# React: Understanding and Using Props and State

This document explains how to use Props and State in React with a simple example of a Counter App.

## Key Concepts

1. Props: Used to pass data from parent to child components (read-only).  
2. State: Represents dynamic data within a component that can change over time.

## Example: Counter App

The Counter App demonstrates how Props and State can be used together to create dynamic components. The parent component passes an initial count as a prop, and the child component manages the count state.

### Parent Component (App.jsx)

import React from 'react';  
import Counter from './Counter';  
  
const App = () => {  
 return (  
 <div style={{ textAlign: 'center', marginTop: '50px' }}>  
 <h1>Props and State Example: Counter App</h1>  
 {/\* Pass initialCount as a prop to Counter \*/}  
 <Counter initialCount={5} />  
 </div>  
 );  
};  
  
export default App;

### Child Component (Counter.jsx)

import React, { useState } from 'react';  
  
const Counter = ({ initialCount }) => {  
 // State to manage the counter value  
 const [count, setCount] = useState(initialCount);  
  
 // Handlers to modify state  
 const increment = () => setCount(count + 1);  
 const decrement = () => setCount(count - 1);  
 const reset = () => setCount(initialCount);  
  
 return (  
 <div>  
 <h2>Counter: {count}</h2>  
 <button onClick={increment}>Increment</button>  
 <button onClick={decrement} style={{ marginLeft: '10px' }}>  
 Decrement  
 </button>  
 <button onClick={reset} style={{ marginLeft: '10px' }}>  
 Reset  
 </button>  
 </div>  
 );  
};  
  
export default Counter;

## How It Works

1. Props (initialCount):  
 - The Counter component receives initialCount from the parent App component.  
 - This is passed as <Counter initialCount={5} />.  
  
2. State (count):  
 - The Counter component uses useState to manage the counter value (count).  
 - The state is updated with setCount.  
  
3. Interaction:  
 - Clicking the 'Increment' button increases the counter.  
 - Clicking the 'Decrement' button decreases the counter.  
 - Clicking the 'Reset' button resets the counter to the initial value passed as a prop.