React useState Hook Assignment

React Assignment: Managing Number State with `useState`

Objective:

Develop a React functional component that utilizes the `useState` hook for managing a numerical state. This component will enable users to increment, decrement, and reset a number through a user interface.

Skills Practiced:

- Utilizing the `useState` hook in functional components
- Managing state in React applications
- Handling user interactions with event listeners

Background:

Assuming the existence of a React application setup, this assignment focuses on creating a single component named `NumberState`. This component will serve as a playground for manipulating state in a React functional component using the `useState` hook.

Assignment Instructions:

Task 1: Create the `NumberState` Component

1. Inside the `src` directory of your existing React app, create a new file named `NumberState.js`.
2. Within `NumberState.js`, start by importing React and the `useState` hook:

```jsx
import React, { useState } from 'react';
```

React useState Hook Assignment

```

3. Define a functional component `NumberState` that renders the current state number and buttons for interactions.

**Task 2: Implement State with `useState`**

1. Use the `useState` hook to initialize a state variable called `number` with a starting value of `0`.

2. Display the `number` within the component's JSX to show the current state to the user.

**Task 3: Enable State Manipulation**

1. Add three buttons to the component: "Increment", "Decrement", and "Reset".

2. Attach `onClick` event handlers to each button to modify the `number` state accordingly:

   - The "Increment" button increases the number by 1.

   - The "Decrement" button decreases the number by 1.

   - The "Reset" button sets the number back to its initial value (0).

**Task 4: Integrate and Test Your Component**

1. Import the `NumberState` component into `App.js` or any other component where you wish to display it.

2. Ensure your application is running (`npm start`) and verify that the `NumberState` component functions as expected: the number increments, decrements, and resets correctly.

#### Deliverables:

- Submit the `NumberState.js` file.

- Include a brief report or comments within your code that describe how the `useState` hook works and its importance in functional components.
```

React useState Hook Assignment

Evaluation Criteria:

- Accurate use of the `useState` hook to manage state within the `NumberState` component.
- Correct functionality for incrementing, decrementing, and resetting the state.
- Code quality, including readability and proper use of React conventions.

This assignment provides a focused way to practice state management in React, specifically using the `useState` hook in functional components. It's designed to reinforce the concept of stateful logic in React and demonstrate the simplicity and power of hooks.