React: Forms

Phase 2 // Week 1, Day 4

Today's Objectives

Today, we'll answer the following questions:

- 1. How do we write forms in React?
- 2. How do we handle form submissions?
- 3. What does it mean for a form to be (un)controlled?
- 4. Why should we write controlled forms?

Uncontrolled Forms

```
export default function Form() {
export default function App() {
                                     return (
 return
                                      <form>
                                       <label>Name<input /></label>
    <h1>Fill this out, please!</h1>
                                        <input type="submit" />
    <Form />
                                      <form>
```

Controlled Forms

- Earlier this week, we learned that a <u>user event</u> is often a sign we have something <u>dynamic</u> and <u>independent</u> that we can hold in state.
- When a user fills out a form, they fire countless events.
- Most of these events affect a form's input values.
- Ergo, it makes sense to hold and update input values in state!

```
export default function Form() {
export default function App() {
                                    return (
 return (
                                      <form>
   <>
                                       <label>Name<input /></label>
    <h1>Fill this out, please!</h1>
    <Form />
                                       <input type="submit" />
                                      <form>
```

```
export default function Form() {
 const [name, setName] = useState("");
 function handleChange (event) console.log(event.target.value)
 return (
  <form>
    <label>Name
     <input value={name} onChange={handleChange} />
    </label>
    <input type="submit" />
  <form>
```

What's your favorite movie?

(Un)controlled Components

- An uncontrolled component has state that cannot be altered by its parent.
 - In other words, an uncontrolled component is driven by state.
- A controlled component renders something managed by a parent.
 - In other words, a controlled component is driven by props.
- An <input> element is uncontrolled when its value isn't held in state.
- An <input> element is controlled when its value is held in state.
- The act of "controlling" a component is often known as lifting state up.

```
export default function Form() {
 const [name, setName] = useState("");
 function handleChange(event) setName(event.target.value);
 return (
  <form>
    <label>Name
     <input value={name} onChange={handleChange} />
    </label>
    <input type="submit" />
  <form>
```

Why "control" a form?

- Controlling a component (i.e., lifting its state) requires setup.
 - It'd be tedious and unwise to lift all state.
 - Often, state belongs right where its rendered.
- However, controlling a component grants us maximal flexibility.
 - For forms, we get cool stuff like input validation and synchronization.

I'm feeling lucky.

Questions? // Thanks!