

Programme	: <b>B.Tech.</b>	Semester	: <b>Winter24-25</b>
Course	: <b>BCSE203E: Web Programming Lab</b>	Slot	: <b>TE1/TE2</b>
Faculty	: <b>Dr. LM Jenila Livingston</b>	Marks	: <b>10</b>

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### Exercise-13

Code:

```
import React, { useState } from "react";
```

```
const HelloWithoutJSX = () => {
  return React.createElement("h1", null, "Hello, React!");
};
```

```
const HelloWithJSX = () => <h1>Hello, React!</h1>;
```

```
const HelloVariable = () => {
  const message = "Hello, React!";
  return <h1>{message}</h1>;
};
```

```
const FruitList = () => {
  const fruits = ["Apple", "Banana", "Cherry"];
  return (
    <ul>
      {fruits.map((fruit, index) => (
```

```
        <li key={index}>{fruit}</li>
      )}
    </ul>
  );
};
```

```
const StyledMessage = () => {
  const style = { color: "blue", fontSize: "20px" };
  return <p style={style}>This is a styled message.</p>;
};
```

```
const SumOfSquares = ({ num1, num2 }) => {
  return <p>Sum of squares: {num1 ** 2 + num2 ** 2}</p>;
};
```

```
const Greeting = ({ isMorning }) => {
  return <p>{isMorning ? "Good Morning" : "Good Evening"}</p>;
};
```

```
const CurrentDay = () => {
  const days = ["Sunday", "Monday", "Tuesday", "Wednesday", "Thursday", "Friday", "Saturday"];
  const today = new Date().getDay();
  return <p>Today is {days[today]}</p>;
};
```

```
const PrimeChecker = ({ number }) => {
  const isPrime = (num) => {
    if (num < 2) return false;
    for (let i = 2; i < num; i++) {
      if (num % i === 0) return false;
    }
  }
};
```

```

    return true;
  };
  return <p>{number} is {isPrime(number) ? "a Prime Number" : "not a Prime Number"}.</p>;
};

```

```

class TemperatureConverter extends React.Component {
  constructor(props) {
    super(props);
    this.state = { temp: "", converted: "" };
  }
  convertToFahrenheit = () => {
    this.setState({ converted: (this.state.temp * 9/5) + 32 + " °F" });
  };
  convertToCelsius = () => {
    this.setState({ converted: ((this.state.temp - 32) * 5/9) + " °C" });
  };
  render() {
    return (
      <div>
        <input type="number" onChange={(e) => this.setState({ temp: e.target.value })} />
        <button onClick={this.convertToFahrenheit}>To Fahrenheit</button>
        <button onClick={this.convertToCelsius}>To Celsius</button>
        <p>{this.state.converted}</p>
      </div>
    );
  }
}

```

```

const ReverseString = ({ text }) => {
  const reversed = text.split("").reverse().join("");
  return <p>Reversed: {reversed} ({text === reversed ? "Palindrome" : "Not a Palindrome"})</p>;
}

```

```
};
```

```
const RandomNumber = () => {  
  const [number, setNumber] = useState(null);  
  return (  
    <div>  
      <button onClick={() => setNumber(Math.floor(Math.random() * 100) + 1)}>Generate Random  
Number</button>  
      {number} && <p>Random Number: {number}</p>  
    </div>  
  );  
};
```

```
const LeapYearChecker = ({ year }) => {  
  const isLeap = (year % 4 === 0 && year % 100 !== 0) || (year % 400 === 0);  
  return <p>{year} is {isLeap ? "a Leap Year" : "not a Leap Year"}.</p>;  
};
```

```
class UserGreeting extends React.Component {  
  render() {  
    return <h1>Hello, {this.props.firstName} {this.props.lastName}!</h1>;  
  }  
}
```

```
const App = () => {  
  return (  
    <div>  
      <HelloWithoutJSX />  
      <HelloWithJSX />  
      <HelloVariable />  
      <FruitList />  
    </div>  
  );  
};
```

```
<StyledMessage />

<SumOfSquares num1={3} num2={4} />

<Greeting isMorning={true} />

<CurrentDay />

<PrimeChecker number={7} />

<TemperatureConverter />

<ReverseString text="React" />

<RandomNumber />

<LeapYearChecker year={2024} />

<UserGreeting firstName="Sara" lastName="Arora" />

</div>

);

};
```

export default App;

Output:

---

**Hello, React!**

**Hello, React!**

- Apple
- Banana
- Cherry

This is a styled message.

Sum of squares: 25

Good Morning

Today is Sunday.

7 is a Prime Number.

88 To Fahrenheit To Celsius

212 °F

Reversed: tcaeR (Not a Palindrome)

Generate Random Number

Random Number: 6

2024 is a Leap Year.

**Hello, Sara Arora!**