

# React Fundamentals

## JavaScript Review



## Let's talk about...

- Types
- Variables
- Functions
- Objects
- Classes
- Events
  
- TypeScript



# JavaScript Review

## Types



## Primitive Types

**String**

**Number**

**Boolean**

**Null**

**Undefined**

**BigInt**

**Symbol**



# JavaScript Review

## Variables



## Variables

const

let

var

```
const string = 'apple'
```

```
let number = 4
```

```
var bool = false
```

# Variables

	const	let	var
Re-assignable	no	yes	yes
Re-declarable	no	no	yes



# JavaScript Review

# Functions



# Functions

- Reusable blocks of code
- Can accept a list of arguments
- Invoked by calling function name with parenthesis ()

```
function sayHello(name) {  
  return `Hello, ${name}`  
}  
  
console.log(sayHello())
```



# JavaScript Review

## Objects

## Objects

- Containers for collections of properties
- Properties can be of any type
- Can access properties via "Dot" or "Bracket" notation

```
const car = {  
  make: 'Honda',  
  model: 'Civic',  
  yearBuilt: 2017,  
  spinningRims: false,  
  selfDriving: false  
}  
  
// Dot Notation  
console.log(car.model)  
  
// Bracket Notation  
console.log(car['selfDriving'])
```



# JavaScript Review

## Classes

# Classes

- Classes were introduced to JavaScript as a part of ES6
- Constructor automatically called when a new object is initialized
- Intended to be familiar to developers with object-oriented experience.

```
class Person {  
  
  constructor(firstName, lastName, age) {  
    this.firstName = firstName  
    this.lastName = lastName  
    this.age = age  
  }  
  
  greetings() {  
    return `Hello! My name is ${this.firstName}`  
  }  
}
```

# JavaScript Review

## Events

# Events

- Events drive interaction between JS code and an HTML page
- There are a lot of types of events but common ones are:
  - onclick
  - onchange
  - onload
  - onkeydown

## HTML

```
<div>
  <button onclick="handleButtonClick()">
    Click me!
  </button>
</div>
```

## JS

```
function handleButtonClick() {
  alert('button clicked!')
}
```



# JavaScript Review

# TypeScript



# TypeScript

- A superset of JavaScript, created by Microsoft
- Adds syntax for specifying types function parameters and variables
- TypeScript code is “transpiled” back to JavaScript before it runs

```
const car: { make: string, model: string, yearBuilt: number,
selfDriving: boolean } = {
  make: 'Honda',
  model: 'Civic',
  yearBuilt: 2017,
  selfDriving: false
};

car.yearBuilt = '2022' // error!
```



# Let's try it!

