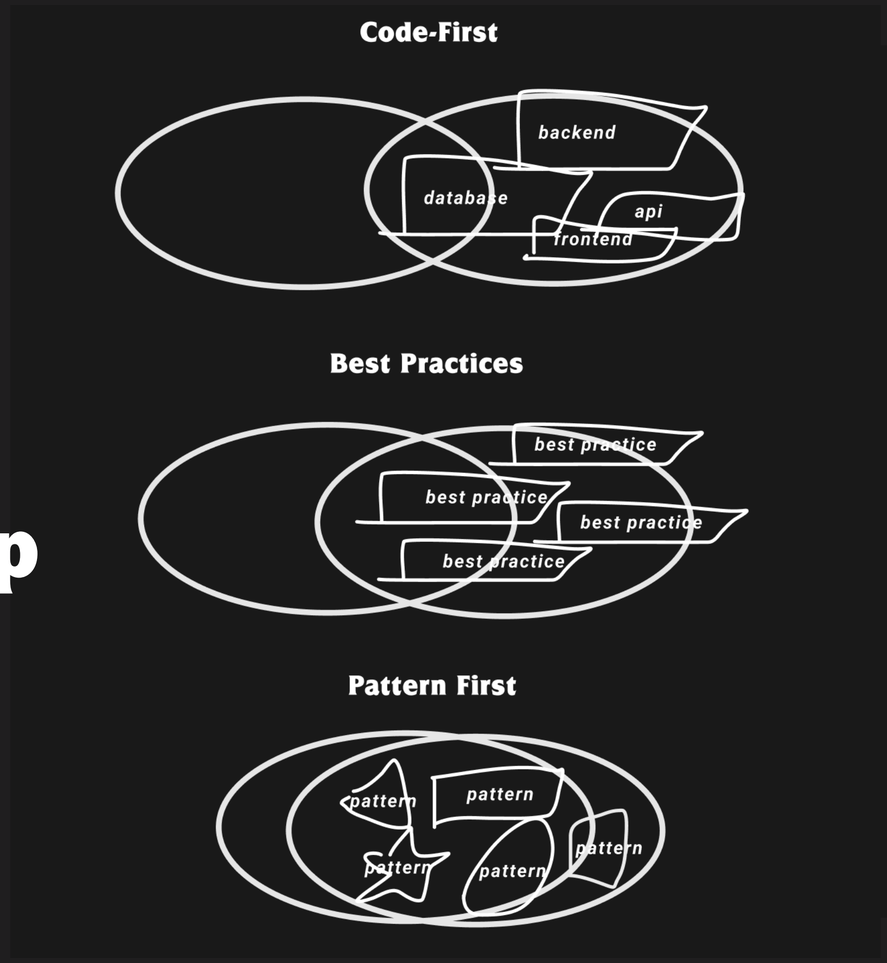
Responsibility-First = “I coordinate the responsibilities for doings and knowings to solve problems”

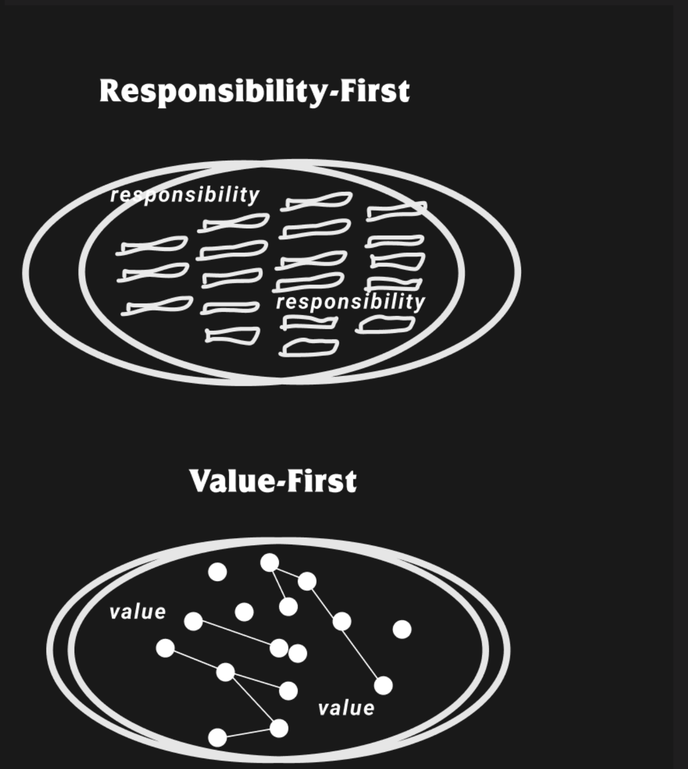
Value-First = “I do what is most valuable”

Image courtesy of Tim Phillips ;)

You'll get the full picture over the course of about 5 Phases of Craftship

more on this later





good mental models are those that are based in reality; they DO help you get the outcomes you want

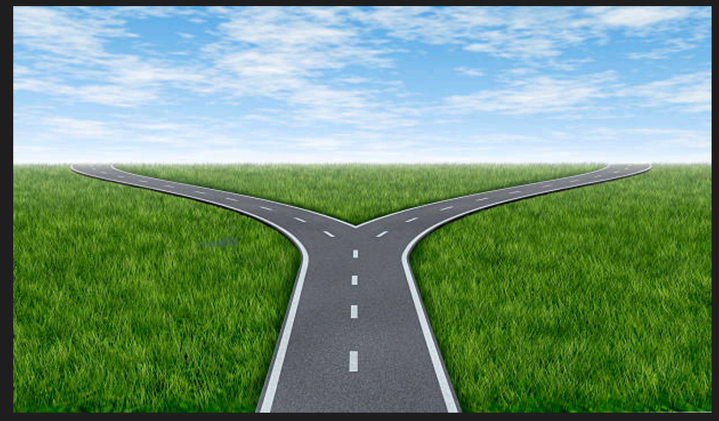
Seek first principles clarity

*“A first principle is **a foundational building block that stands alone.**”*

Good mental models prepare you for quantum moments

Some choices we make are more important than others because they can send us towards an experience of reality that is very good, very painful, or just very different.

These are Quantum Moments.



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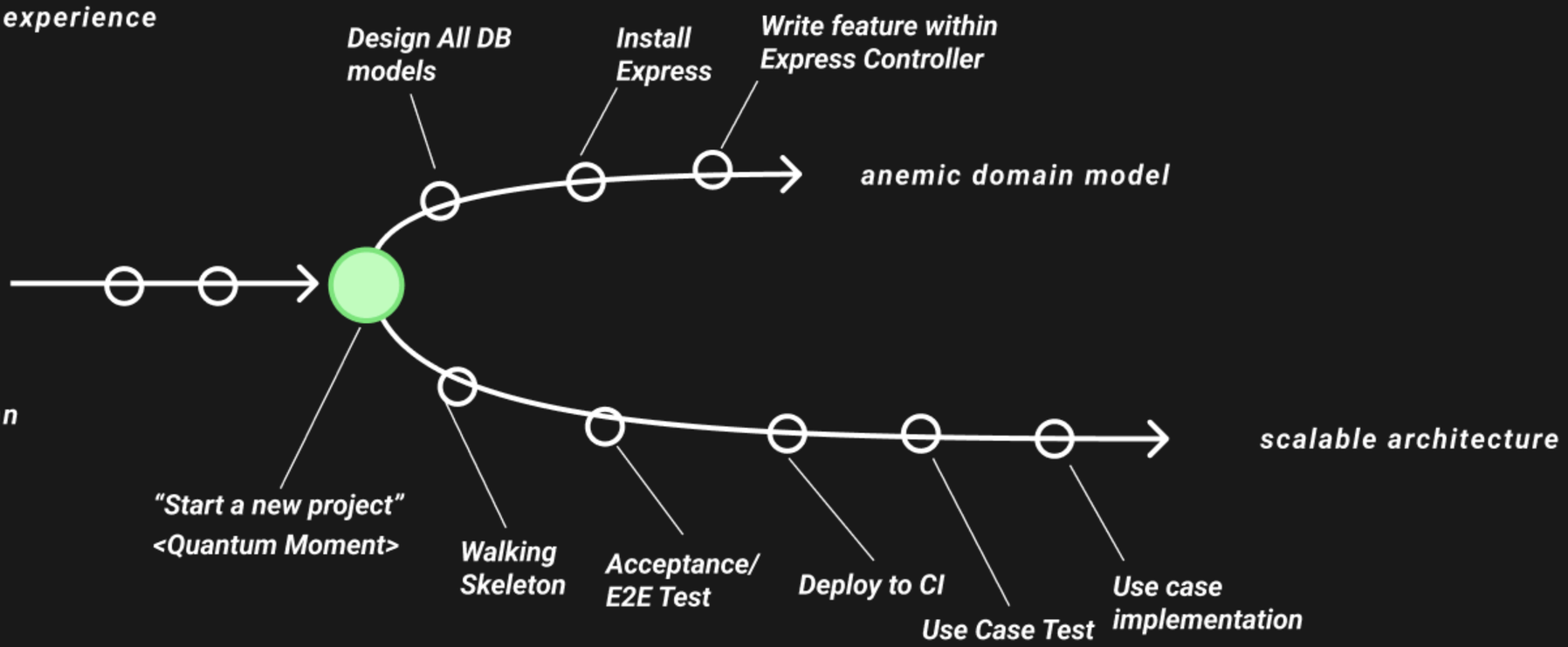
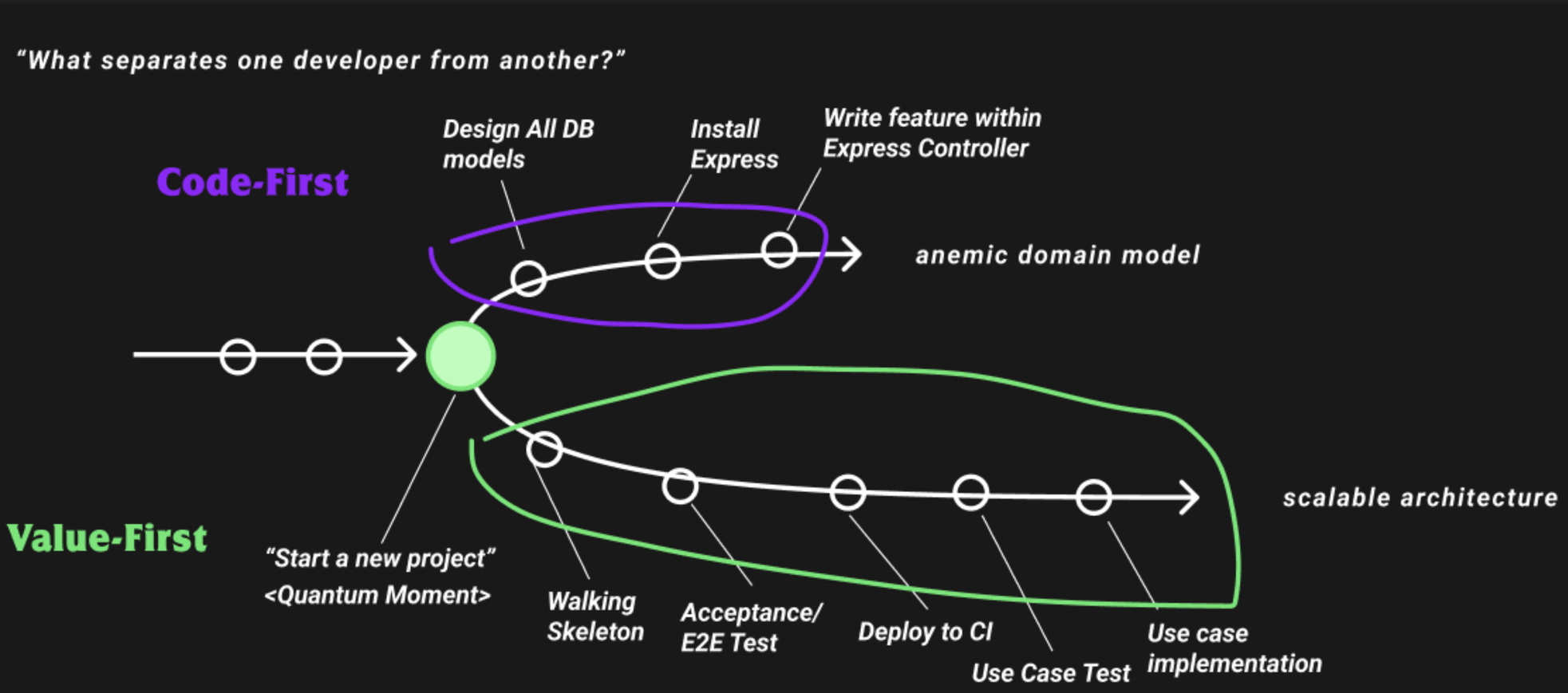
These are Quantum Moments.

ie:
- investing in Bitcoin
- investing in Uber
- being a sociable person at a networking event and making an important connection




"What separates one developer from another?"
Code-First
Design All DB models
Install Express
Write feature within Express Controller
anemic domain model
Value-First
"Start a new project"
<Quantum Moment>
Walking Skeleton
Acceptance/ E2E Test
Deploy to CI
Use Case Test
Use case implementation
scalable architecture

The key is to ask the essential questions

What is software?

Why do we write it?

Who is it for?

What is it made out of?

How do we do it well?

How do we do it poorly?

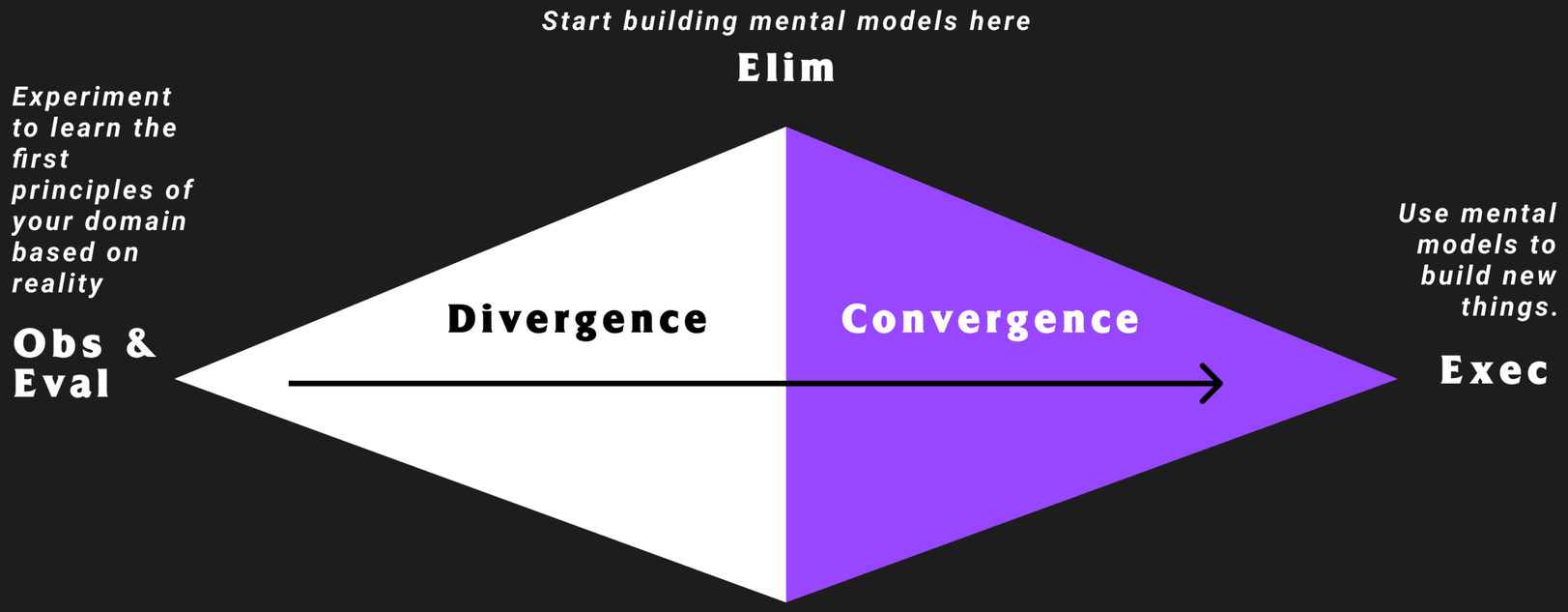
The Reality?

This can take ages to learn and piece together.

My Story?

It took me many years of research, practice, writing down every concept I could find, reading books and asking the experts.

Essentialism, Divergence & Convergence



What we covered