REACT Cheat Sheet

This cheat sheet is for the course **React 18 Course - Learn React JS the fast way** by *Jannick Leismann.*

Components

A component in React is like a building block you use to build your User Interface. An independent, reusable pieces of UI. It can be **functional** or **class-based**.

Component Structures

Functional Components – Initially used for stateless components, these are simpler components defined in JavaScript functions that takes props and returns **JSX (JavaScript XML)**

```
export default function MyComponent(){
  return (
    <h1>Hello World!</h1>
  )
}
```

Class Components –provide all React features via an object-oriented approach, they have additional features like state and lifecycle

```
import React from "react";

class MyComponent extends React.Component{
  render() {
    return <h1>Hello World!</h1>
  }
}

export default MyComponent;
```

* React favors functional components because they're easier to understand and manage. These functions can handle data changes (state) and external interactions (side effects) using **Hooks** like **useState** and **useEffect**. This approach not only improves code readability and maintainability but also allows for better performance optimization.

JSX (JavaScript XML)

An extension syntax in react allows you to write **HTML-like** code within JavaScript.

Props

Are used to pass data from **parent component** to **child components**.

```
export default function MyComponent(props) {
  return (
    <h1>Hello {props.name}!</h1>
  );
}
```

```
    <MyComponent name="Bob" />
```

Fragment

Allows functional components to return multiple elements without a div.

```
export default function MyComponent(){
  return (
    <>
     <h1>Hello World!</h1>
     <h2>Hello Universe!</h2>
    </>
  )
}
```

Conditional Rendering

Allows components to render different content based on certain conditions.

```
import React from "react";


export default function MyComponent(props) {
  return (
    <div>
      {props.isLoggedIn ? <p>Welcome, user!</p> : <p>Please log in</p>}
    </div>
  );
}
```

Event Handling

Events like **'onclick'** or **'onChange'** can be handled by components that are called **event handlers**.

```
export default function MyComponent(){

  const handleClick = () => {

  console.log('Button clicked');

};

return <button onClick={handleClick}>Click me</button>;

}
```