

Title : Develop the Counter application using both Function and Class components in React.

Problem description:. Create a component Counter with A state variable count initialized to 0. Create Buttons to increment and decrement the count. Simulate fetching initial data for the Counter component using useEffect (functional component) or componentDidMount (class component). Extend the Counter component to Double the count value when a button is clicked. Reset the count to 0 using another button

Method: Initialize the counter variable to null. In function Component, initialize counter value to zero in useEffect() after 2 ms. using setTimeout() method. In Class component, use componentDidMount() to initialize the counter value to zero.

Step -1 : Create Application

```
npm create vite@latest counter-app
```

```
cd counter-app
```

```
npm install
```

```
code .
```

Step – 2 : Add the Code

App.jsx

```
import './App.css'
import Statemgt from './Statemgt'
import Statemgtclass from './Statemgtclass'

function App() {
  return (
    <div>
      <h1>Counter Application</h1>
      <h2>Using Functional Component</h2>
      <Statemgt />

      <h2>Using Class Component</h2>
      <Statemgtclass />
    </div>
  )
}

export default App;
```

Create src/Statemgt.jsx (Functional Component)

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

const Statemgt = () => {
  const [number, setNumber] = useState(0);
```

```

// Reset number after 10 seconds (10000 ms)
useEffect(() => {
  setTimeout(() => {
    setNumber(0);
  }, 10000);
}, []);

const increment = () => setNumber(number + 1);
const decrement = () => {
  if (number > 0) setNumber(number - 1);
};
const reset = () => setNumber(0);
const double = () => setNumber(number * 2);

return (
  <div>
    <h3>Number: { number } </h3>
    <button onClick={increment}>Increment</button>
    <button onClick={decrement}>Decrement</button>
    <button onClick={double}>Double</button>
    <button onClick={reset}>Reset</button>
  </div>
);
};

export default Statemgt;

```

Create src/Statemgtclass.jsx (Class Component)

```

import React, { Component } from 'react';

class Statemgtclass extends Component {
  state = { number: 0 };

  componentDidMount() {
    // Reset number after 10 seconds (10000 ms)
    this.timer = setTimeout(() => {
      this.setState({ number: 0 });
    }, 10000);
  }

  increment = () => this.setState({ number: this.state.number + 1 });
  decrement = () => {
    if (this.state.number > 0)
      this.setState({ number: this.state.number - 1 });
  }
}

```

```
    };  
    reset = () => this.setState({ number: 0 });  
    double = () => this.setState({ number: this.state.number * 2 });  
  
    render() {  
      return (  
        <div>  
          <h3>Number: {this.state.number}</h3>  
          <button onClick={this.increment}>Increment</button>  
          <button onClick={this.decrement}>Decrement</button>  
          <button onClick={this.double}>Double</button>  
          <button onClick={this.reset}>Reset</button>  
        </div>  
      );  
    }  
  }  
}  
  
export default Statemgtclass;
```

3. Run the Application

In terminal, run:

npm run dev

Output:

