







Video 3.4

React Component Interaction





Chris Murphy

Review





- We can bind user events in HTML elements to callback functions in React components
- When we invoke a component's **setState** function, the **render** function will automatically be called and the component's appearance can change accordingly
- Re-rendering one component may necessitate re-rendering others as well

   react-list.html 

- anteater
- bear
- cat
- dog
- elephant
- fox

   react-list.html 

- anteater
- bear
- cat
- elephant

   react-list.html 

- anteater
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class FilteredList extends React.Component {

  constructor(props) {
    super(props);
    var allItems = [ "Anteater", "Bear", "Cat",
                     "Dog", "Elephant" ];
    this.state = { initialItems: allItems,
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class ListItems extends React.Component {
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TO-DO LIST

Add




    react-todo.html 

TO-DO LIST

   react-todo.html

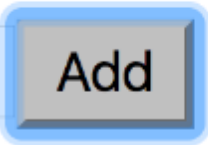
TO-DO LIST

- learn JavaScript

   react-todo.html

TO-DO LIST

- learn JavaScript
- find happiness

Add

TO-DO LIST

- ~~learn JavaScript~~
- find happiness


```
class TodoApp extends React.Component {
  constructor(props) {
    super(props);
    this.state = {items: [], text: ' ', id: 0};
  }

  handleChange(e) {
    this.setState( { text: e.target.value } );
  }

  handleSubmit(e) {
    e.preventDefault(); // so as not to reload the page
    var newItem = { text: this.state.text,
                    id: this.state.id };
    this.setState( {
      items: this.state.items.concat(newItem),
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      id: this.state.id + 1
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class TodoApp extends React.Component {
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  render() {
    return (
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        <h3>TO-DO LIST</h3>
        <TodoList items={this.state.items} />
        <form onSubmit={this.handleSubmit.bind(this)}>
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class TodoItem extends React.Component {
  constructor(props) {
    super(props);
    this.state = { amDone: false };
  }

  handleClick() {
    this.setState( { amDone: !this.state.amDone} );
  }

  render() {
    var line = this.state.amDone ? 'line-through' : 'none';
    return (
      <li key={this.props.id}
        onClick={this.handleClick.bind(this)}
        style={{textDecoration:line}}>
        {this.props.text} </li>
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  constructor(props) {
    super(props);
    this.state = { amDone: false };
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  handleClick() {
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  render() {
    var line = this.state.amDone ? 'line-through' : 'none';
    return (
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Review

- React allows us to create reusable, modularized components that can be combined to form web applications
- React handles re-rendering of components based on the structure of VirtualDOM