

Hello, Turing!

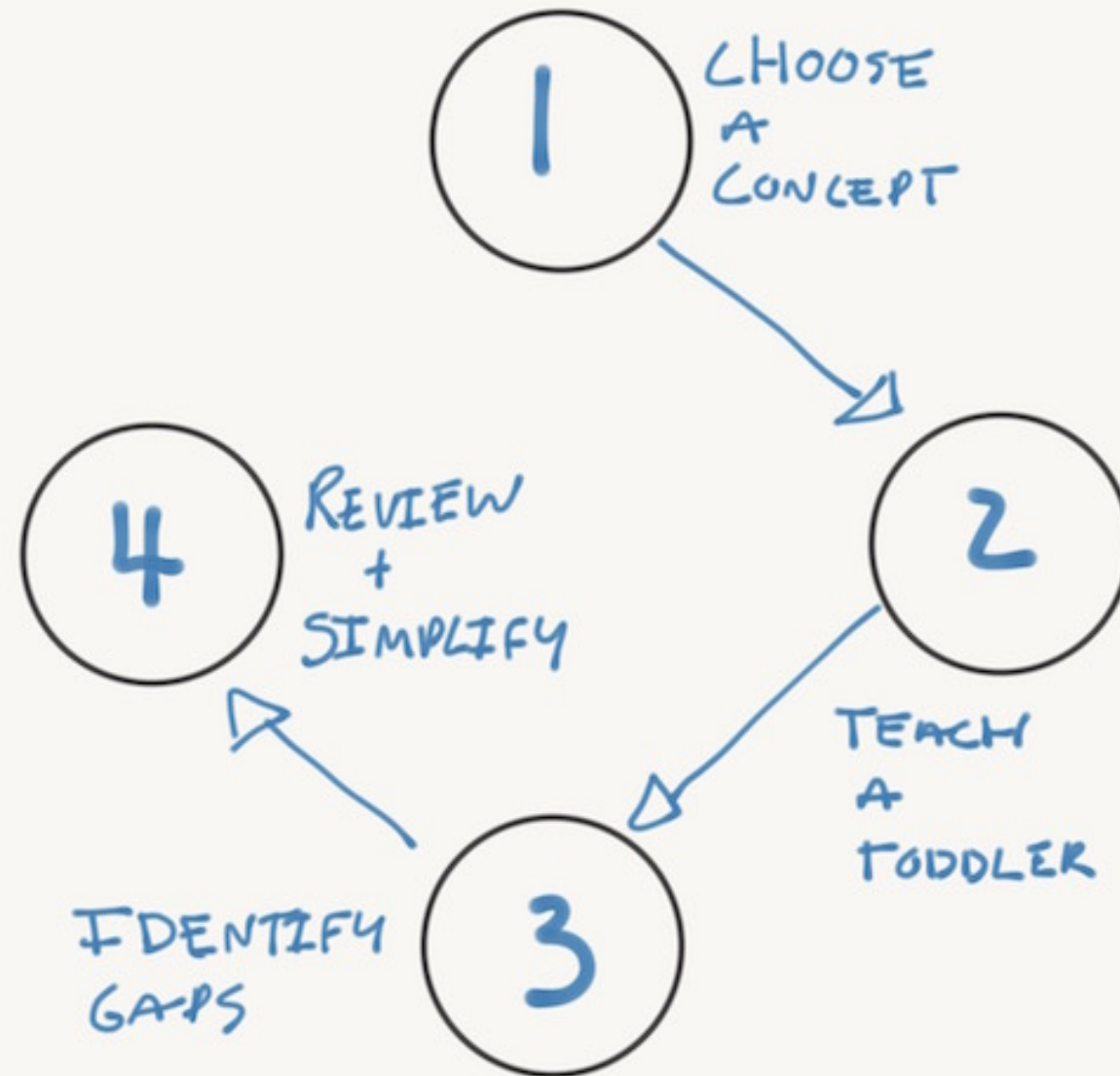
today we will discuss:

OOP

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THE FEYNMAN TECHNIQUE



FARNAM STREET

What is OOP?

Definition

Object-oriented programming is a software programming model organized around objects rather than “actions”.

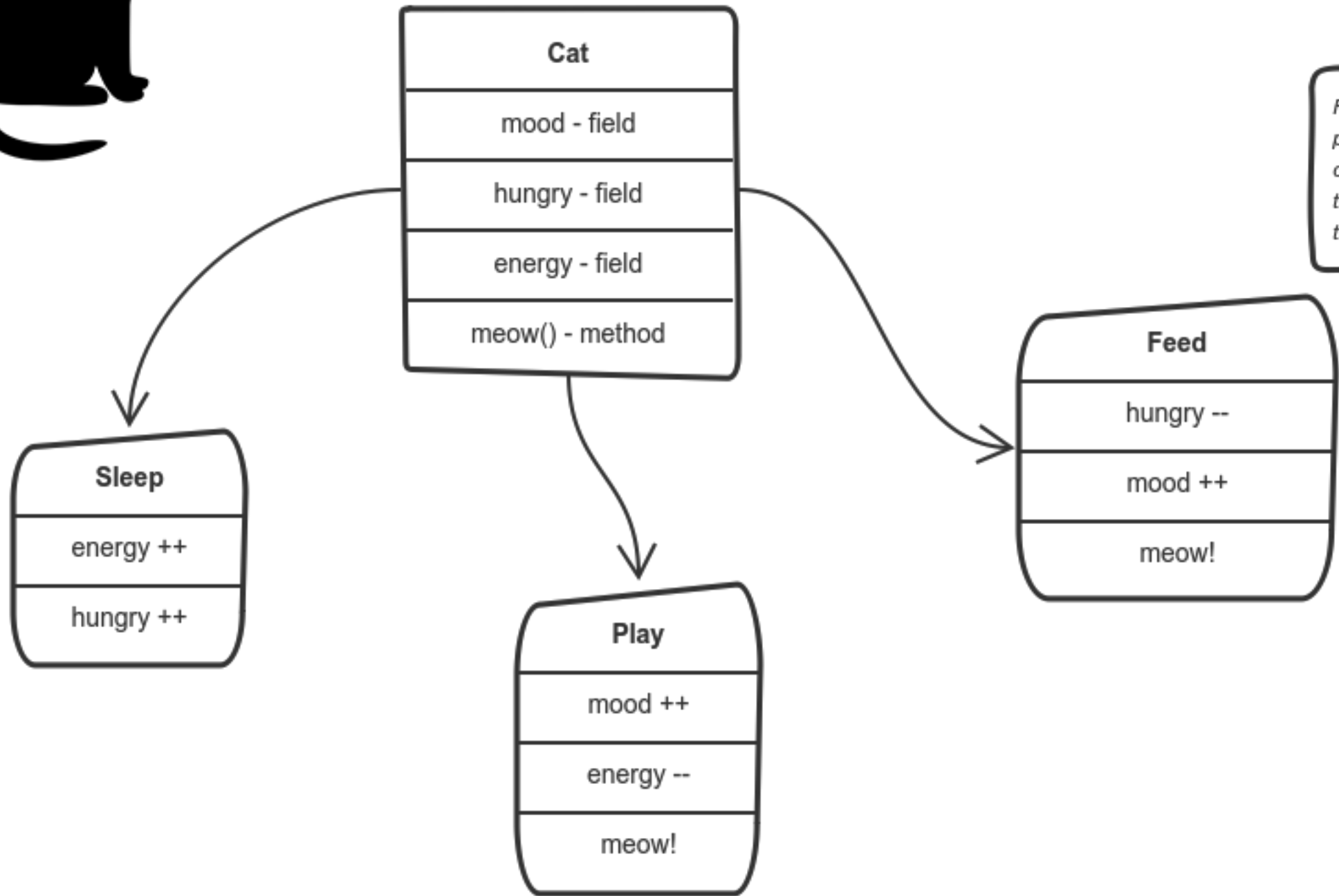
Main principles

Encapsulation





The Cat class has mood, hungry and energy private fields and a meow private method

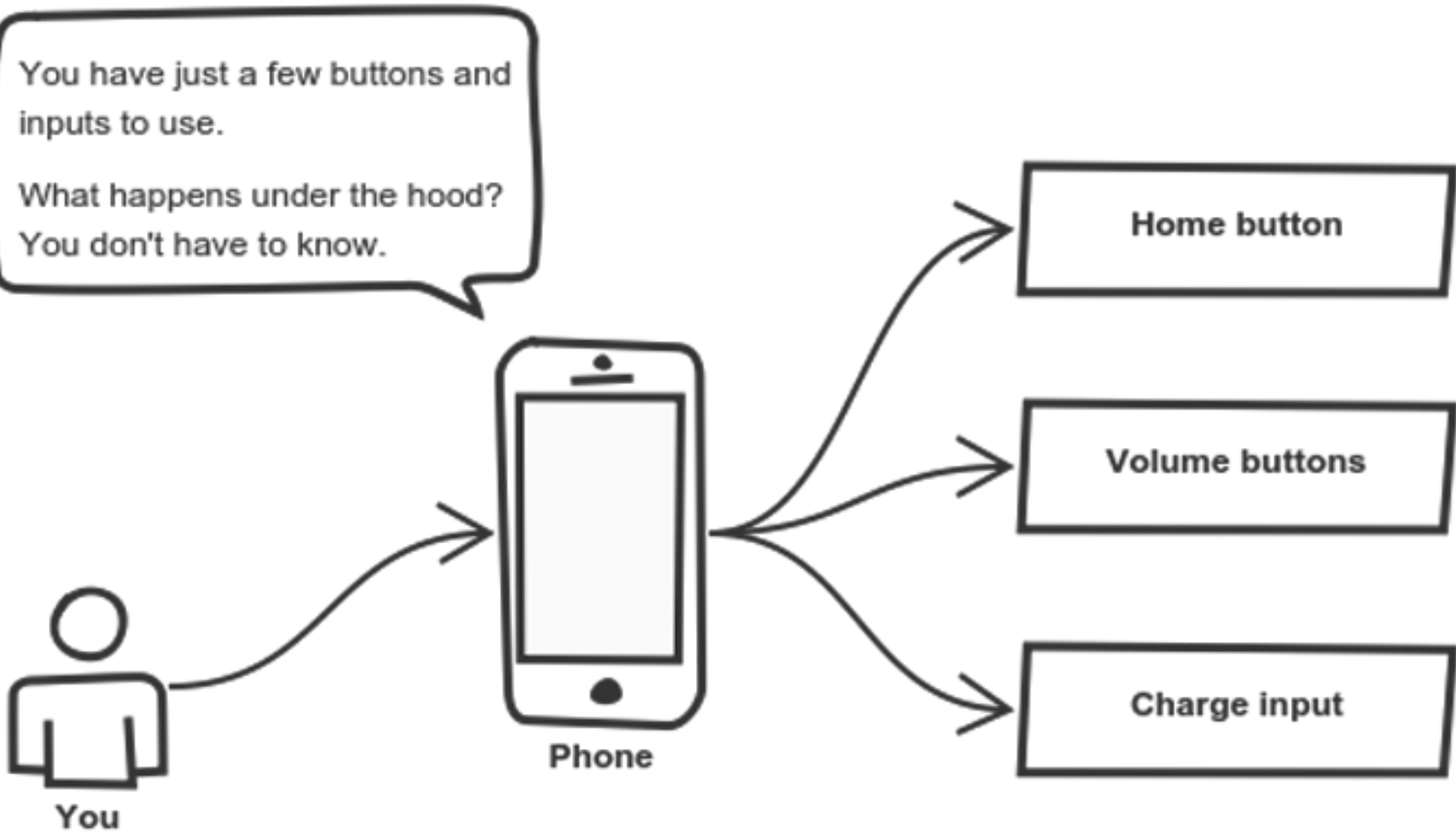


Feed, Play and Sleep are public methods. Other classes can call them, but they can't directly modify the private fields.

Definiton

**Internal state is private,
But can be modified using methods**

Abstraction → 



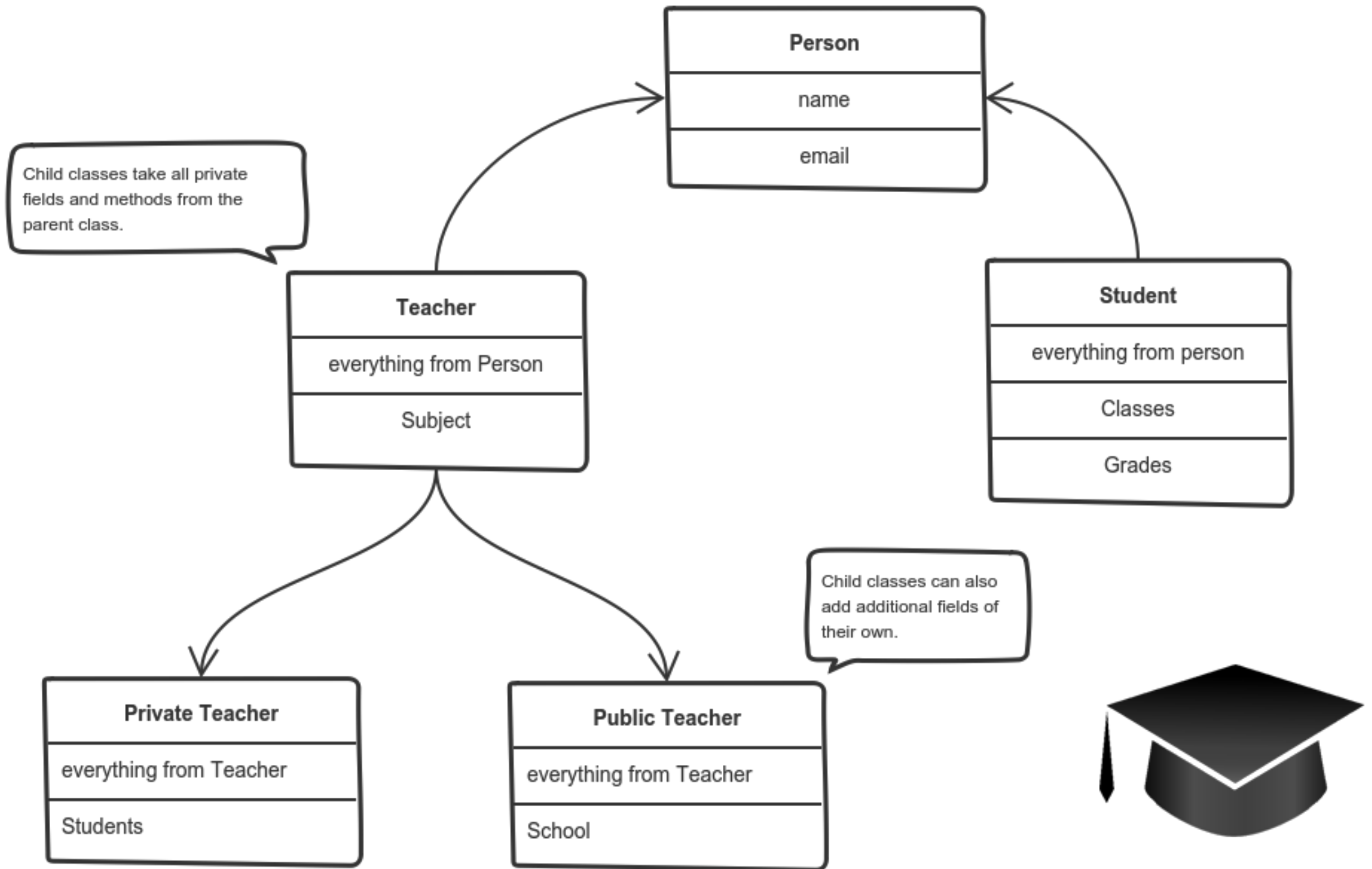
Abstraction	Encapsulation
1. Abstraction solves the problem in the design level.	1. Encapsulation solves the problem in the implementation level.
2. Abstraction is used for hiding the unwanted data and giving relevant data.	2. Encapsulation means hiding the code and data into a single unit to protect the data from outside world.
3. Abstraction lets you focus on what the object does instead of how it does it	3. Encapsulation means hiding the internal details or mechanics of how an object does something.
<p>4. Abstraction- Outer layout, used in terms of design.</p> <p>For Example:-</p> <p>Outer Look of a Mobile Phone, like it has a display screen and keypad buttons to dial a number.</p>	<p>4. Encapsulation- Inner layout, used in terms of implementation.</p> <p>For Example:- Inner Implementation detail of a Mobile Phone, how keypad button and Display Screen are connect with each other using circuits.</p>

Definiton

Applying abstraction means that each object should only expose a high-level mechanism for using it.

Inheritance

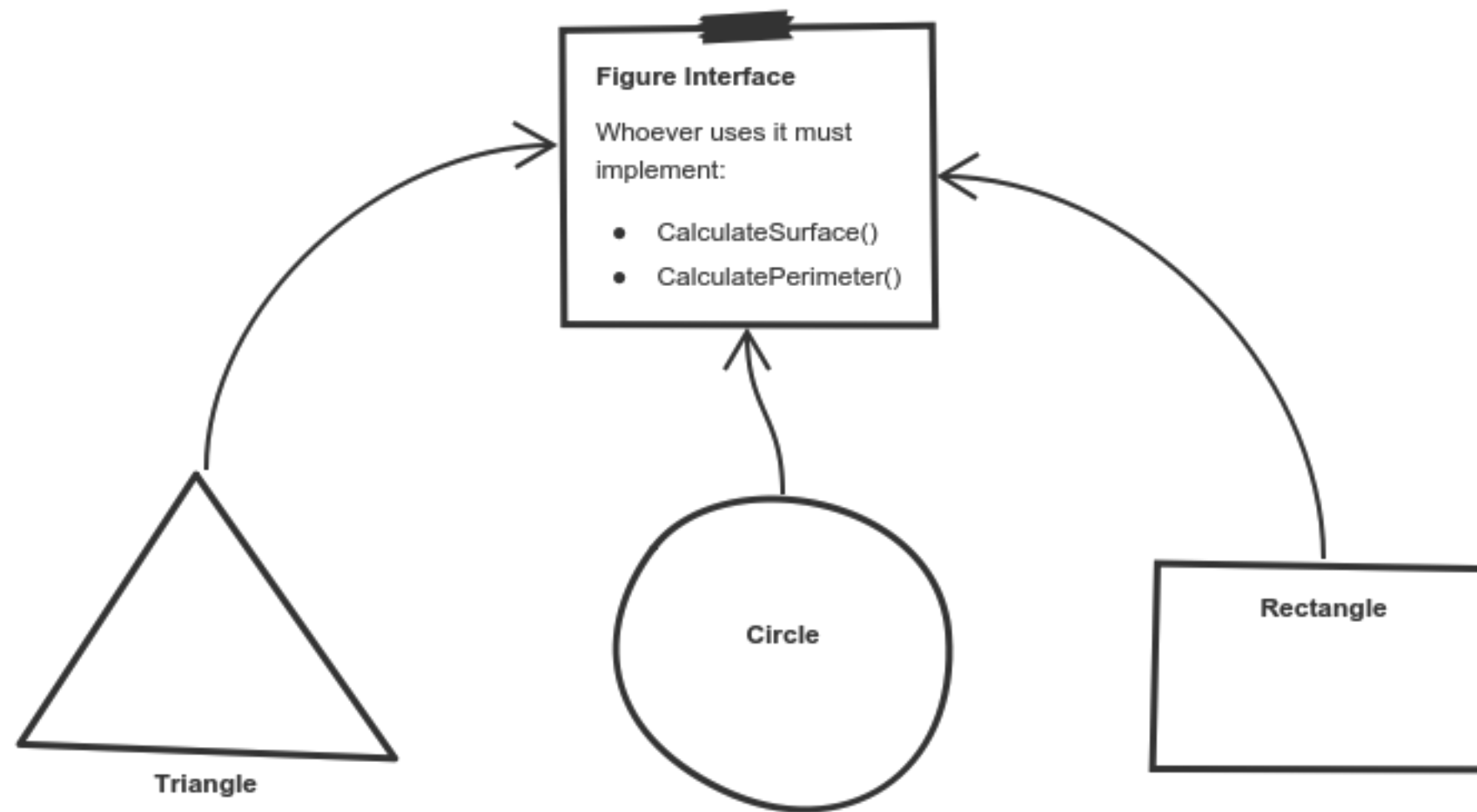




Definiton

A class is derived from another class and it shares common characteristics with the class from which it is derived.

Polymorphism



Triangle, Circle and Rectangle inherit the Figure interface or abstract class.

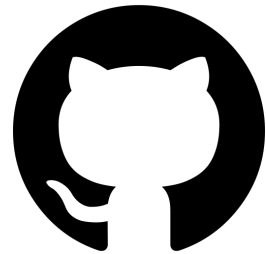
They implement their own versions of **CalculateSurface()** and **CalculatePerimeter()**.

They can be used in a mixed collection of Figures.

Definiton

Simply put, polymorphism gives a way to use a class exactly like its parent so there's no confusion with mixing types. But each child class keeps its own methods as they are.

Next: Paradigms
OOD
Design Patterns
Architecture



/nugmanoff



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Thank you, Turing! 🙌