



# React Props ?

***React Props are like function arguments in JavaScript and attributes in HTML.***

***React Props are read only.***

***React props can't be modified.***



# React Props ?

***To send props into a component, use the same syntax as HTML attributes:***

Example

Add a "brand" attribute to the Car element:

```
const myelement = <Car brand="Ford" />;
```



# React Props ?

***The component receives the argument as a props object:***

Example

Use the brand attribute in the component:

```
class Car extends React.Component {  
  Render() {  
    return <h2>I am a {this.props.brand}</h2>;  
  }  
}
```



## React State ?

*React components has a built-in state object.*

*The state object is where you store property values that belongs to the component.*

*When the state object changes, the component re-renders.*



# React State ?

## *Creating the state Object*

*The state object is initialized in the constructor:*

Example

Specify the state object in the constructor method:

```
class Car extends React.Component {  
  constructor(props) {  
    super(props);  
    this.state = {brand: "Ford"};  
  }  
  
  render() {  
    return (  
      <div> <h1>My Car</h1></div>  
    )  
  }  
}
```



# React State ?

*The state object can contain as many properties as you like:*

Example

Specify all the properties your component need:

```
class Car extends React.Component {  
  constructor(props) {  
    super(props);  
    this.state = {  
      brand: "Ford",  
      model: "Mustang",  
      color: "red",  
      year: 1964  
    };  
  }  
}
```



## *Changing the state Object ?*

*To change a value in the state object, use the `this.setState()` method.*

*When a value in the state object changes, the component will re-render, meaning that the output will change according to the new value(s).*



## ***Changing the state Object ?***

***Always use the `setState()` method to change the state object, it will ensure that the component knows its been updated and calls the `render()` method (and all the other lifecycle methods).***



# *Props VS State ?*

## Props vs. State

- ★ Immutable
- ★ Has better performance
- ★ Can be passed to child components

{ }

- ★ Owned by its component
- ★ Locally scoped
- ★ Writeable / Mutable
- ★ Has setState() method to modify properties
- ★ Changes to state can be asynchronous
- ★ Can only be passed as props