

Hands-on 3

Objectives

- Explain React components
- Identify the differences between components and JavaScript functions
- Identify the types of components
- Explain class component
- Explain function component
- Define component constructor
- Define render() function

In this hands-on lab, you will learn how to:

- Create a function component
- Apply style to components
- Render a component

Prerequisites

The following is required to complete this hands-on lab:

- Node.js
- NPM
- Visual Studio Code

Notes

Estimated time to complete this lab: **30 minutes**.

Create a react app for Student Management Portal named scorecalculatorapp and create a function component named “CalculateScore” which will accept Name, School, Total and goal in order to calculate the average score of a student and display the same.

1. Create a React project named “scorecalculatorapp” type the following command in terminal of Visual studio:

```
C:>npx create-react-app scorecalculatorapp
```

2. Create a new folder under Src folder with the name “Components”. Add a new file named “CalculateScore.js”
3. Type the following code in CalculateScore.js

```
import './Stylesheets/mystyle.css'

const percentToDecimal= (decimal) => {
  return (decimal.toFixed(2) + '%')
}

const calcScore = (total, goal) => {
  return percentToDecimal(total/goal)
}
```

```

export const CalculateScore = ({Name, School, total, goal}) => (
  <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>Score:</b>
      <span>
        {calcScore(
          total,
          goal
        )}
      </span>
    </div>
  </div>
)

```

4. Create a Folder named Stylesheets and add a file named "mystyle.css" in order to add some styles to the components:

```

.Name
{
  font-weight:300;
  color:blue;
}

.School
{
  color:crimson;
}

.Total
{
  color:darkmagenta;
}

.formatstyle
{
  text-align:center;
  font-size:large;
}

.Score
{
  color:forestgreen;
}

```

5. Edit the App.js to invoke the CalculateScore functional component as follows:

```
import {CalculateScore} from '../src/components/CalculateScore';

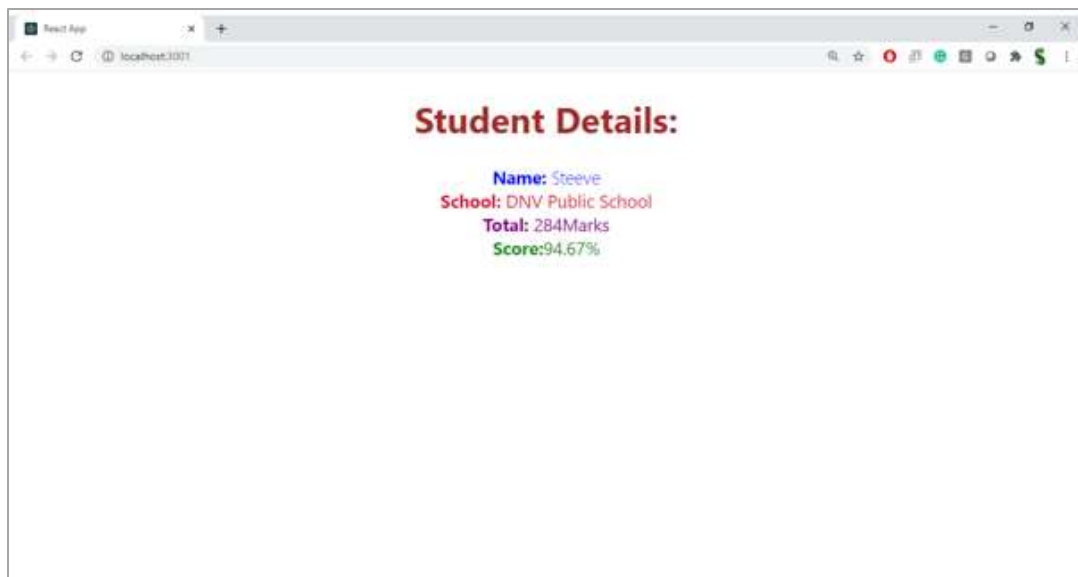
function App()
{
  return(
    <div>
      <CalculateScore Name={"Steeve"}
        School={"DNV Public School"}
        total={284}
        goal={3}
      />
    </div>
  )
}

export default App;
```

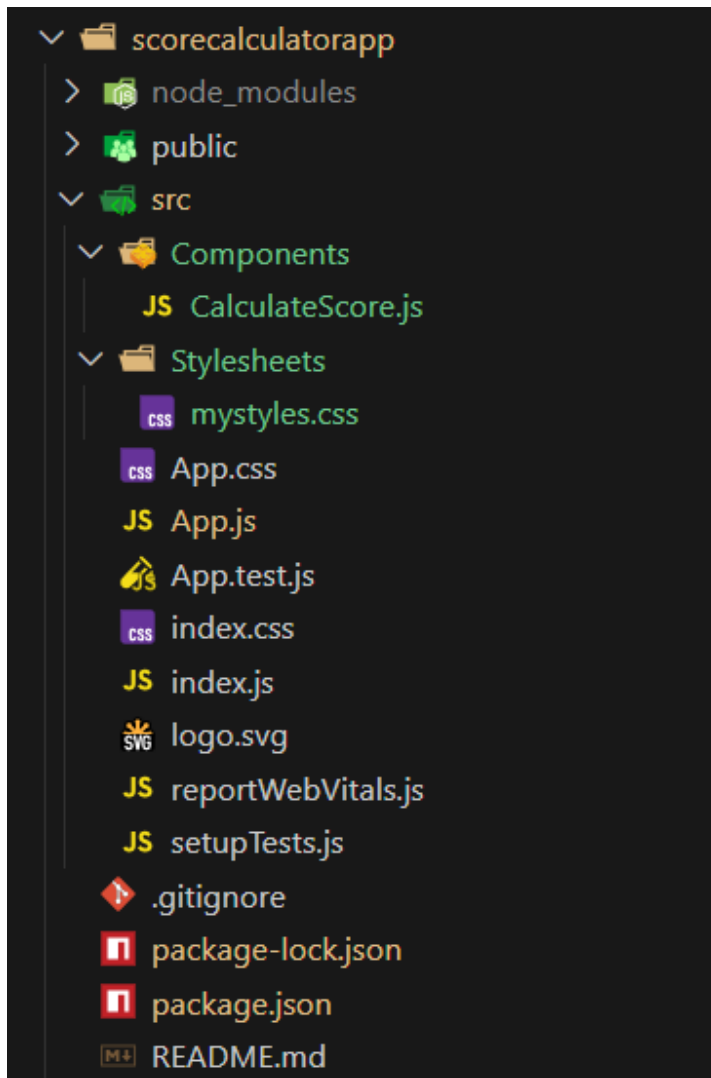
6. In command Prompt, navigate into scorecalculatorapp and execute the code by typing the following command:

```
C:\scorecalculatorapp>npm start
```

7. Open browser and type "localhost:3000" in the address bar:



Implementation



App.js

```
import logo from './logo.svg';
import './App.css';
import { CalculateScore } from './Components/CalculateScore';

function App() {
  return (
    <div className="App">
      <CalculateScore Name={"Steve"} school = {"DNV Public School"} total={284} goal={3}/>
    </div>
  );
}

export default App;
```

CalculateScore.js

```
import React from 'react';
import '../Stylesheets/mystyles.css';

const percentToDecimal = (decimal) => {
  return (decimal.toFixed(2) + '%')
}

const calcScore = (total, goal) => {
  return percentToDecimal(total/goal)
}

export const CalculateScore = ({ Name, School, total, goal }) => (
  <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>Score:</b>
      <span>{calcScore(total, goal)}</span>
    </div>
  </div>
);
```

mystyle.css

```
.formatstyle {
  text-align: center;
  font-size: large;
}

.Name {
  font-weight: 300;
  color: blue;
}
```

```
.School {  
  color: crimson;  
}
```

```
.Total {  
  color: darkmagenta;  
}
```

```
.Score {  
  color: forestgreen;  
}
```

Output:

