Mark Split-Up

1. **Identify Components – 10 marks**

2. **Component Hierarchy Diagram – 10 marks**

3. **ES6, JSX, Functional Component – 10 marks**

4. **Use State – 20 marks**

5. **Props – 20 marks**

6. **React Routing – 10 marks**

7. **CSS and/or Bootstrap – 10 marks**
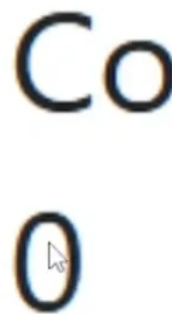
8. **Coding Progress and Process – 10 marks**

Algorithm

1. **Identify Components**

2. **Construct Component Hierarchy Diagram**

3. **Implement the Static Parts of the WebApp**

   a) **Implement a Component and a Necessary Prop**

   b) **Include it into the Main Application**

   c) **Test the Output**

   d) **Repeat (a) to (c)**

4. **Identify States and Implement States**

5. **Add Necessary CSS/ Bootstrap**

Identify Components

1. Header
2. Counter
3. Increment
4. Decrement
5. Reset

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Identify Components

Counter Application

- Header
- Counter Display
- Counter Container
  - Increment Button
  - Decrement Button
  - Reset Button

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Choose a web app or make a web app design (screenshots or rough sketches - hand-drawn or electronic form is fine) (20 marks).

Ensure your design is unique compared to your classmates (20 marks).

Identify the components and prepare a component hierarchy diagram (20 marks).

Implement and test component by component (20 marks).

Make sure to utilize JSX, Functional Components, Import and Export, ES6, Props, States, Routing, and CSS/Bootstrap concepts in your initial web app design (20 marks).

->twitter login page
->gmail login page

Steps

-> Open react app

(Tip: To test that you have Node.js and npm correctly installed on your machine, you can type `node --version` and `npm --version` in a terminal or command prompt.)

You can now create a new React application by typing:

```
npx create-react-app my-app

cd my-app
npm start
```
You should see the React logo and a link to "Learn React"

-> Install react-router-dom

```
npm i react-router-dom
```

->Create 'components' folder inside src
-> import React from 'react'
-> const Home = () => {

```
const Home = () => {

const containerStyle = {
    textAlign: 'center',
    padding: '20px',
    border: '2px solid #ddd', // Add border
    backgroundColor: '#f9f9f9', // Set your preferred background color
    borderRadius: '10px', // Add border radius for a smoother look
    margin: 'auto', // Center the container
    maxWidth: '800px', // Set maximum width for better readability};};
```

```
const footerStyle = {
        position: 'fixed',
        bottom: 0,
        width: '100%',
        backgroundColor: '#f9f9f9',
        padding: '5px 0', // Adjusted padding for a thinner footer
        left: 0,
        right: 0,
    };

 const headingStyle = {
        fontSize: '20px',
        color: '#333',
    };

    const textStyle = {
        fontSize: '16px',
        color: '#666',
    };
```

-> html part
```
 return (
        <div style={containerStyle}>
            <p style={{ fontSize: '16px', color: '#100' }}>Get the Latest
Weather Updates</p>

            <h2 style={headingStyle}>Featured Locations</h2>
            <a href="#">View All Locations</a>


            <h2 style={headingStyle}>WEATHER BLOG</h2>
            <p style={textStyle}>Understanding Weather Patterns and
Forecasts</p>
            <p style={textStyle}>
                Stay informed about the latest weather trends and how they
impact your daily life.
            </p>
```

```jsx
        <h2 style={headingStyle}>WEATHER ALERTS</h2>
        <p style={textStyle}>
            Receive Instant Alerts for Severe Weather Conditions and
Important Updates
        </p>
        <p style={textStyle}>
            Stay prepared for any weather emergencies with real-time
notifications.
        </p>

        {/* Footer */}
        <div style={footerStyle}>
            <p style={{ fontSize: '12px', color: '#777' }}>&copy; 2023
Weather and Co</p>
        </div>
      </div>
    );
};

export default Home;
```

-> Boxes (coloured)

```jsx
const Connect = () => {
  return (
    <div style={{ display: 'flex', flexDirection: 'column', alignItems:
'center', marginTop: '50px' }}>
      <h1 style={{ fontSize: '24px', marginBottom: '20px' }}>Connect with
Us</h1>
      <div style={{ display: 'flex', justifyContent: 'center', marginTop:
'20px' }}>
        <div style={{ width: '100px', height: '100px', backgroundColor:
'#405DE6', display: 'flex', justifyContent: 'center', alignItems:
'center', margin: '0 10px' }}>
          <span style={{ color: 'white', fontSize: '18px'
}}>Instagram</span>
        </div>
        <div style={{ width: '100px', height: '100px', backgroundColor:
'#3b5998', display: 'flex', justifyContent: 'center', alignItems:
'center', margin: '0 10px' }}>
```

```jsx
          <span style={{ color: 'white', fontSize: '18px'
}}>Facebook</span>
        </div>
        <div style={{ width: '100px', height: '100px', backgroundColor:
'#0e76a8', display: 'flex', justifyContent: 'center', alignItems:
'center', margin: '0 10px' }}>
          <span style={{ color: 'white', fontSize: '18px'
}}>LinkedIn</span>
        </div>
        <div style={{ width: '100px', height: '100px', backgroundColor:
'#ea4335', display: 'flex', justifyContent: 'center', alignItems:
'center', margin: '0 10px' }}>
          <span style={{ color: 'white', fontSize: '18px' }}>Gmail</span>
        </div>
      </div>
    </div>
  );
};

export default Connect;
```

-> Use state
```jsx
import React, { useState, useEffect } from 'react';

const WeatherComponent = ({ cityName }) => {
  const [weather, setWeather] = useState(0);

  useEffect(() => {
    const interval = setInterval(() => {
      setWeather(Math.floor(Math.random() * 100));
    }, 1000);

    return () => clearInterval(interval);
  }, []);

  return (
    <div style={{ textAlign: 'center', marginTop: '50px' }}>
      <h2>{cityName} Weather</h2>
      <h1 style={{ fontSize: '48px', margin: '20px' }}>{weather}</h1>
```

```jsx
        <h3>Can you predict the weather?</h3>
      </div>
    );
};

export default WeatherComponent;
```

Example 1: Rendering a simple heading in JSX:

jsx
Copy code
const heading = <h1>Hello, this is a JSX heading!</h1>;
Example 2: Creating a list of items using JSX:

jsx
Copy code
const items = (

    Item 1
    Item 2
    Item 3

);
Example 3: Using JSX within a React component:

jsx
Copy code
```jsx
import React from 'react';

const MyComponent = () => {
  return <div>This is a JSX component!</div>;
};
```
Example 4: Utilizing JSX to render a form with input fields:

jsx
Copy code
```jsx
const form = (
  <form>
    <label>
      Name:
      <input type="text" name="name" />
    </label>
    <br />
    <label>
      Email:
      <input type="email" name="email" />
    </label>
    <br />
    <button type="submit">Submit</button>
  </form>
);
```

Academic and Research	34
👤 Work	3

Academic and Research

∨ **Daily** 3

○ I must do

○ I must do but can do later

○ Delegate
   ☎ 1/1

+ Add task