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**Web Programming Lab (BCSE203E)  
LAB – 13 JSX – Intro**

**1.**

**(i) Create a React component that displays "Hello, React!" inside an <h1> tag without**

**JSX.**

**(ii) Modify the above code and solve using React JSX**

**(iii) Modify the above component to display a message stored in a variable.**

**2. Create a component that renders a list of three fruits dynamically.**

**3. Create a component that displays a styled message using inline CSS in JSX.**

**4. Create a component that displays the sum of squares of two numbers inside a <p> tag.**

**5. Create a component that displays "Good Morning" if isMorning is true, otherwise**

**display**

**"Good Evening."**

**6. Create a React component that displays the current day of the week dynamically using**

**JavaScript's**

**7. Create a React component that checks whether a given number is prime and displays the**

**result.**

**8. Create a React class component called TemperatureConverter that allows the user to**

**convert a temperature from Celsius to Fahrenheit and Fahrenheit to Celsius.**

**9. Create a component that takes a string (e.g., "React") and displays its reverse ("tcaeR")**

**inside a <p> tag and display whether the string is palindrome or not**

**10. Create a button that, when clicked, generates and displays a random number between 1 and 100.**

**11. Check If a Year is a Leap Year: Take a year (e.g., 2024) as a variable and display**

**whether it is a leap year or not**

**12. Create a React class component named UserGreeting that takes two props: firstName and**

**lastName. Inside the render() method, display a greeting message with the full name of**

**the user in the following format:**

**"Hello, [First Name] [Last Name]!"**

**Code:**

***Q1\_1.jsx***

import React from "react";

const Q1\_1 = () => {

    return React.createElement("h1", null, "1.1) Hello, React!");

};

export default Q1\_1;

***Q1\_2.jsx***

import React from "react";

const Q1\_2 = () => {

    return <h1>1.2) Hello, React!</h1>;

};

export default Q1\_2;

***Q1\_3.jsx***

import React from "react";

const Q1\_3 = () => {

    const message = "1.3) Welcome to JSX!";

    return <h1>{message}</h1>;

};

export default Q1\_3;

***Q2.jsx***

import React from "react";

const Q2 = () => {

    const fruits = ["Apple", "Banana", "Orange"];

    return (

        <>

            <p>Q2</p>

            <ul>

                {fruits.map((fruit, index) => (

                    <li key={index}>{fruit}</li>

                ))}

            </ul>

        </>

    );

};

export default Q2;

***Q3.jsx***

import React from "react";

const Q3 = () => {

    const style = { color: "red", fontSize: "20px", fontWeight: "bold" };

    return <p style={style}>3) This is a styled message.</p>;

};

export default Q3;

***Q4.jsx***

import React from "react";

const Q4 = ({ a, b }) => {

    const sum = a \* a + b \* b;

    return <p>4) Sum of squares: {sum}</p>;

};

export default Q4;

***Q5.jsx***

import React from "react";

const Q5 = ({ isMorning }) => {

    return <h1>5) {isMorning ? "Good Morning" : "Good Evening"}</h1>;

};

export default Q5;

***Q6.jsx***

import React from "react";

const Q6 = () => {

    const days = [

        "Sunday",

        "Monday",

        "Tuesday",

        "Wednesday",

        "Thursday",

        "Friday",

        "Saturday",

    ];

    const today = new Date().getDay();

    return <h1>6) Today is {days[today]}</h1>;

};

export default Q6;

***Q7.jsx***

import React from "react";

const Q7 = ({ number }) => {

    const isPrime = (num) => {

        if (num < 2) return false;

        for (let i = 2; i <= Math.sqrt(num); i++) {

            if (num % i === 0) return false;

        }

        return true;

    };

    return (

        <p>

            7) &nbsp;

            {number} is{" "}

            {isPrime(number) ? "a prime number" : "not a prime number"}.

        </p>

    );

};

export default Q7;

***Q8.jsx***

import React, { Component } from "react";

class Q8 extends Component {

    constructor(props) {

        super(props);

        this.state = { celsius: "", fahrenheit: "" };

    }

    convertToCelsius = (f) => ((f - 32) \* 5) / 9;

    convertToFahrenheit = (c) => (c \* 9) / 5 + 32;

    handleCelsiusChange = (e) => {

        this.setState({

            celsius: e.target.value,

            fahrenheit: this.convertToFahrenheit(e.target.value),

        });

    };

    handleFahrenheitChange = (e) => {

        this.setState({

            fahrenheit: e.target.value,

            celsius: this.convertToCelsius(e.target.value),

        });

    };

    render() {

        return (

            <div>

                <p>8)</p>

                <input

                    type="number"

                    value={this.state.celsius}

                    onChange={this.handleCelsiusChange}

                    placeholder="Celsius"

                />

                <input

                    type="number"

                    value={this.state.fahrenheit}

                    onChange={this.handleFahrenheitChange}

                    placeholder="Fahrenheit"

                />

            </div>

        );

    }

}

export default Q8;

***Q9.jsx***

import React from "react";

const Q9 = ({ text }) => {

const reversed = text.split("").reverse().join("");

const isPalindrome = text.toLowerCase() === reversed.toLowerCase();

return (

<div>

<p>9) Reversed: {reversed}</p>

<p>

{isPalindrome ? "It is a palindrome" : "It is not a palindrome"}

</p>

</div>

);

};

export default Q9;

***Q10.jsx***

import React, { useState } from "react";

const Q10 = () => {

    const [number, setNumber] = useState(null);

    const generateNumber = () => {

        setNumber(Math.floor(Math.random() \* 100) + 1);

    };

    return (

        <div>

            <button onClick={generateNumber}>10) Generate Number</button>

            {number && <p>Random Number: {number}</p>}

        </div>

    );

};

export default Q10;

***Q11.jsx***

import React from "react";

const Q11 = ({ year }) => {

    const isLeapYear = (year % 4 === 0 && year % 100 !== 0) || year % 400 === 0;

    return (

        <p>

            11) {year} is {isLeapYear ? "a leap year" : "not a leap year"}.

        </p>

    );

};

export default Q11;

***Q12.jsx***

import React, { Component } from "react";

class Q12 extends Component {

    render() {

        const { firstName, lastName } = this.props;

        return (

            <h1>

                12) Hello, {firstName} {lastName}!

            </h1>

        );

    }

}

export default Q12;

***App.jsx***

import React from "react";

import Q1\_1 from "./solutions/Q1\_1";

import Q1\_2 from "./solutions/Q1\_2";

import Q1\_3 from "./solutions/Q1\_3";

import Q2 from "./solutions/Q2";

import Q3 from "./solutions/Q3";

import Q4 from "./solutions/Q4";

import Q5 from "./solutions/Q5";

import Q6 from "./solutions/Q6";

import Q7 from "./solutions/Q7";

import Q8 from "./solutions/Q8";

import Q9 from "./solutions/Q9";

import Q10 from "./solutions/Q10";

import Q11 from "./solutions/Q11";

import Q12 from "./solutions/Q12";

function App() {

    return (

        <div>

            <Q1\_1 />

            <Q1\_2 />

            <Q1\_3 />

            <Q2 />

            <Q3 />

            <Q4 a={3} b={4} />

            <Q5 isMorning={true} />

            <Q6 />

            <Q7 number={7} />

            <Q8 />

            <Q9 text="String" />

            <Q10 />

            <Q11 year={2024} />

            <Q12 firstName="Madhan" lastName="T B" />

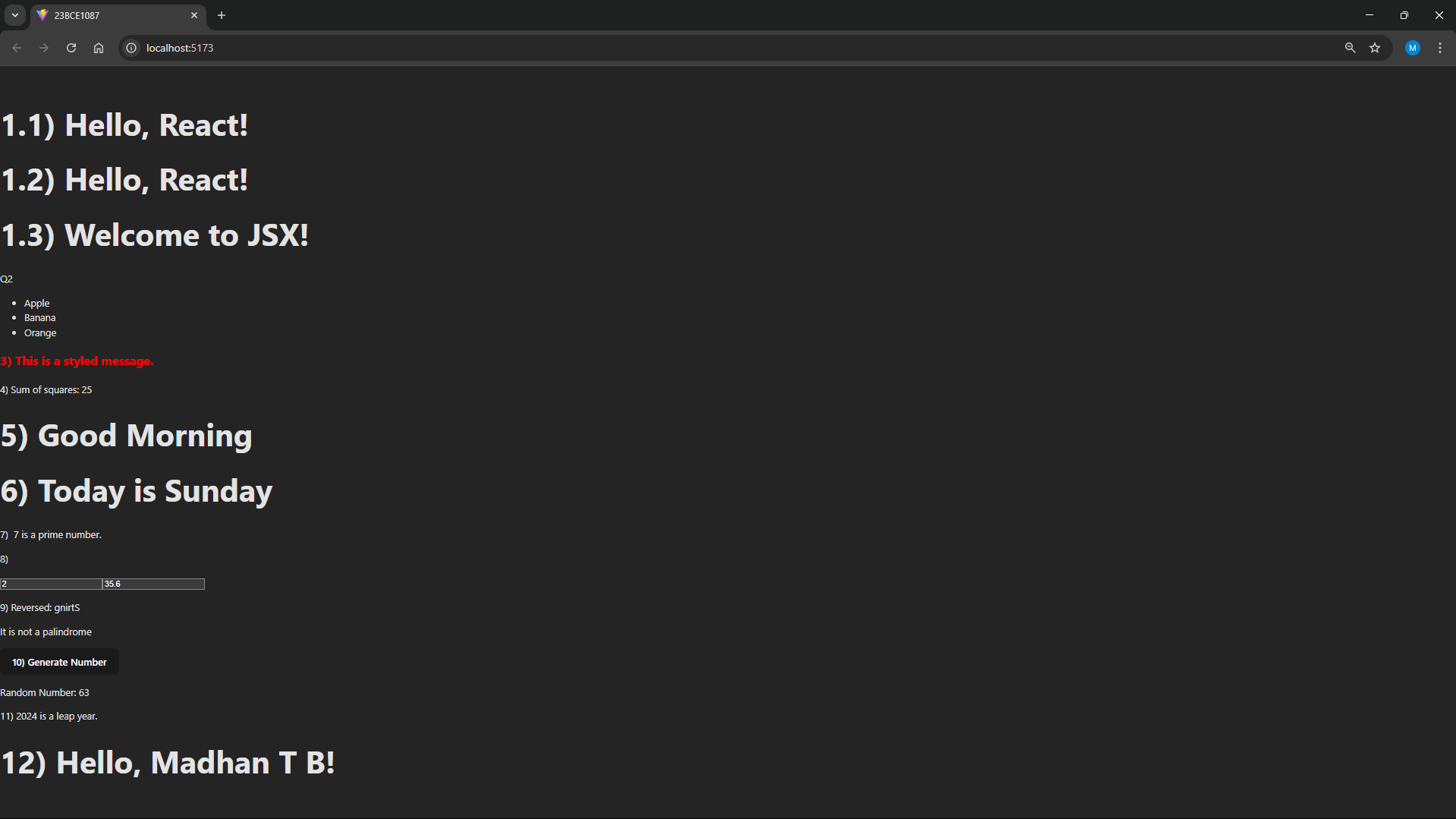
        </div>

    );

}

export default App;

**Output:**

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