

# Intro to ReactJS

# About Me

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# What is React ?

Library for building User Interfaces

V part of **MVC ( Model View Controller )**

Not a front end framework



# And React is not a templating library





# Why To Use React ?

Simple

Declarative

Build Reusable Components





# React Uses JSX (JavaScript & XML)

Standard HTML - Accept all attributes

Little modifications like **className** instead of **class**

```
var CommentBox = React.createClass({  
  render: function() {  
    return (  
      <div className="commentBox">  
        Hello, world! I am a CommentBox.  
      </div>  
    );  
  }  
});
```



# Virtual DOM

React uses a concept called ***Virtual DOM***

It's Faster for re-rendering the entire component on every state change.

Virtual DOM uses diff algorithm.

Can rendered in server and synced with local client.





# Three Important Terminologies

Components

States

Props







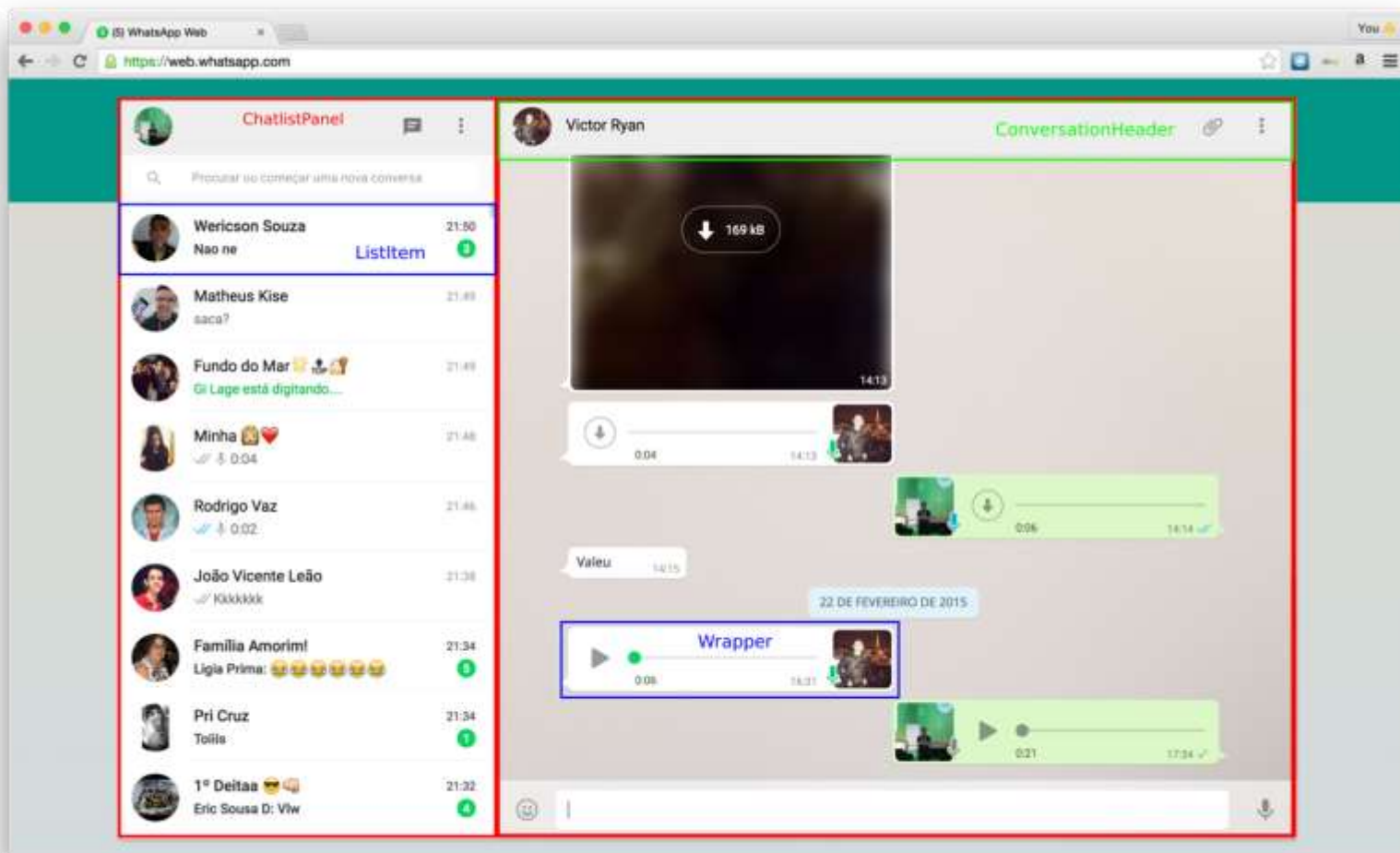
# Components

Everything is a component in react

Created using **React.createClass**

Key functions for every components

```
getInitialState: function() {},  
componentWillMount : function() {},  
componentDidMount : function() {},  
componentWillUnmount : function() {},  
componentDidUnmount : function() {},  
render : function() {}
```





# Props

Loaded as attributes for components

Used for unidirectional data flow

immutable or read only

```
var CommentBox = React.createClass({  
  render: function() {  
    return (  
      <div className="commentBox">{this.props.message}</div>  
    );  
  }  
});  
ReactDOM.render(<CommentBox message="Say Hello"/>, document.getElementById('content'));
```



# States

Defines states of a component.

Changes to the state causes re rendering of the entire component.

`getInitialState()` is used to set initial states of the component

`setState({state: value})` is used to update the state





# Render Function

The Actual View Code is written here

States and Props both are read-only here

Returns JSX Elements

```
render: function() {  
  return (  
    <div className="commentBox">{this.props.message}</div>  
  );  
}
```





# Forms

Form elements are pointed or named with `ref` attribute

Form values are extracted like `this.refs.searchInput.value` where `searchInput` is the ref of the input element

Default value is set with help of `defaultValue` attribute.





# Events

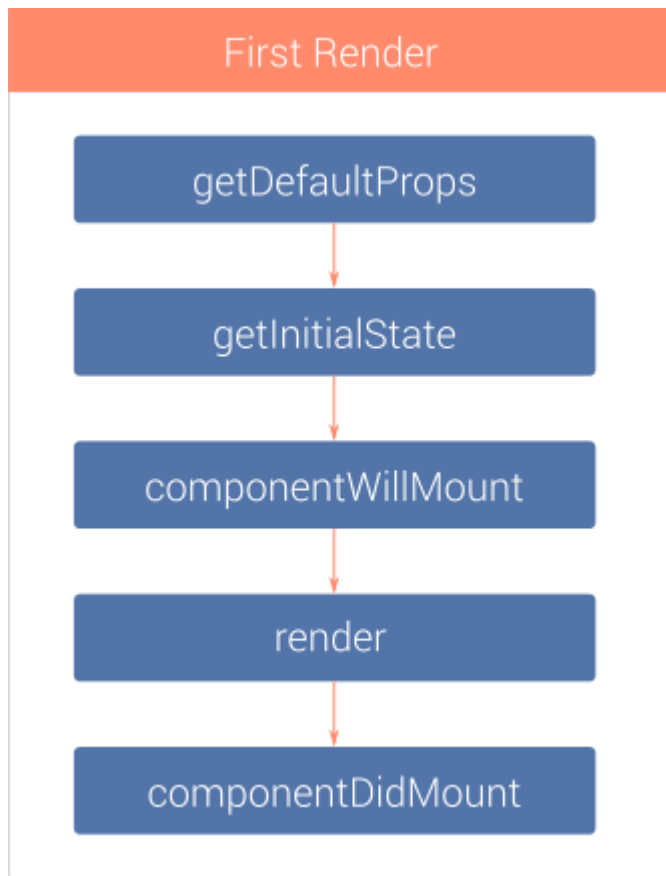
## Cross Browser Events

### CamelCase Event Handlers

<code>onClick</code>	<code>onDragStart</code>
<code>onContextMenu</code>	<code>onDrop</code>
<code>onDoubleClick</code>	<code>onMouseDown</code>
<code>onDrag</code>	<code>onMouseEnter</code>
<code>onDragEnd</code>	<code>onMouseLeave</code>
<code>onDragEnter</code>	<code>onMouseMove</code>
<code>onDragExit</code>	<code>onMouseOut</code>
<code>onDragLeave</code>	<code>onMouseOver</code>
<code>onDragOver</code>	<code>onMouseUp</code>



# Component LifeCycle





## TODO LIST EXAMPLE



```
var TodoList = React.createClass({
  render: function() {
    var createItem = function(item) {
      return <li key={item.id}>{item.text}</li>;
    };
    return <ul>{this.props.items.map(createItem)}</ul>;
  }
});

var TodoApp = React.createClass({
  getInitialState: function() { return {items: [], text: ''}; },
  onChange: function(e) {
    this.setState({text: e.target.value});
  },
  handleSubmit: function(e) {
    e.preventDefault();
    var nextItems = this.state.items.concat([{text: this.state.text, id: Date.now()}]);
    var nextText = '';
    this.setState({items: nextItems, text: nextText});
  },
  render: function() {
    return (
      <div>
        <h3>TODO</h3>
        <TodoList items={this.state.items} />
        <form onSubmit={this.handleSubmit}>
          <input onChange={this.onChange} value={this.state.text} />
          <button>{'Add #' + (this.state.items.length + 1)}</button>
        </form>
      </div>
    );
  }
});

ReactDOM.render(<TodoApp />, mountNode);
```



# Useful tools when developing in React

[HTML to JSX Compiler](#)

[React Developer Tools for Chrome](#)

[React Developer Tools for Firefox](#)





# Sites built with React

Facebook

Whatsapp Web

netflix

BlankCursor

Instagram

Producthunt

messenger.com



**ANY QUESTIONS?**



# Thank You !

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