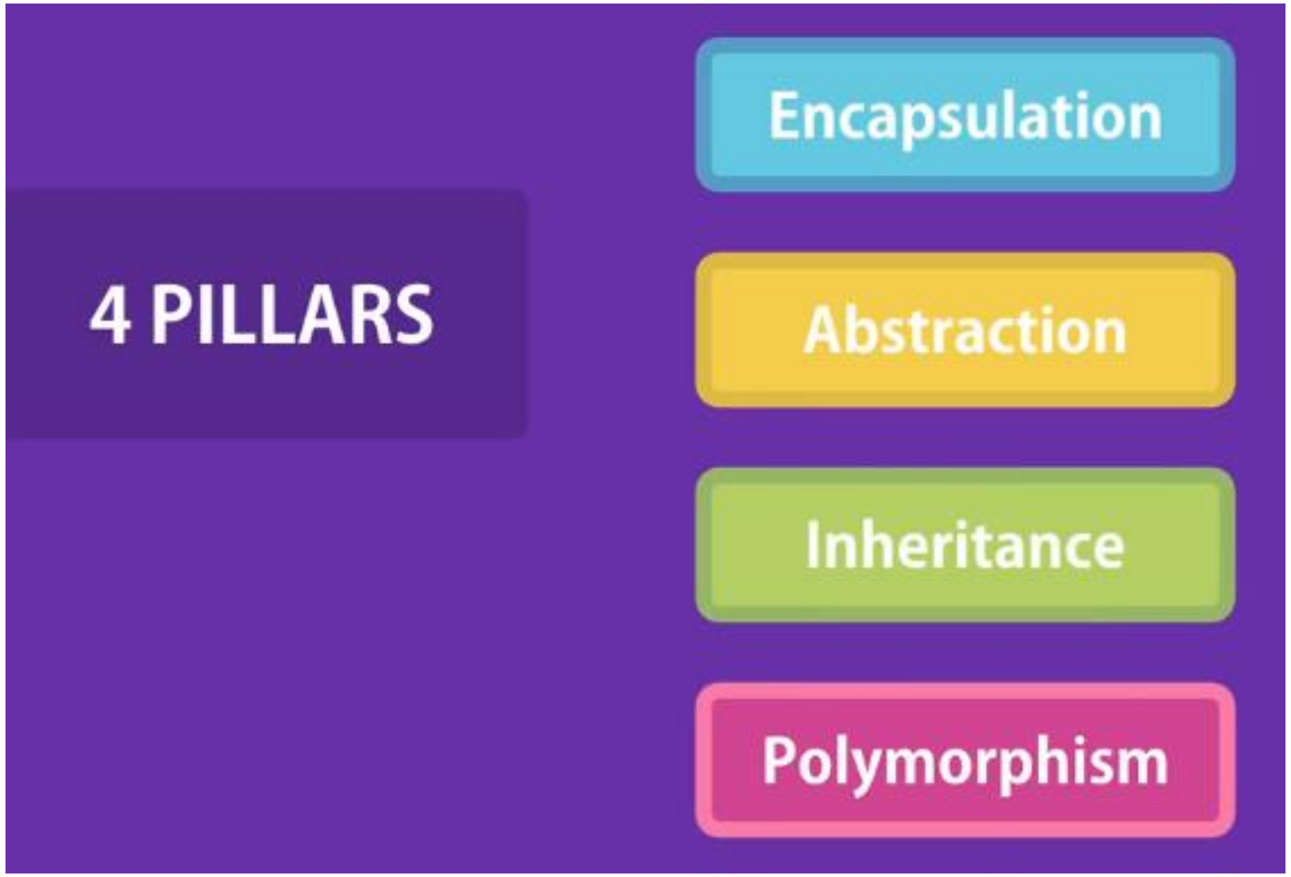
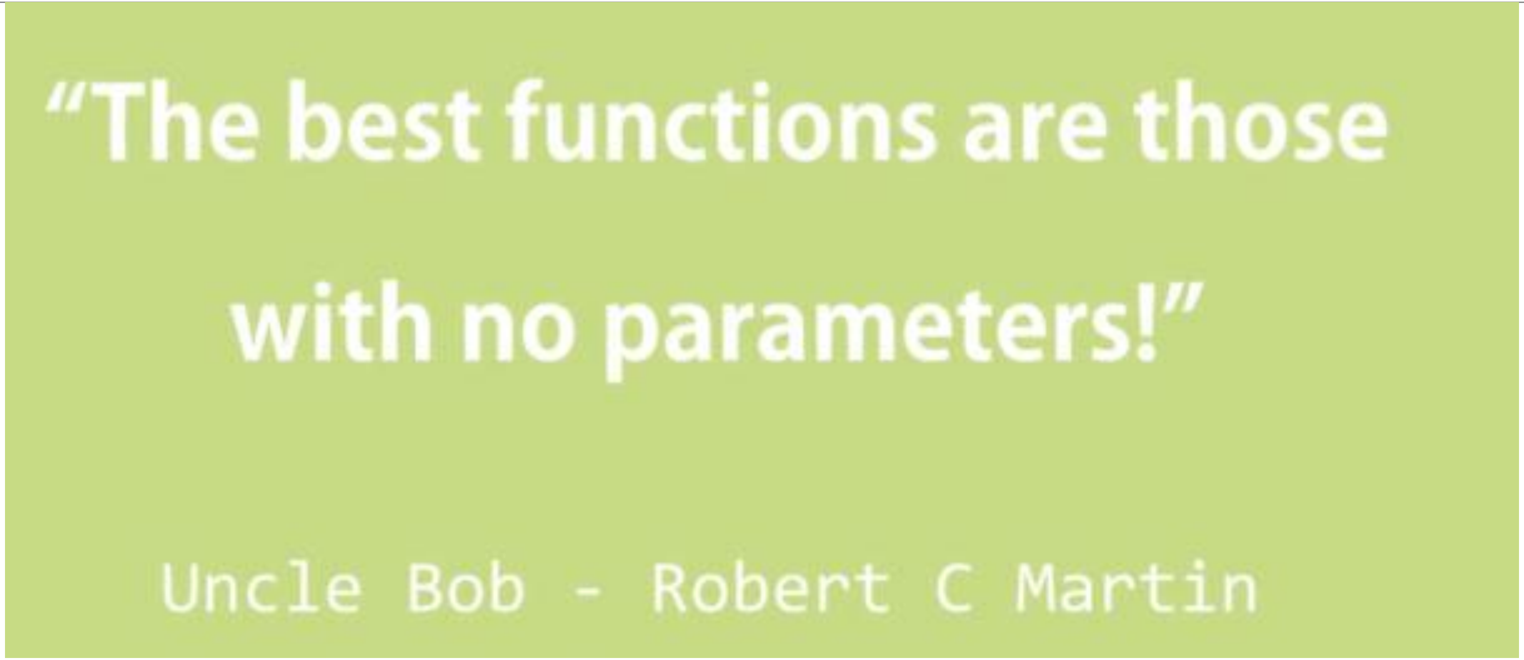
Node

JS OOP

4 Pillars of OOP



Encapsulation


“The best functions are those with no parameters!”

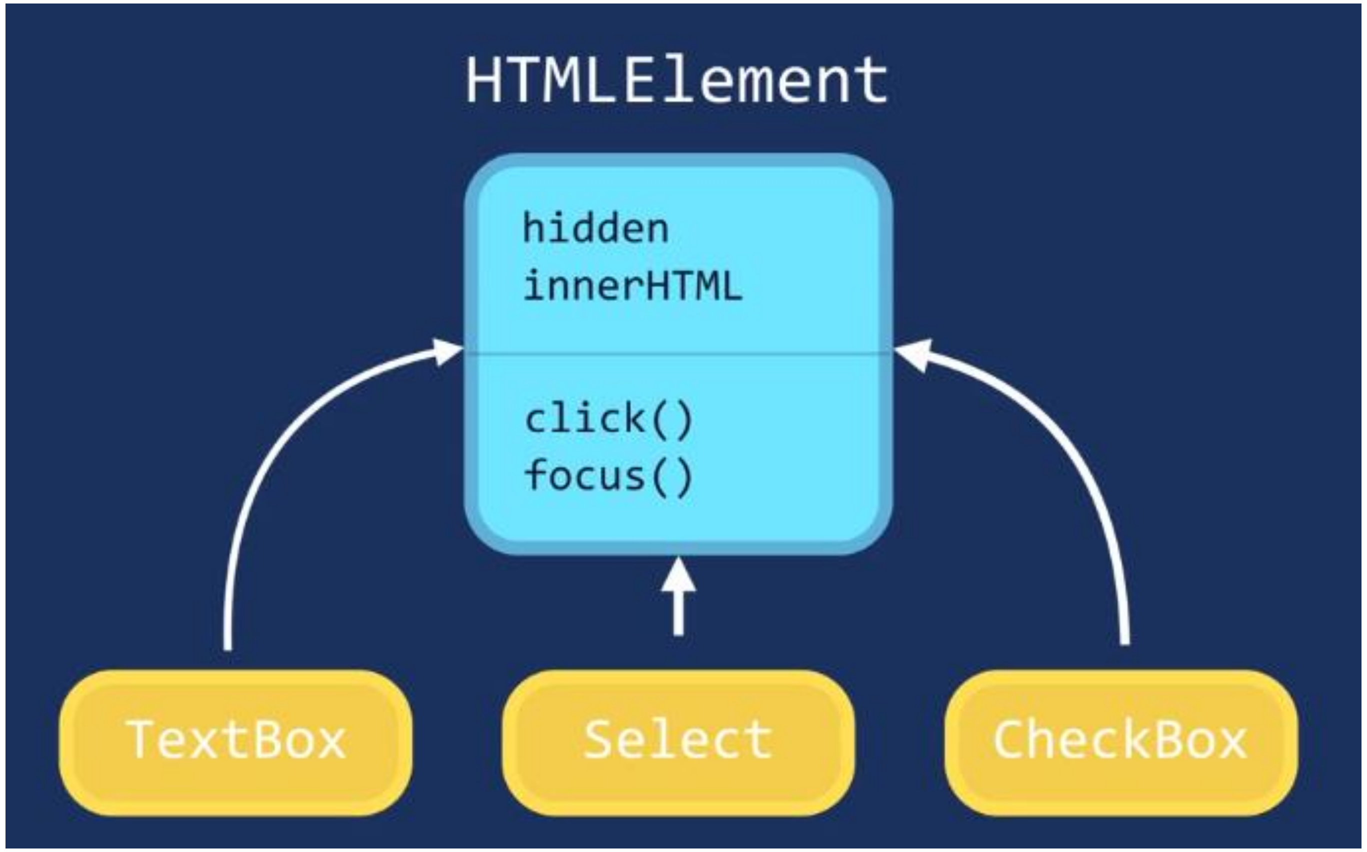
Uncle Bob - Robert C Martin

Abstraction

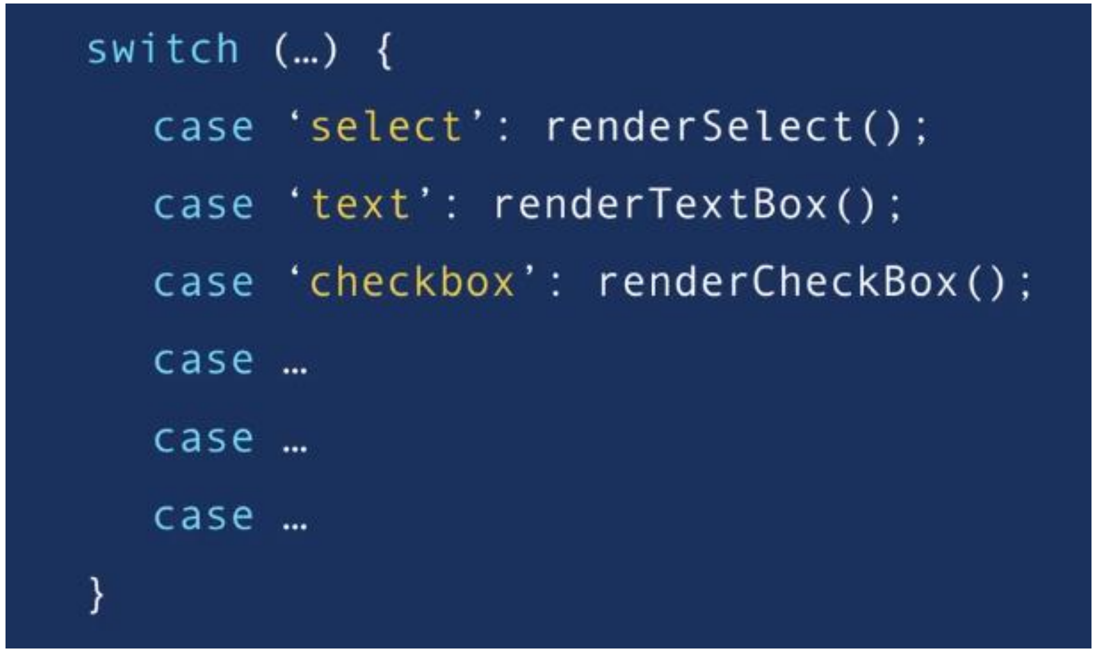
Hide Complex Implementation Details

- Clean your interface

Inheritence

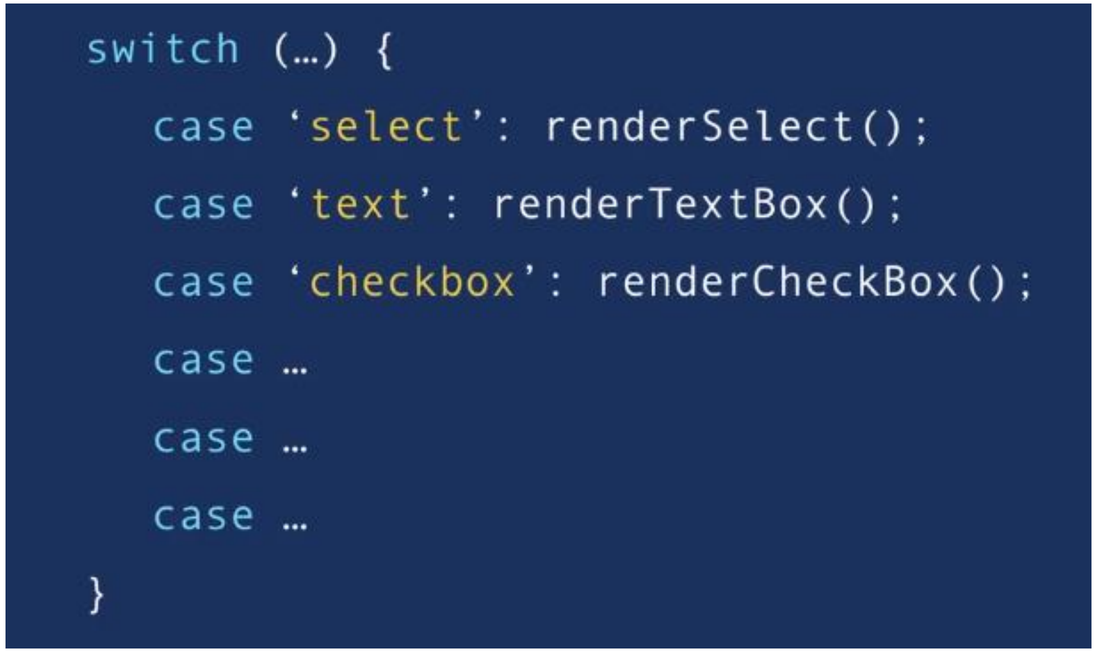


Poly Morphism



```
switch (…) {
   case ‘select’: renderSelect();
   case ‘text’: renderTextBox();
   case ‘checkbox’: renderCheckBox();
   case …
   case …
   case …
}
```

Poly Morphism



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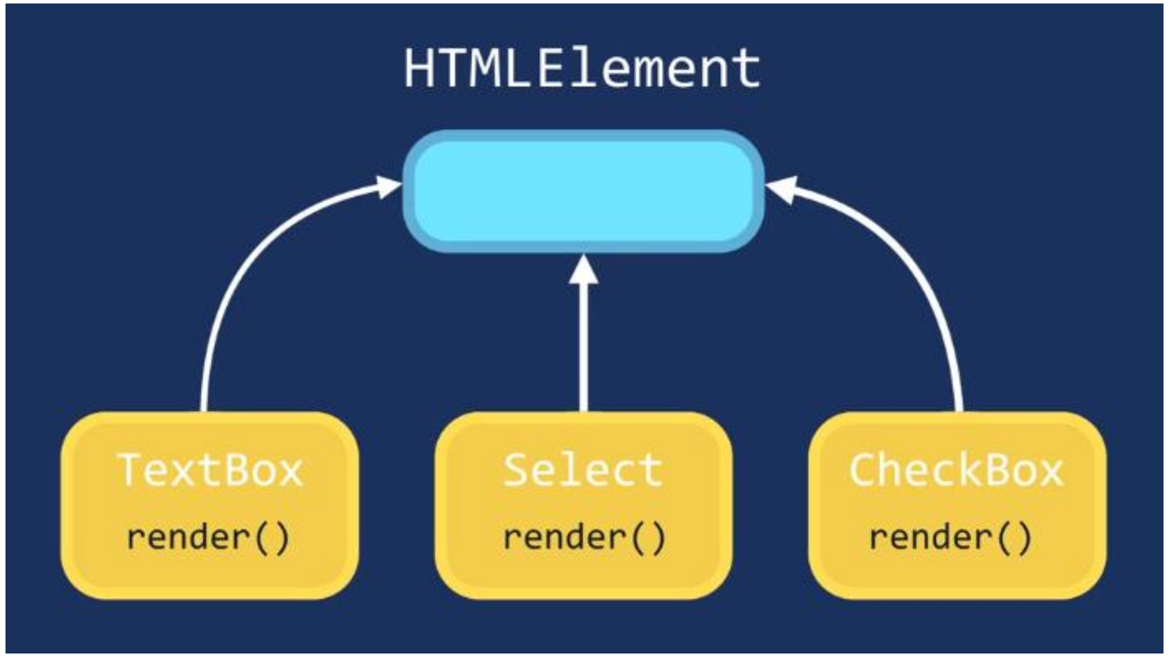
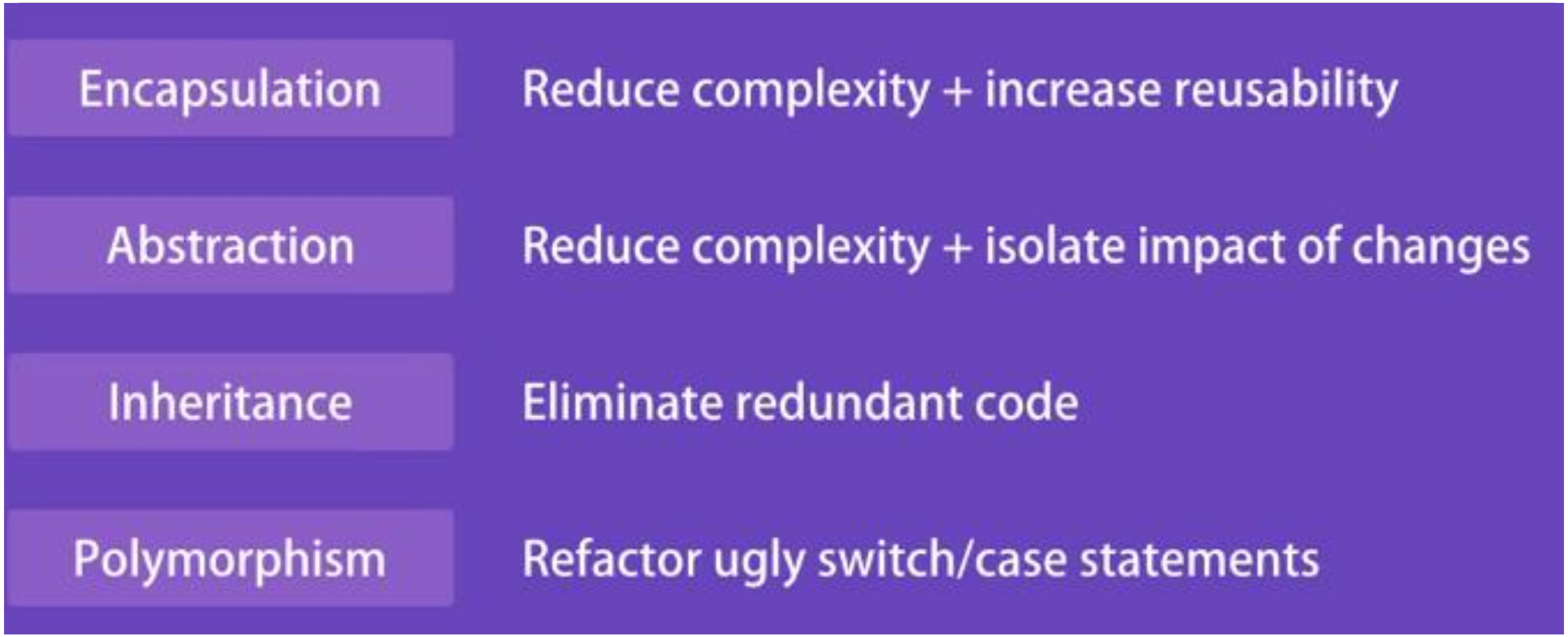
```

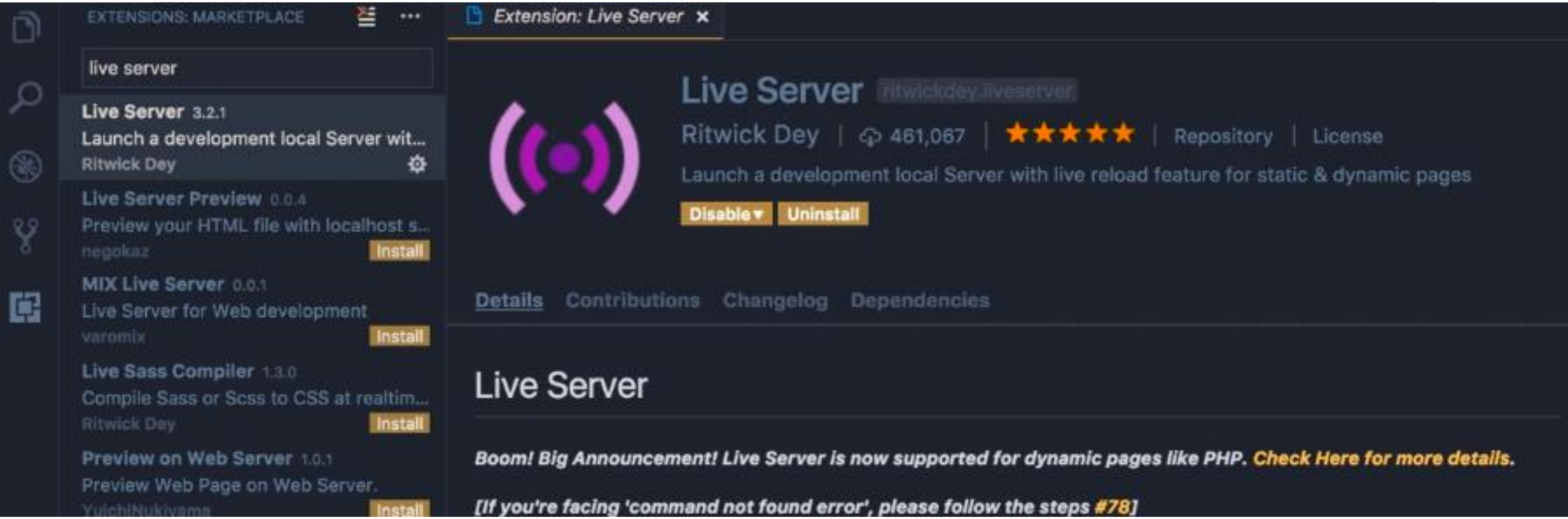


Why OOP



Encapsulation	Reduce complexity + increase reusability
Abstraction	Reduce complexity + isolate impact of changes
Inheritance	Eliminate redundant code
Polymorphism	Refactor ugly switch/case statements

Development Environment



live server

Live Server 3.2.1
Launch a development local Server wit...
Ritwick Dey

Live Server Preview 0.0.4
Preview your HTML file with localhost s...
negokaz
Install

MIX Live Server 0.0.1
Live Server for Web development
varomix
Install

Live Sass Compiler 1.3.0
Compile Sass or Scss to CSS at realtim...
Ritwick Dey
Install

Preview on Web Server 1.0.1
Preview Web Page on Web Server.
YuichiNukiyama
Install

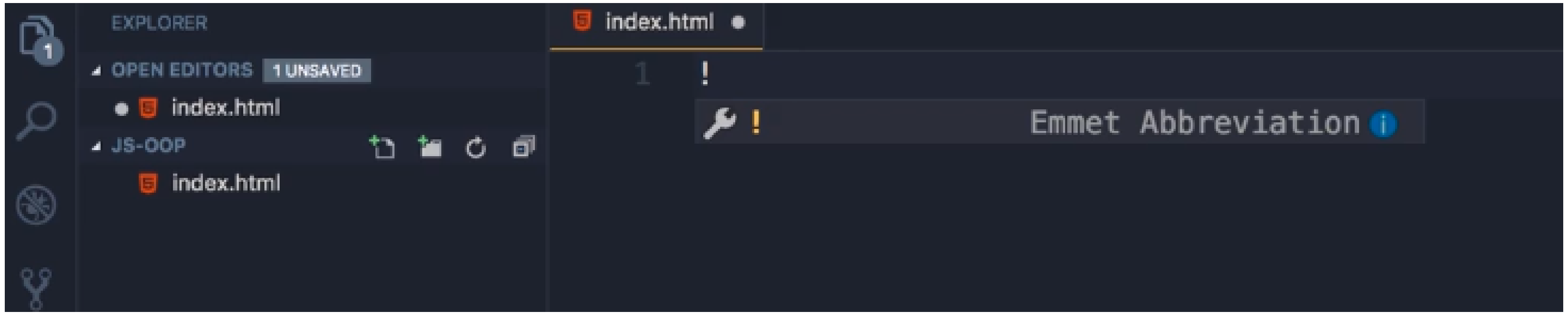
Live Server ritwickdey.liveserver
Ritwick Dey | 461,067 | ★★★★★ | Repository | License
Launch a development local Server with live reload feature for static & dynamic pages

Live Server

Boom! Big Announcement! Live Server is now supported for dynamic pages like PHP. Check Here for more details.

[If you're facing 'command not found error', please follow the steps #78]

Live Templates in CS Code (!) press tab



```
!
```

Object Literal

```
let circle = {
radius: 1,
border: 2,
}
```

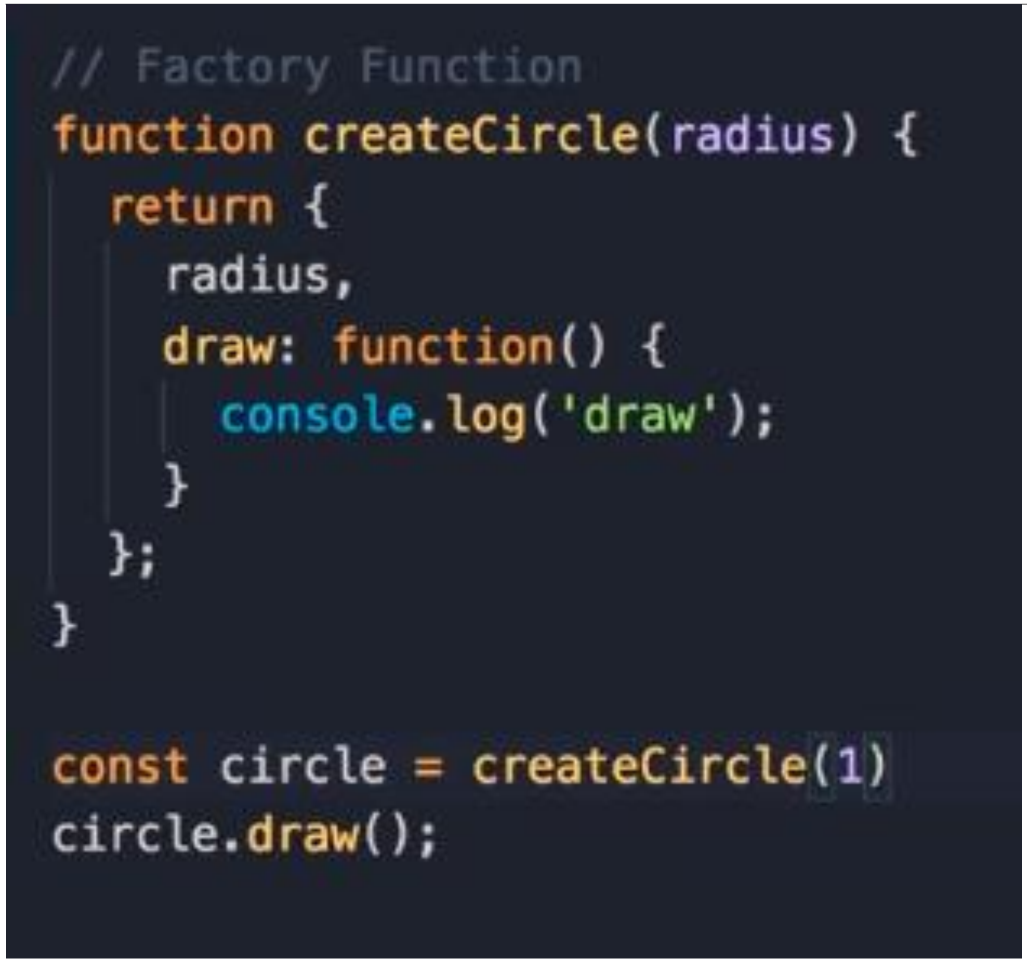
Object Literal

```
let circle = {
radius: 1,
border: 2,
location: {
   x: 45,
   y: 35
  }
}
```

Object Literal

```
let circle = {
radius: 1,
draw: function () {
console.log('draw');
}
}
circle.draw();
```

Factory Function



```javascript
// Factory Function
function createCircle(radius) {
  return {
    radius,
    draw: function() {
      console.log('draw');
    }
  };
}

const circle = createCircle(1)
circle.draw();
```

Constructor Function

```
function Circle(radius) {
 this.radius = radius;
 this.draw = function () {
  console.log("Draw: r=" + radius);
 }
}
const c = new Circle(5); //new Object
c.draw();
```

Don't Miss It

this

Referes to the object calling current function

Constructor property

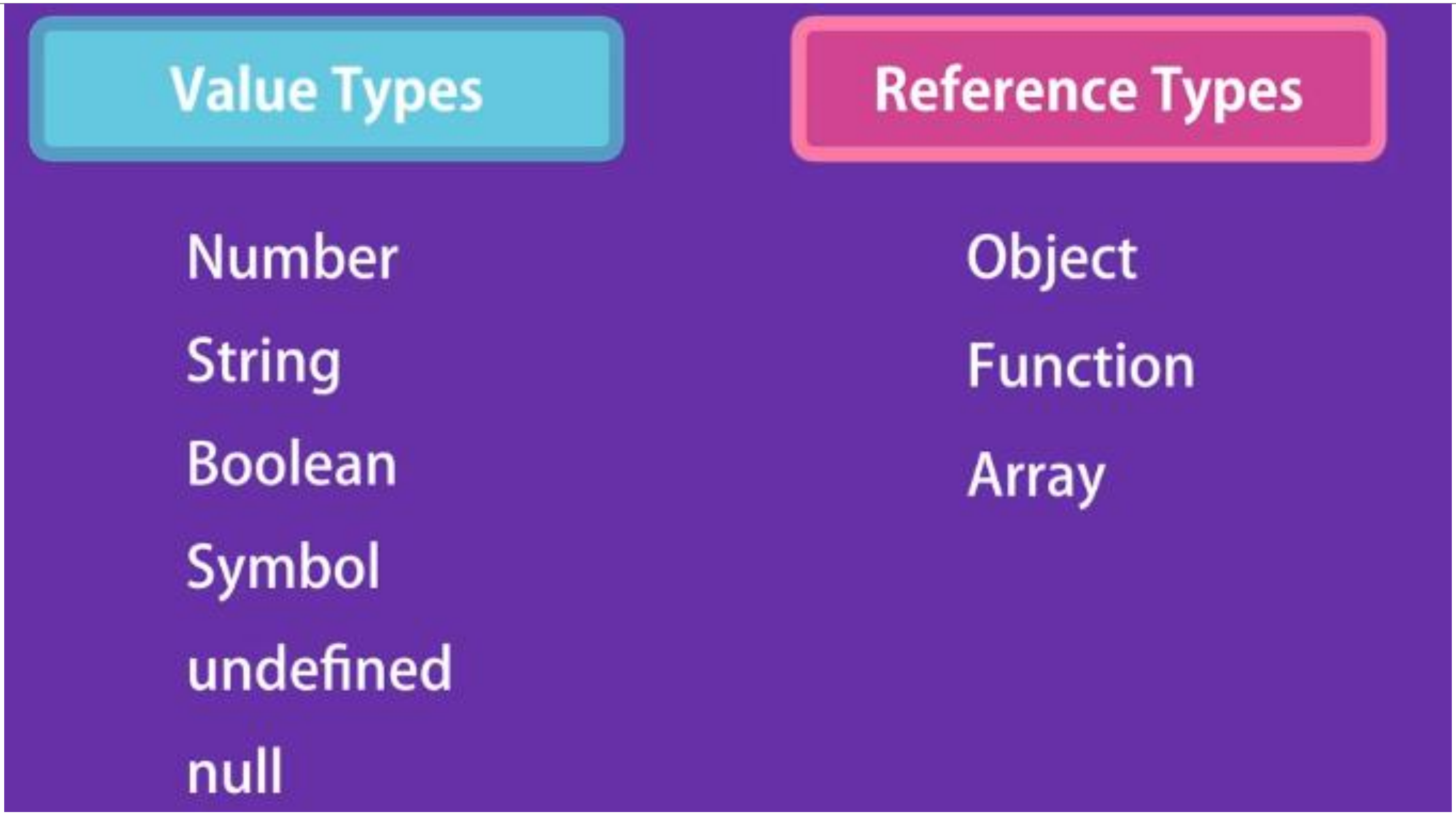
```
let x = {}
// let x= new Object()
```

//factory functions use default constructor

//check from browser by

object.constructor

Value vs Reference Types

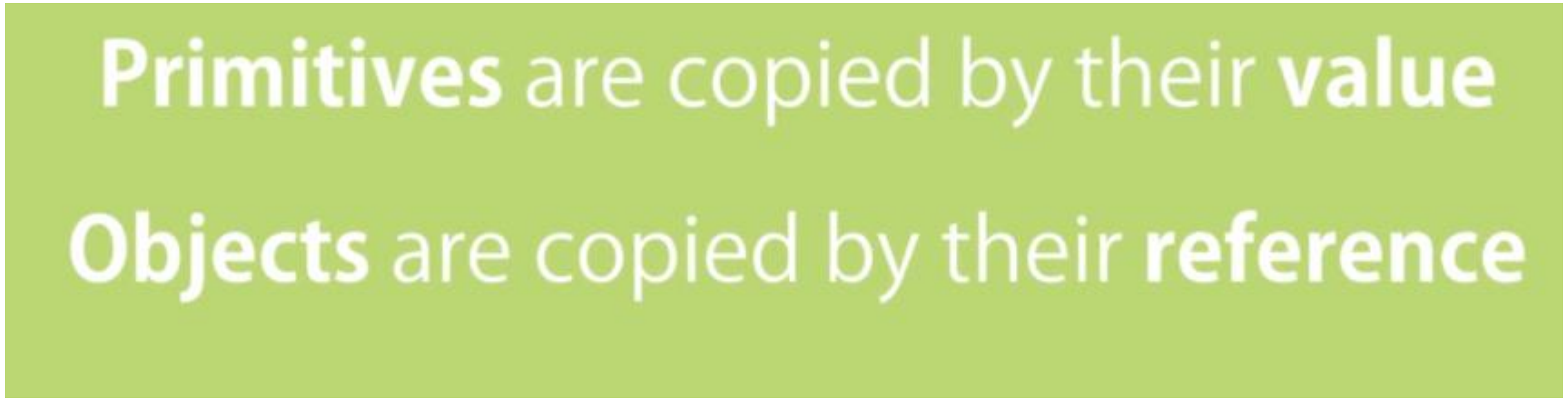


Value Types	Reference Types
Number	Object
String	Function
Boolean	Array
Symbol	
undefined	
null	

Value vs Reference Types

```
let x = 10;

let y = x;

x = 20;

//y will have 10
```

```
let x = {value:10}

let y = x;

x.value = 20;

//y.value will have 20
```



Primitives are copied by their **value**

Objects are copied by their **reference**

What will be the output

```
let x = 10;
function increase(x) {
x++;
}
Increase(x);
console.log(x);
//10
```

```
let y = { value: 10 };
function increaseObj(y) {
y.value++;
}
increaseObj(y);
console.log(y.value);
//11
```

Cheat Sheet

https://1drv.ms/u/s!AtGKdbMmNBGdhQqT7nVD8sP5MlW2