

Chapter 7 Study Guide

JSX / PROPS

ReactDOM, Component Declarations, Arrow Functions, Events

Objectives:

- Explain the role of ReactDOM in rendering React components within the HTML structure.
- Describe how React initializes an application using createRoot() and integrates with the browser's rendering engine.
- Understand the purpose of <StrictMode> for identifying potential issues during development.
- Define JSX and explain its benefits for creating dynamic UIs.
- Write function components using arrow function syntax for cleaner code.
- Attach event handlers properly in JSX by passing function references and accessing state.

ReactDOM

ReactDOM is a package that provides DOM-specific methods. It is used to render React components.

```
import ReactDOM from 'react-dom';
```

```
ReactDOM.render(<App />, document.getElementById('root'));
```

Component Declarations

Components are the building blocks of a React application. They can be declared as functions or classes.

```
function Welcome(props) {  
  return <h1>Hello, {props.name}</h1>;  
}
```

Arrow Functions

Arrow functions provide a concise syntax for writing functions. They are often used in React for even simpler components.

```
const Welcome = (props) => {  
  return <h1>Hello, {props.name}</h1>;  
};
```

Event Handlers

Event handlers are functions that handle user interactions. They can be added to elements using J

```
function handleClick() {  
  alert('Button clicked!');  
}  
<button onClick={handleClick}>Click me</button>
```

Props

Props are inputs to components. They allow data to be passed from parent to child components. E

```
function Welcome(props) {  
  return <h1>Hello, {props.name}</h1>;  
}  
<Welcome name="Sara" />
```

useState

useState is a Hook that allows you to add state to functional components. It returns an array with the current state and a function to update it.

```
const [count, setCount] = useState(0);
```

```
<button onClick={() => setCount(count + 1)}>Click me</button>
```

Practice Questions and Answers

1. ReactDOM

Q: What is the purpose of ReactDOM in a React application?

A: ReactDOM provides DOM-specific methods to render React components into the DOM.

2. Component Declarations

Q: How can you declare a component in React?

A: Components can be declared as functions or classes. Function components are commonly used with

3. Arrow Functions

Q: Why are arrow functions often used in React?

A: Arrow functions provide concise syntax and automatically bind 'this', making them ideal for event han

4. Event Handlers

Q: How do you attach an event handler to a button in JSX?

A: Use the onClick attribute with a function reference, e.g., <button onClick={handleClick}>Click me</bu

5. Props

Q: What are props in React?

A: Props are inputs to components that allow data to be passed from parent to child components.

6. useState

Q: What does the useState hook do?

A: useState allows you to add state to functional components and provides a function to update that state.