**WEEK-3 React JS-HOL 3**

**SUPERSET ID :6393676**

**OBJECTIVES**

**• Explain React components**

React components are reusable building blocks of a React application. They define how a part of the UI should appear and behave.

**• Identify the differences between components and JavaScript functions**

Components return JSX (UI elements), while regular JavaScript functions perform logic or computation. Components can manage state and lifecycle, functions cannot.

**• Identify the types of components**

Function components

Class components

• **Explain class component**

A class component is a JavaScript class that extends React. Component and includes a render() method to return JSX.

**• Explain function component**

A function component is a plain JavaScript function that returns JSX. It can use Hooks for state and side effects.

**• Define component constructor**

The constructor is a special method in class components used to initialize state and bind methods. It's called before the component mounts.

**• Define render() function**

The render() function is used in class components to return the JSX that defines the UI output of the component.

**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.**

**CalculateScore.js**

import React, { useState } from 'react';

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

function CalculateScore() {

  const [name, setName] = useState('');

  const [school, setSchool] = useState('');

  const [total, setTotal] = useState('');

  const [goal, setGoal] = useState('');

  const [average, setAverage] = useState(null);

  const handleCalculate = () => {

    if (total && goal) {

      const avg = (parseFloat(goal) / parseFloat(total)) \* 100;

      setAverage(avg.toFixed(2));

    } else {

      alert('Please enter valid total and goal');

    }

  };

  return (

    <div className="form-container">

      <h2>Student Score Calculator</h2>

      <div className="form-group">

        <label>Name:</label>

        <input type="text" value={name} placeholder="Enter name" onChange={(e) => setName(e.target.value)} />

      </div>

      <div className="form-group">

        <label>School:</label>

        <input type="text" value={school} placeholder="Enter school" onChange={(e) => setSchool(e.target.value)} />

      </div>

      <div className="form-group">

        <label>Total Marks:</label>

        <input type="number" value={total} placeholder="Enter total marks" onChange={(e) => setTotal(e.target.value)} />

      </div>

      <div className="form-group">

        <label>Goal Marks:</label>

        <input type="number" value={goal} placeholder="Enter goal marks" onChange={(e) => setGoal(e.target.value)} />

      </div>

      <button onClick={handleCalculate}>Calculate Average</button>

      {average !== null && (

        <div className="result">

          <p><strong>{name}</strong> from <strong>{school}</strong> has scored an average of <strong>{average}%</strong></p>

        </div>

      )}

    </div>

  );

}

export default CalculateScore;

**App.js**

import React from 'react';

import './App.css';

import CalculateScore from './Components/CalculateScore';

function App() {

  return (

    <div className="App">

      <CalculateScore />

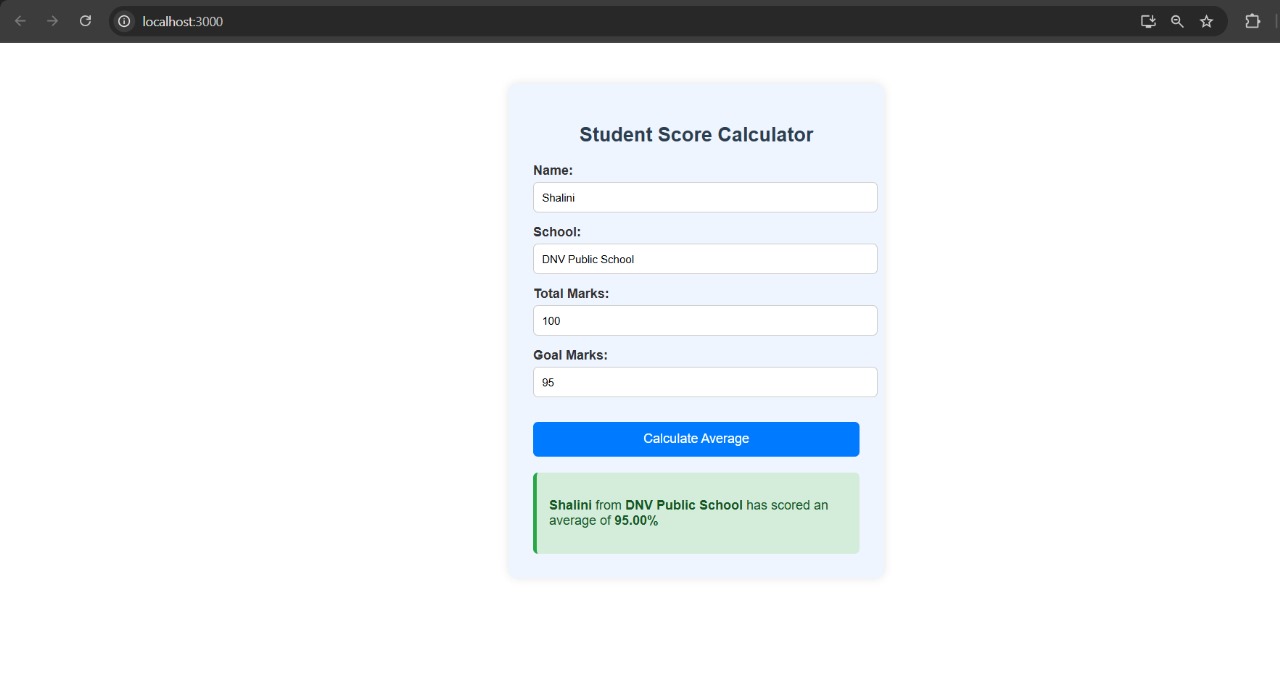
    </div>

  );

}

export default App;

**OUTPUT**

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