**Exercise 3: Create a React project named “scorecalculatorapp”**

**1. React Components**

Components are reusable, independent blocks of UI in a React app, built using either classes or functions.

**2. Components vs JavaScript Functions**

| **Feature** | **React Component (Function)** | **JavaScript Function** |
| --- | --- | --- |
| Returns | JSX (UI markup) | Primitive/structured data |
| Used for | Building UI | Logic / computations |
| React Hooks | Can use (e.g., useState) | No React hooks support |

**3. Types of Components**

* **Class Components** (use render(), lifecycle methods)
* **Function Components** (modern, with Hooks)

**4. Class Component**

Uses ES6 class syntax with a render() method to return JSX.

**5. Function Component**

A JavaScript function that returns JSX. Preferred for most React code.

**6. Component Constructor**

Used in class components to initialize state:

js

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constructor(props) {

super(props);

this.state = { ... };

}

**7. render() Function**

Used only in **class components** to render JSX. Not required in function components.

**Hands-On Lab Steps**

**1. Create React Project**

In Visual Studio Code terminal:

bash

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npx create-react-app scorecalculatorapp

**2. Create Components Folder**

Go to src/ → Create folder Components/  
Add file: CalculateScore.js

**3. Code for CalculateScore.js**

**Path:** src/Components/CalculateScore.js

jsx

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import React from 'react';

import '../Stylesheets/mystyle.css';

const percentToDecimal = (decimal) => {

return (decimal \* 100).toFixed(2) + '%';

};

const calcScore = (total, goal) => {

return percentToDecimal(total / goal);

};

export const CalculateScore = ({ Name, School, total, goal }) => {

return (

<div className="formatstyle">

<h1><font color="Brown">Student Details:</font></h1>

<div className="Name">

<b><span> Name: </span></b>

<span>{Name}</span>

</div>

<div className="School">

<b><span> School: </span></b>

<span>{School}</span>

</div>

<div className="Total">

<b><span> Total: </span></b>

<span>{total}</span> <span>Marks</span>

</div>

<div className="Score">

<b><span> Score: </span></b>

<span>{calcScore(total, goal)}</span>

</div>

</div>

);

};

**4. Add Styling**

Create folder: src/Stylesheets/  
Add file: mystyle.css

**src/Stylesheets/mystyle.css:**

css

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.Name {

font-weight: 300;

color: blue;

}

.School {

font-weight: 300;

color: crimson;

}

.Total {

font-weight: 300;

color: darkmagenta;

}

.Score {

font-weight: 300;

color: forestgreen;

}

.formatstyle {

text-align: center;

font-size: large;

}

**5. Edit App.js**

**Replace content of src/App.js with:**

jsx

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import React from 'react';

import './App.css';

import { CalculateScore } from './Components/CalculateScore';

function App() {

return (

<div>

<CalculateScore

Name="Steeve"

School="DNV Public School"

total={284}

goal={300}

/>

</div>

);

}

export default App;

**6. Run the App**

**In terminal:**

**bash**

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**cd scorecalculatorapp**

**npm start**

**7. View Output**

**Open browser and visit:  
👉** [**http://localhost:3000**](http://localhost:3000)

