

Forms in React

- What changes with forms in React?
 - What doesn't change?
- How do we do validation?
- How to handle a11y with reusable Components?

React has two ways to manage forms

- Controlled
 - React handles the values of field elements
 - `<input>`, `<select>`, `<textarea>`, etc
- Uncontrolled
 - Browser manages values of field elements

Both have their uses

- Controlled takes more effort
- Uncontrolled has limitations

We will do only Controlled forms

Generated HTML is mostly the same

- You CAN skip `<form>` in SPA
 - No actual submission, after all
 - But don't want to
 - Semantic/a11y benefits
 - `onSubmit` is still useful
 - Not all React apps are SPAs

Validation Checks

- Check form field values:
 - `onInput()`
 - `onChange()`
 - React makes `onChange()` on text input act like `onInput()`
 - `onSubmit()`
 - I suggest saving to local state variables
 - Like "in progress" shown in previous class
- Remember to `.preventDefault()` in `onSubmit()`
 - Even on success! Just save info in state

Calculate Derived State and Render

- Local state variables have form field values
- "Should I show an error message?"
 - May be a **derived state**
 - Calculate on render, do not store as state
 - Exception: Fields that default to invalid state
- Conditionally render error messages
 - based on those derived state(s)
- Error messages are just Conditionally Rendered

Accessibility Concerns

- Components are meant to be **reusable**
 - Can use repeatedly in application
 - Can use in other applications
- Forms need labels for a11y
 - Labels often rely on `id` attribute
 - `id` are NOT reusable
- How to resolve?

for in JSX

- Just like `class` attribute is changed to `className`
- `for` attribute of `<label>` is changed to `htmlFor`
 - Still refers to the id attribute of the element

Resolving the uniqueness problem

- React has a `useId` hook
- Gives a unique value for each component
- Use as a prefix if you have multiple fields
- Can't be targeted by CSS
 - Use `className` for that part

```
import { useId } from 'react';

function MyComponent() {
  const id = useId();

  return (
    <form>
      <label htmlFor={`${id}-name`} >Name</label>
      <input id={`${id}-name`} />
    </form>
  );
}
```