

Practical JavaScript Design Patterns

WHAT IS A DESIGN PATTERN ANYWAY?



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Design Patterns



Who created them?

What are they?

When to use them?

Where to use them?

How to implement them?

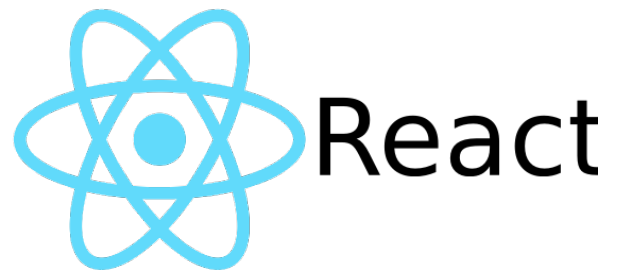


“It was the Rodney Dangerfield
of languages”

Brendan Eich



The Rise of the Framework





Bad JavaScript!



Design Patterns To The Rescue



Design Patterns







A Pattern Language

Towns · Buildings · Construction



Christopher Alexander

Sara Ishikawa · Murray Silverstein

WITH

Max Jacobson · Ingrid Fiksdahl-King

Shlomo Angel



“...each pattern represents our current best guess as to what arrangement of the physical environment will work to solve the problem presented.”

Christopher Alexander



“The empirical questions center on
the *problem*
—does it occur and is it felt in
the way we have described it?”

Christopher Alexander



“and the *solution*
—does the arrangement we
propose in fact *resolve* the problem?”

Christopher Alexander



Design Patterns

Problems

On and Off Traffic for Highways

Pedestrian Traffic

Entry and Exit for Public Buildings

Solutions

Cloverleaf Interchanges

Sidewalks...

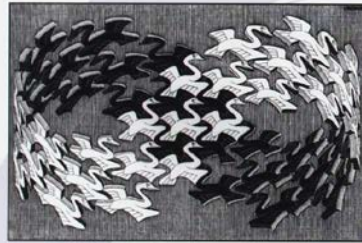
Revolving Doors



Design Patterns

Elements of Reusable
Object-Oriented Software

Erich Gamma
Richard Helm
Ralph Johnson
John Vlissides



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Foreword by Grady Booch



ADDISON-WESLEY PROFESSIONAL COMPUTING SERIES



Design Patterns

Problems

Designing Service Layers

Overly Complicated Object Interfaces

Visibility Into State Changes

Solutions

Module Pattern

Façade Pattern

Observer Pattern



So, What Constitutes a Pattern?



It solves a problem

It is a proven concept

The solution is not obvious

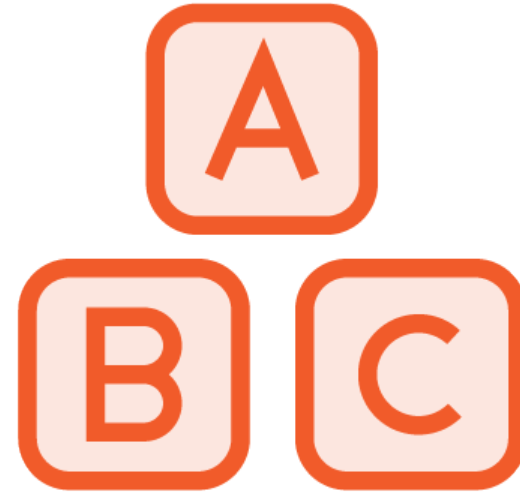
It described a relationship

It has a significant human component

Why Bother With Patterns?



Why solve it again?



Common Vocabulary



Types Of Patterns

Creational

- 1) Constructor
- 2) Module
- 3) Factory
- 4) Singleton

Structural

- 1) Decorator
- 2) Façade
- 3) Flyweight

Behavioral

- 1) Command
- 2) Mediator
- 3) Observer



Rules of the Road



Objects In JavaScript

Each Pattern Stands On Its Own

Describe Each Pattern

Implement in Node

Implement in Angular

