PHP Design Patterns

UNDERSTANDING DESIGN PATTERNS

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Object Oriented Principle

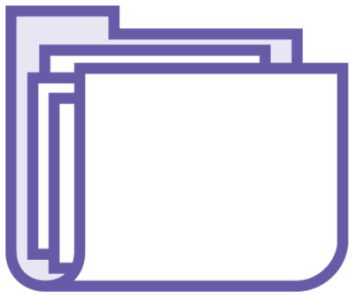
Inheritance

Polymorphism

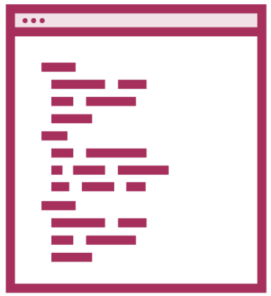
Abstraction

Encapsulation

Design Process



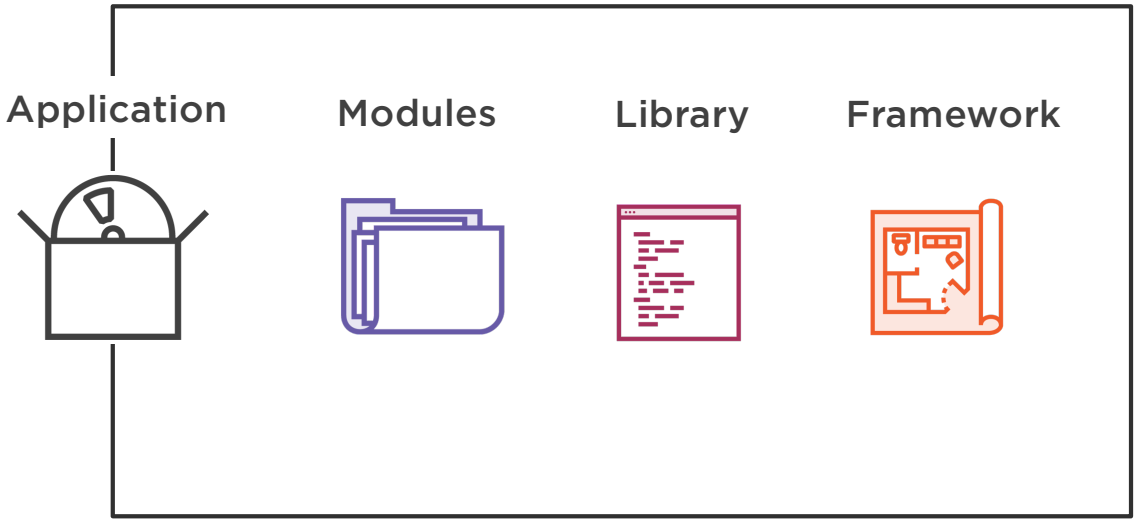
Modules



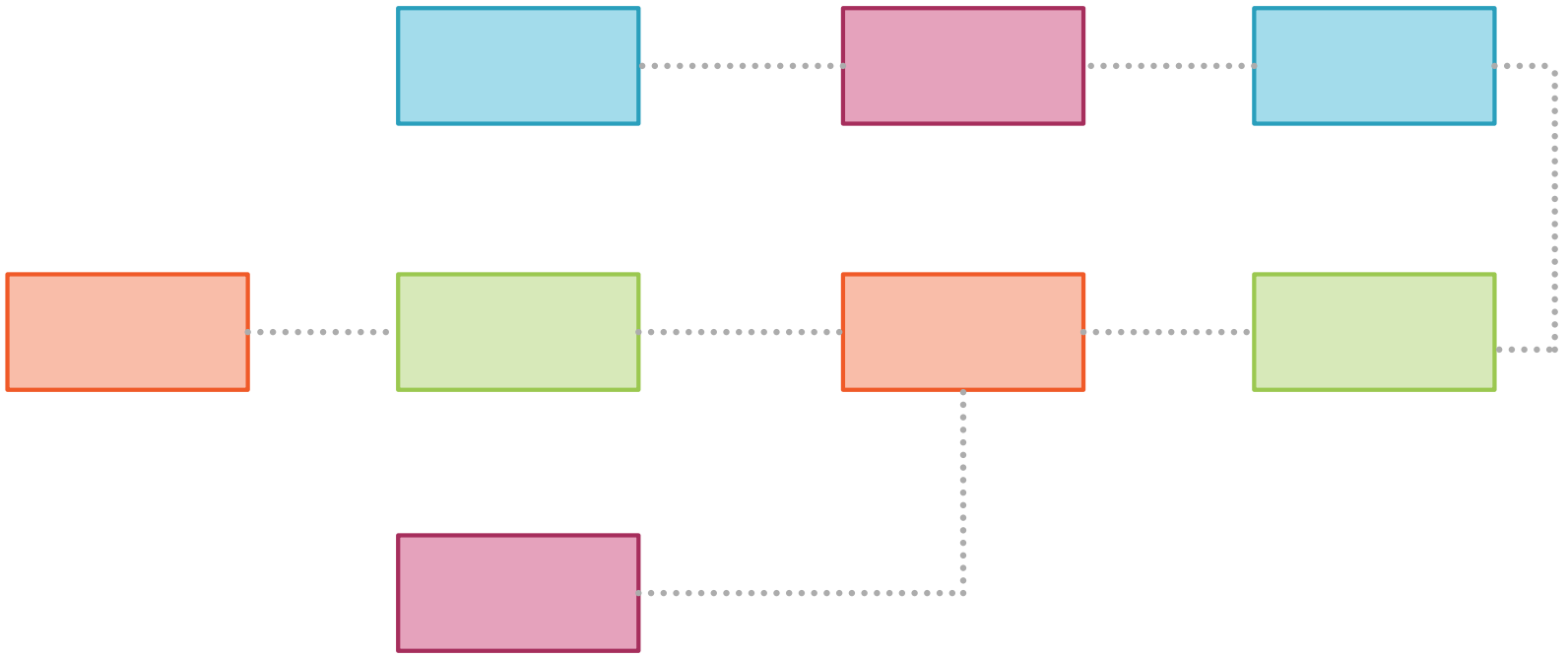
Libraries

Frameworks

Design Process



Design Patterns



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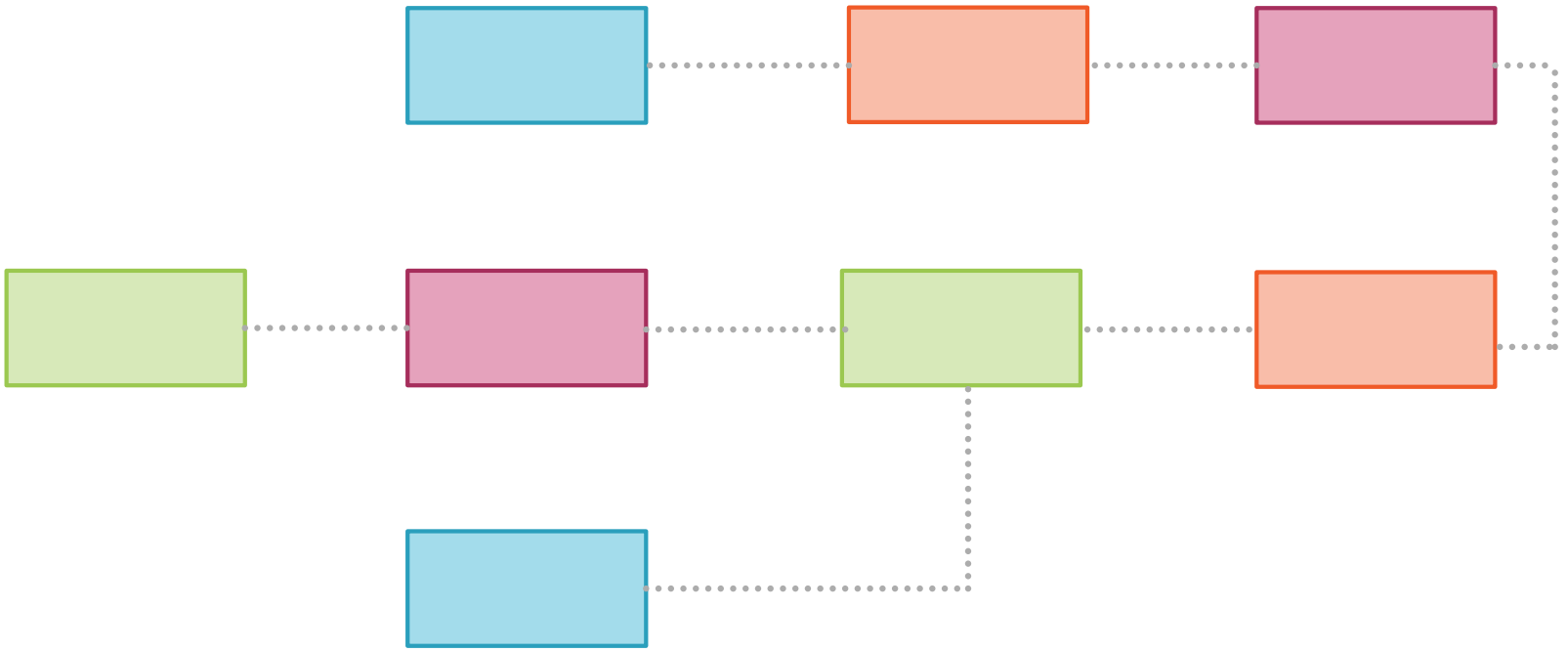

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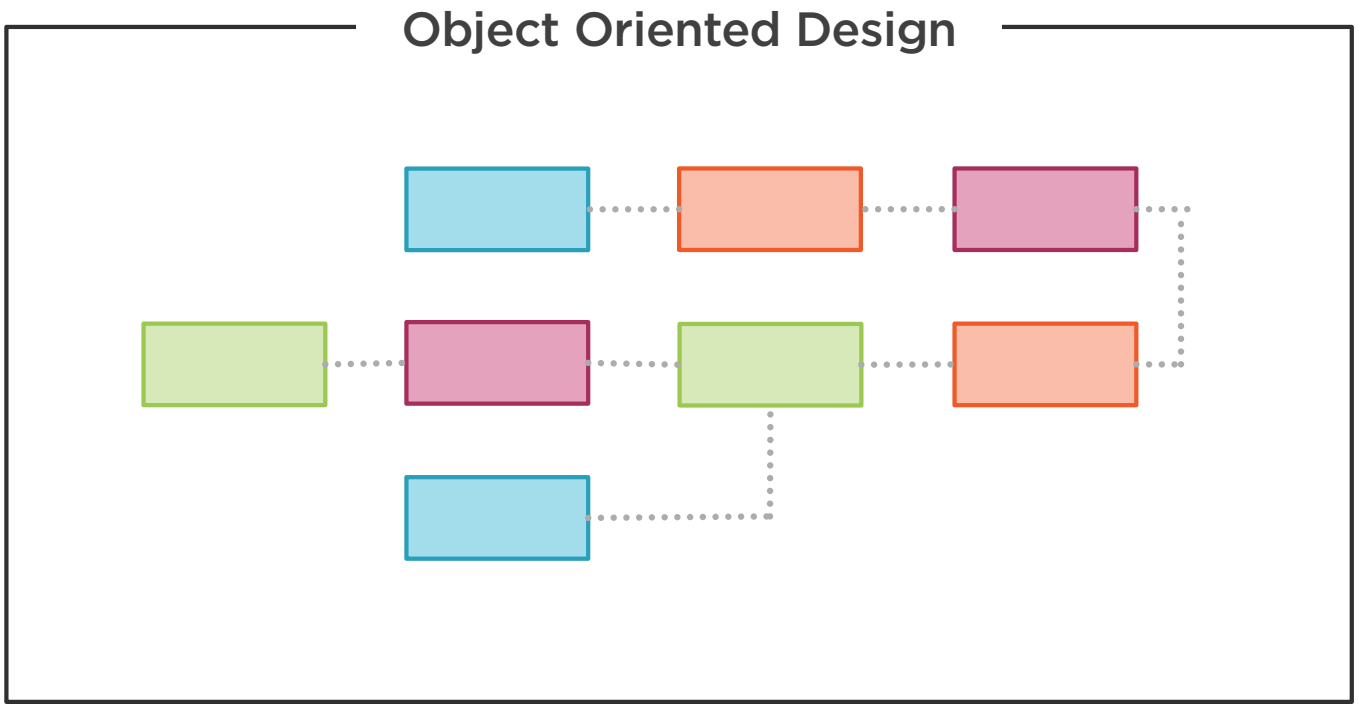


What is Design Pattern?

Design patterns are solution to real-world problem, that often occur during software designing, in form of blueprint, well-proven, tested and safe to follow.

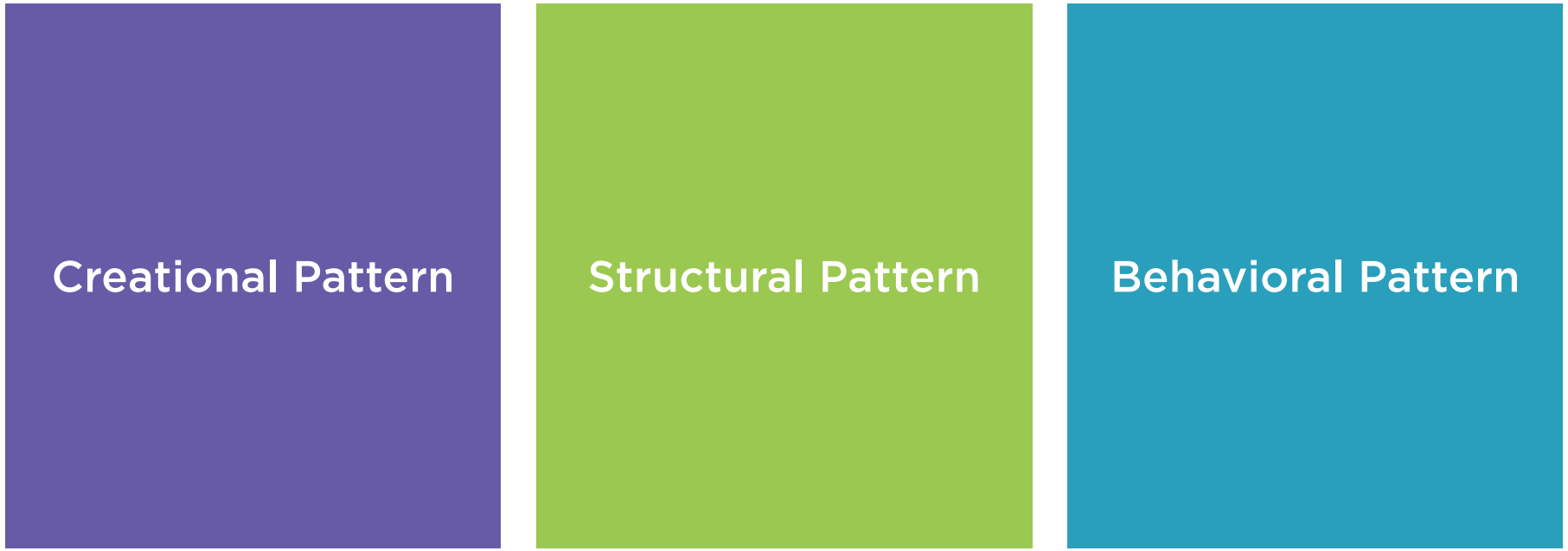
Brief History

Design Patterns: Elements of Reusable Object-Oriented Software

The Book by the Gang of Four

3 categories and 23 patterns

Design Patterns



Design Patterns

Creational Pattern

Factory Method
Abstract Factory
Builder
Prototype
Singleton

Structural Pattern

Behavioral Pattern

Design Patterns

Creational Pattern	Structural Pattern	Behavioral Pattern
Factory Method	Adapter	
Abstract Factory	Bridge	
Builder	Composite	
Prototype	Decorator	
Singleton	Façade	
	Flyweight	
	Proxy	

Design Patterns

Creational Pattern	Structural Pattern	Behavioral Pattern
Factory Method	Adapter	Chain of Responsibility
Abstract Factory	Bridge	Command
Builder	Composite	Iterator
Prototype	Decorator	Mediator
Singleton	Façade	Memento
	Flyweight	Observer
	Proxy	State
		Strategy
		Template
		Visitor

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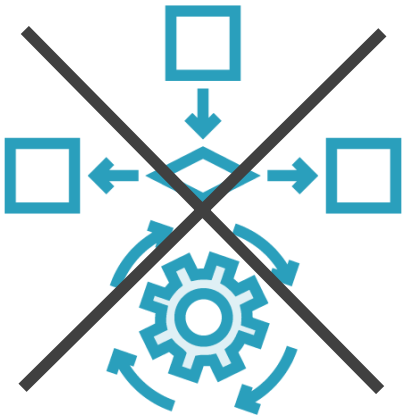
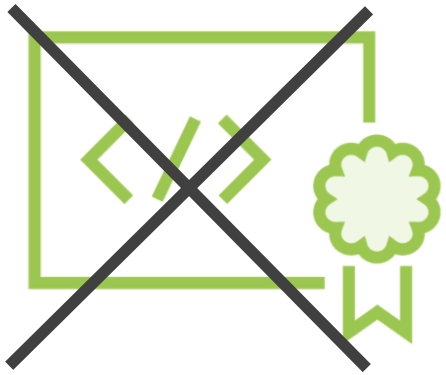
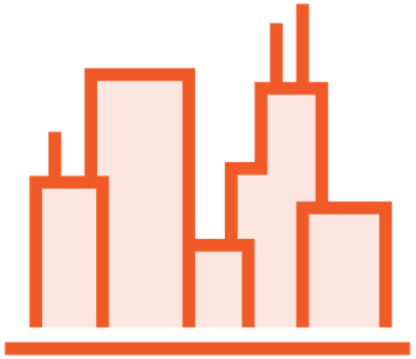


Algorithm



Code



Blueprint

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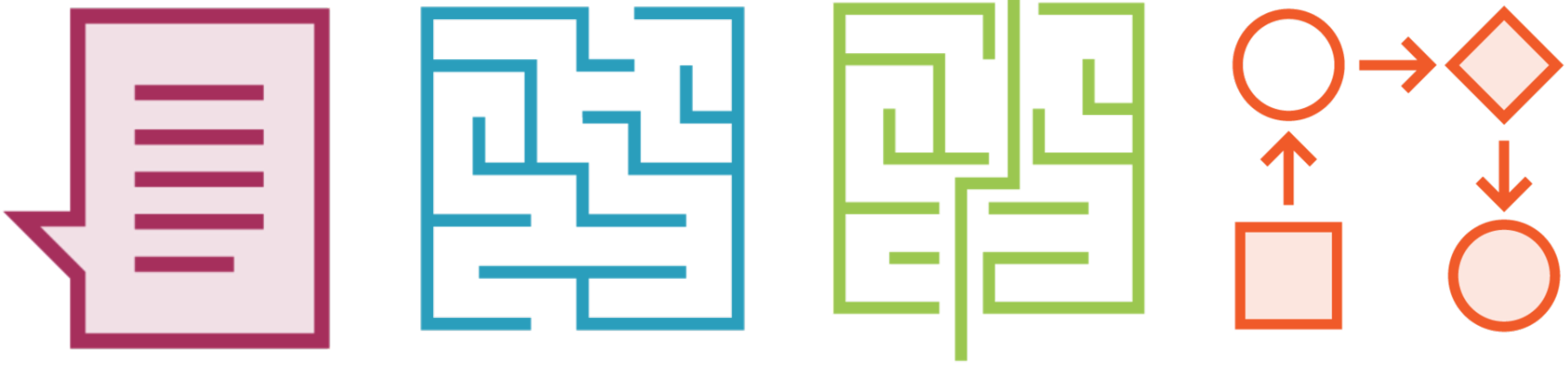
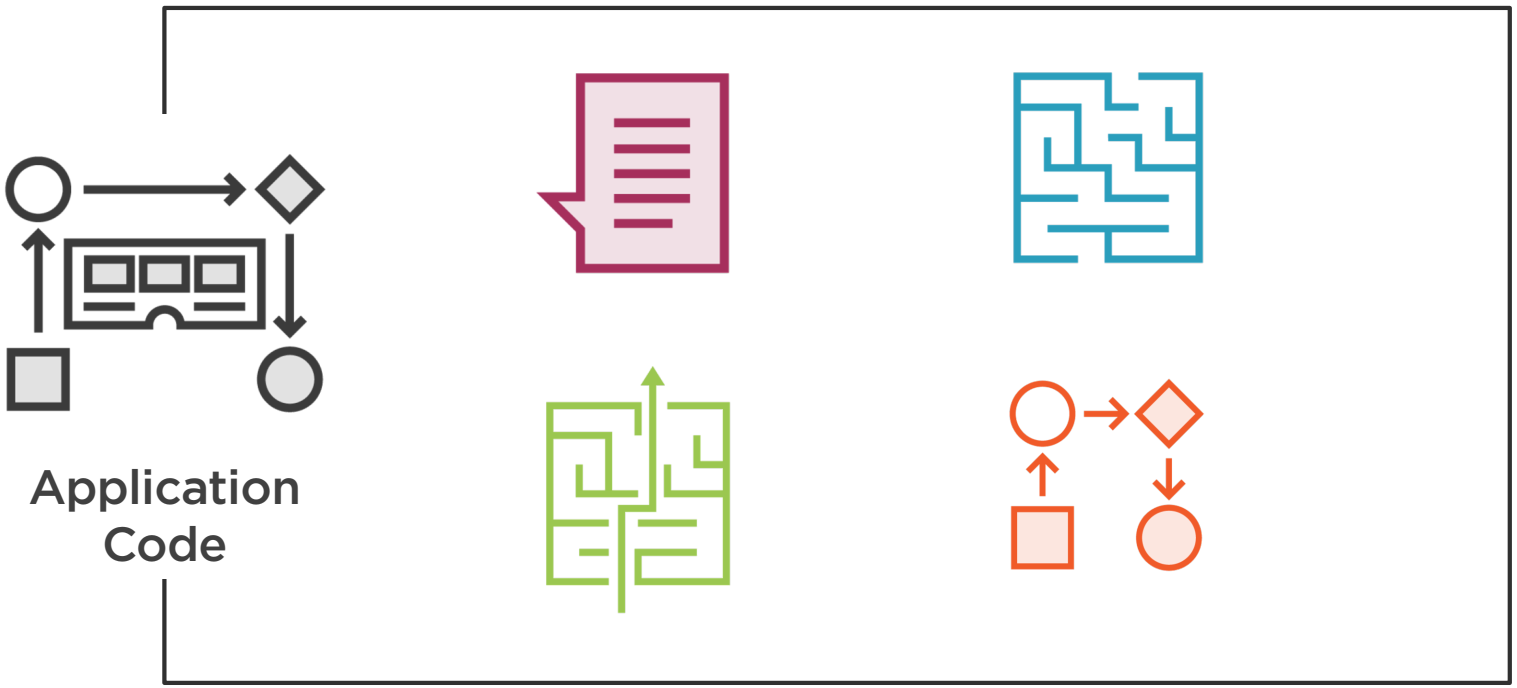
Design Patterns



Definition Problem Solution Structure

Design Patterns



Categorization of Design Patterns

Contacts

Music

Fitness

Gaming

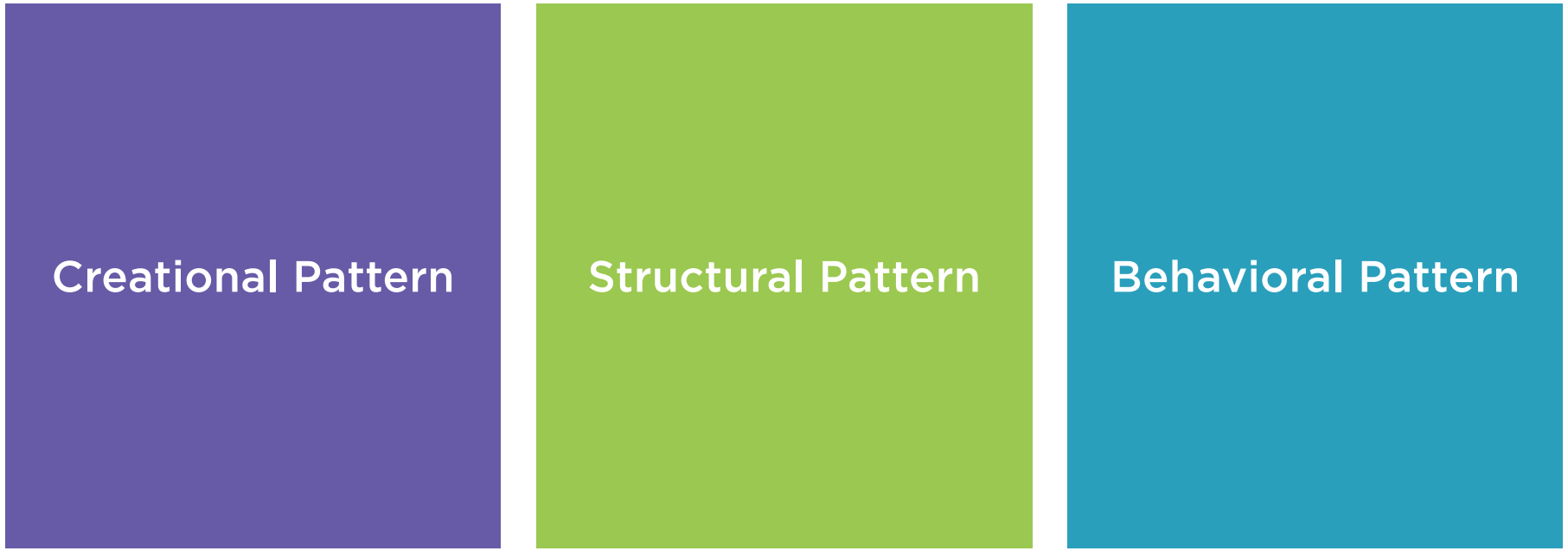
Camera

Social Media

Design Patterns

General solutions for common problems that crop up in all kinds of applications

Design Patterns



Design Patterns

Creational Pattern

Provides object creation mechanism

Structural Pattern

Behavioral Pattern

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Explains how to assemble objects and classes into larger, flexible structures

Behavioral Pattern

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Creational Pattern

Provides object creation mechanism

Structural Pattern

Explains how to assemble objects and classes into larger, flexible structures

Behavioral Pattern

Deals with algorithms and assignment of responsibilities between objects

Design Principle vs. Design Pattern

Design Principle	Design Pattern
Provide high level guidelines	Provide low-level solutions related to implementation
Aims for better software applications	Addresses commonly occurring object-oriented problems
Aren't concrete - rather abstract	Are specific
Desirable goals to achieve	Tools used to realize the goals

Design Patterns

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		Visitor

Design Principles

Inheritance

Polymorphism

Abstraction

Encapsulation

Single Responsibility

Open-closed

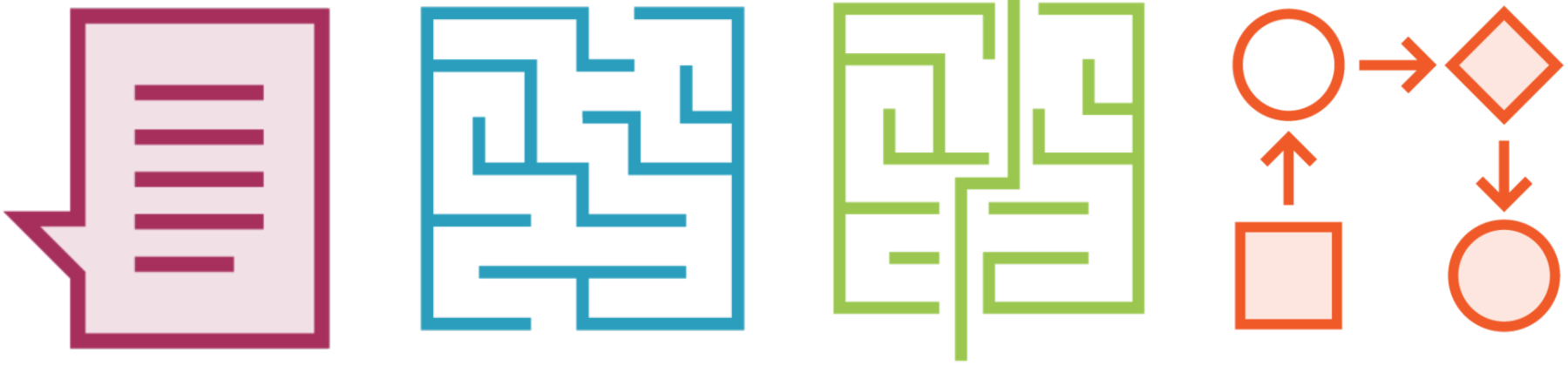
Loose coupling

Composition over Inheritance

Program to an interface, not an implementation

Encapsulate what varies

Design Patterns



Definition Problem Solution Structure

Summary

Design patterns are general solutions for common problems in software design

These are blueprints, not algorithms or code

Use design pattern to achieve the goals set by design principles

Use Design Patterns in PHP

Up Next:
Learning Creational Design Patterns