

# Design Patterns in PHP





# Introduction



# What are design patterns?

- Solutions to recurring problems
- Guidelines on how to tackle certain problems
- Not a silver bullet to all your problems
- Do not try to force them
- Are not solutions looking for problems

# Types of design patterns

- Creational Design Patterns
- Structural Design Patterns
- Behavioral Design Patterns

# Creational Design Patterns

Creational patterns are focused towards how to instantiate an object or group of related objects.



# Creational Design Patterns

 Singleton

 Simple Factory

 Factory Method

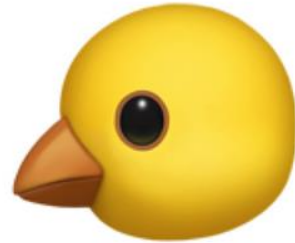
 Abstract Factory

 Builder

 Prototype

# Structural Design Patterns

Structural patterns are mostly concerned with object composition or in other words how the entities can use each other.





# Structural Design Patterns



Adapter

Bridge

Composite

Decorator

Facade

Flyweight

Proxy

# Behavioral Design Patterns

Behavioral design patterns are design patterns that identify common communication patterns between objects and realize these patterns.





# Strategy Design Pattern

# In plain words

Strategy pattern allows you to switch the algorithm or strategy based upon the situation

# Wikipedia says

In computer programming, the strategy pattern (also known as the policy pattern) is a behavioral software design pattern that enables an algorithm's behavior to be selected at runtime.

# Real world example

Consider the example of sorting, we implemented bubble sort but the data started to grow and bubble sort started getting very slow. In order to tackle this we implemented Quick sort. But now although the quick sort algorithm was doing better for large datasets, it was very slow for smaller datasets. In order to handle this we implemented a strategy where for small datasets, bubble sort will be used and for larger, quick sort.

# Programmatic Example

<https://github.com/kamranahmedse/design-patterns-for-humans#-strategy>



# UML

