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23BCE5071

Web Programming

Assignment – 13

Q1.

(i)

```
import React from "react";

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

export default App;
```

(ii)

```
import React from "react";

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

```
export default App;
```

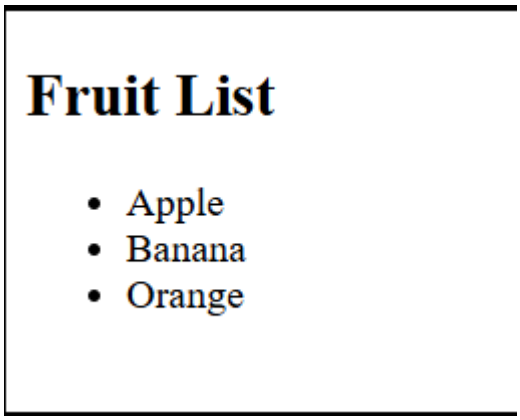
(iii)

```
import React from "react";

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

export default App;
```

Q2.

```
import React from "react";

const App = () => {
  const fruits = ["Apple", "Banana", "Orange"];

  return (
    <div>
      <h2>Fruit List</h2>
      <ul>
        {fruits.map((fruit, index) => (
          <li key={index}>{fruit}</li>
        ))}
```

```
      </ul>
    </div>
  );
};

export default App;
```

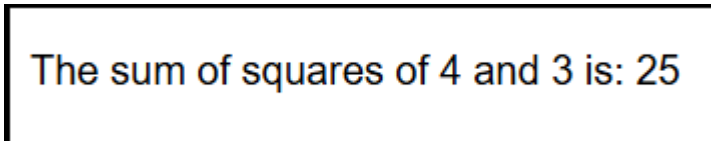


Q3.

```
import React from "react";

const App = () => {
  // Inline CSS styles as an object
  const messageStyle = {
    color: "white",
    backgroundColor: "green",
    padding: "10px",
    borderRadius: "5px",
    textAlign: "center",
    fontSize: "20px",
    fontWeight: "bold",
  };

  return <div style={messageStyle}>Hello, This is a Styled Message!</div>;
};

export default App;
```

Q4

```jsx
import React from "react";

const App = () => {
  const num1 = 4;
  const num2 = 3;

  const sumOfSquares = num1 ** 2 + num2 ** 2;

  return <p>The sum of squares of {num1} and {num2} is: {sumOfSquares}</p>;
};

export default App;
```



Q5

```jsx
import React from "react";

const App = () => {
  const isMorning = true;

  return <h1>{isMorning ? "Good Morning" : "Good Evening"}</h1>;
};

export default App;
```

Good Morning

Q6

```
import React from "react";

const App = () => {
  const daysOfWeek = ["Sunday", "Monday", "Tuesday", "Wednesday", "Thursday",
"Friday", "Saturday"];
  const today = new Date().getDay();

  return <h1>Today is {daysOfWeek[today]}.</h1>;
};

export default App;
```

Today is Sunday.

Q7

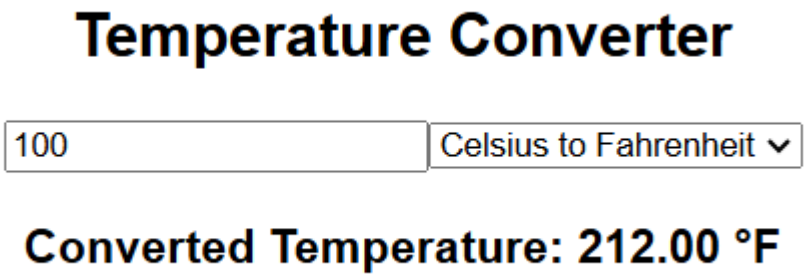
```
import React from "react";

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

const App = () => {
  const number = 17;
  const result = isPrime(number) ? "a Prime Number" : "not a Prime Number";

  return <h1>{number} is {result}.</h1>;
};

export default App;
```

17 is a Prime Number.

Q8

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

class TemperatureConverter extends Component {
  constructor(props) {
    super(props);
    this.state = {
      temperature: "",
      scale: "C", // Default scale is Celsius
    };
  }

  handleChange = (event) => {
    this.setState({ temperature: event.target.value });
  };

  handleScaleChange = (event) => {
    this.setState({ scale: event.target.value });
  };

  convertTemperature = () => {
    const { temperature, scale } = this.state;
    const temp = parseFloat(temperature);

    if (isNaN(temp)) return "";

    return scale === "C"
      ? ((temp * 9) / 5 + 32).toFixed(2) + " °F"
      : (((temp - 32) * 5) / 9).toFixed(2) + " °C";
  };

  render() {
    return (
      <div style={{ textAlign: "center", marginTop: "20px" }}>
        <h2>Temperature Converter</h2>
        <input
          type="number"
          placeholder="Enter temperature"
          value={this.state.temperature}
```

```
          onChange={this.handleChange}
        />
        <select value={this.state.scale} onChange={this.handleScaleChange}>
          <option value="C">Celsius to Fahrenheit</option>
          <option value="F">Fahrenheit to Celsius</option>
        </select>
        <h3>Converted Temperature: {this.convertTemperature()}</h3>
      </div>
    );
  }
}

export default TemperatureConverter;
```



Q9

```
import React from "react";

const App = () => {
  const inputString = "react";
  const reversedString = inputString.split("").reverse().join("");
  const isPalindrome = inputString.toLowerCase() ===
reversedString.toLowerCase();

  return (
    <div style={{ textAlign: "center", marginTop: "20px" }}>
      <h2>String Reversal & Palindrome Check</h2>
      <p>Original String: {inputString}</p>
      <p>Reversed String: {reversedString}</p>
      <p>{isPalindrome ? " It's a Palindrome!" : " Not a Palindrome."}</p>
    </div>
  );
};

export default App;
```

String Reversal & Palindrome Check

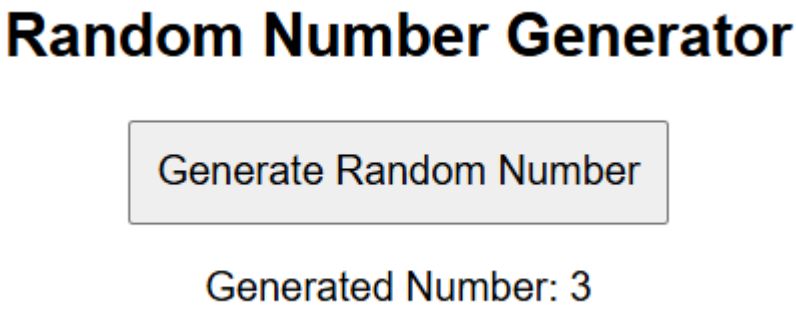
Original String: react

Reversed String: tcaer

Not a Palindrome.

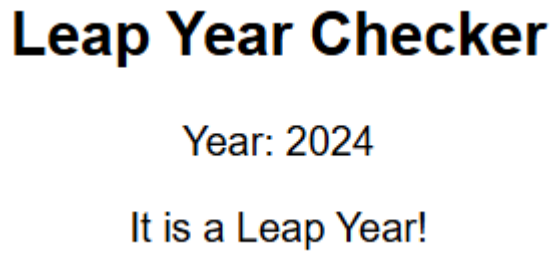
Q10

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

const App = () => {
  const [randomNumber, setRandomNumber] = useState(null);

  const generateRandomNumber = () => {
    const num = Math.floor(Math.random() * 100) + 1;
    setRandomNumber(num);
  };

  return (
    <div style={{ textAlign: "center", marginTop: "20px" }}>
      <h2>Random Number Generator</h2>
      <button onClick={generateRandomNumber} style={{ padding: "10px",
fontSize: "16px" }}>
        Generate Random Number
      </button>
      {randomNumber !== null && <p>Generated Number: {randomNumber}</p>}
    </div>
  );
};

export default App;
```



Q11

```
import React from "react";

const isLeapYear = (year) => {
  return (year % 4 === 0 && year % 100 !== 0) || year % 400 === 0;
};

const App = () => {
  const year = 2024;
  const result = isLeapYear(year) ? "It is a Leap Year!" : " Not a Leap
Year.";

  return (
    <div style={{ textAlign: "center", marginTop: "20px" }}>
      <h2>Leap Year Checker</h2>
      <p>Year: {year}</p>
      <p>{result}</p>
    </div>
  );
};

export default App;
```



Q12

```jsx
import React, { Component } from "react";

class UserGreeting extends Component {
  render() {
    const { firstName, lastName } = this.props;
    return (
      <div style={{ textAlign: "center", marginTop: "20px" }}>
        <h2>Hello, {firstName} {lastName}!</h2>
      </div>
    );
  }
}

const App = () => {
  return <UserGreeting firstName="Divyansh" lastName="Mishra" />;
};

export default App;
```