

Imperative React

In a React function component, React's `useRef` Hook is used mostly for imperative programming. Throughout React's history, the *ref* and its usage had a few versions:

- String Refs (deprecated)
- Callback Refs
- `createRef` Refs (exclusive for Class Components)
- `useRef` Hook Refs (exclusive for Function Components)

Recently, the React team introduced **React's `createRef`** as the latest equivalent to a function component's `useRef` hook:

```
class InputWithLabel extends React.Component {
  constructor(props) {
    super(props);

    this.inputRef = React.createRef();
  }

  componentDidMount() {
    if (this.props.isFocused) {

      this.inputRef.current.focus();
    }
  }

  render() {
    ...

    return (
      <>
        ...
        <input

          ref={this.inputRef}
          id={id}
          type={type}
          value={value}
          onChange={onInputChange}
        />
      </>
    );
  }
}
```



```

</>
);

}
}

```

src/App.js

With the helper function, the ref is created in the class' constructor, applied in the JSX for the `ref` attributed, and here used in a lifecycle method. The ref can also be used elsewhere, like focusing the input field on a button click.

Where `createRef` is used in React's class components, React's `useRef` Hook is used in React function components. As React shifts towards function components, today its common practice to use the `useRef` hook exclusively to manage refs and apply imperative programming principles.

Let's see the live execution of legacy version:

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Let's now observe the differences in legacy version and the modern version.

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```

Exercises:

EXERCISES.

- Read more about [the different ref techniques in React](#).