Name: Ilam Venkata Satwik
Super_Set_Id: 4992334
Email: 2200032398cseh@gmail.com

3. REACT – JS - HOL

1. Explain React Components

A React component is a reusable, independent piece of UI (User Interface).

- It can be compared to a JavaScript function that returns a JSX element (HTML-like syntax).
- Components can be combined together to build complex UIs.

2. Differences Between Components and JavaScript Functions

React Components	JavaScript Functions
Returns JSX (UI).	Returns values/data (number, string).
Follow React lifecycle.	No lifecycle.
Written with Capital Letters (e.g., Home).	Written with lowercase names (e.g., add).
Used as <Component /> in JSX.	Called as add() in code.
Can manage state and props.	No built-in state or props.

3. Types of Components

React provides two main types of components:

3. Class Components – Older style, uses render() method, can manage state and lifecycle.
4. Function Components – Modern style, uses functions and React Hooks like useState and useEffect.

4. Class Component

- A class component is a JavaScript class that extends React.Component.
- It must have a render() method which returns JSX.

5. Function Component

- A function that returns JSX.
- Easier to write and understand.
- Can use Hooks for state and lifecycle.

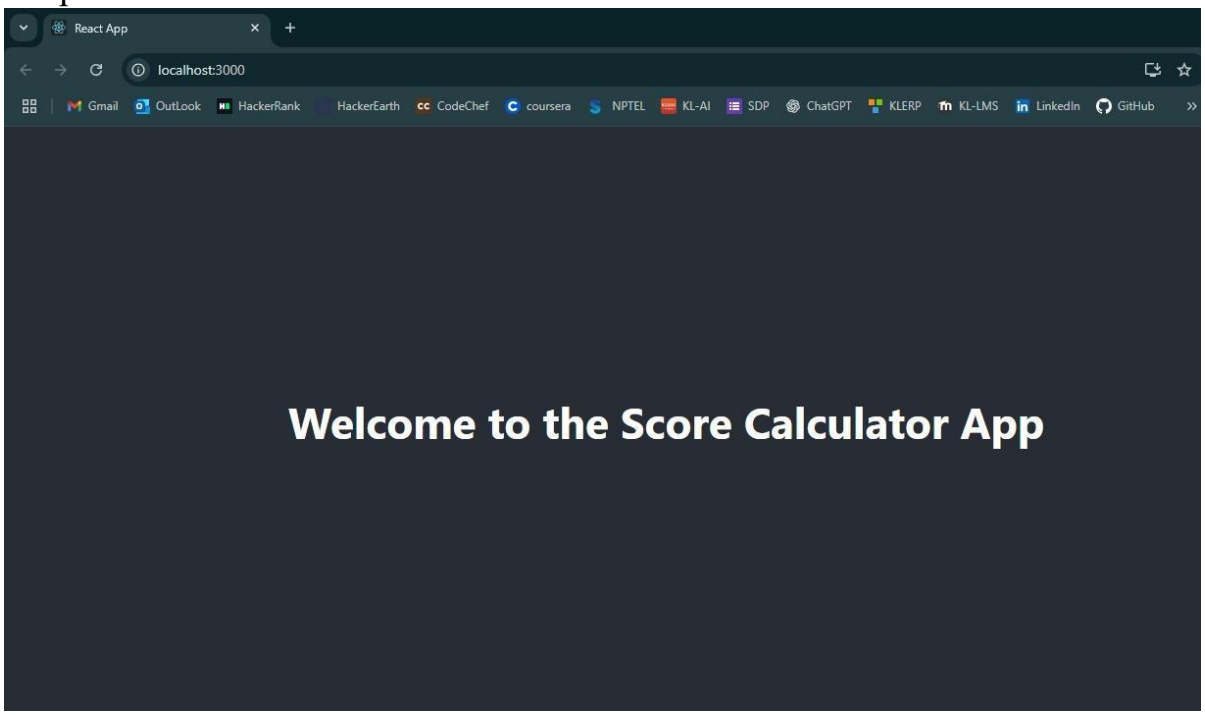
6. Component Constructor

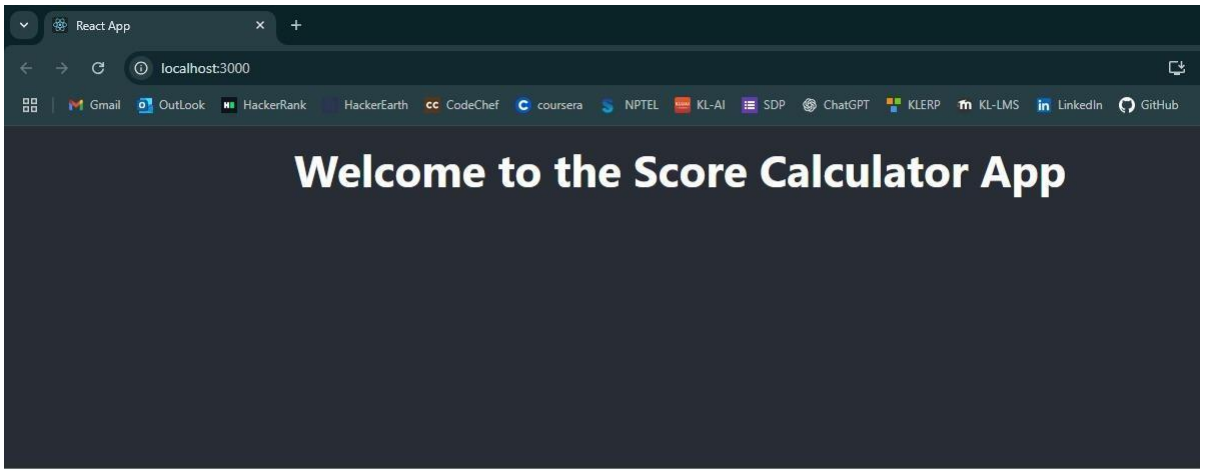
- In class components, constructor() is used to:
  - Initialize state.
  - Bind event handlers.
- constructor is called before the component is mounted.

7. render() Function

- A special method inside class components.
- Mandatory for class components.
- Returns the JSX (HTML-like structure) to display on the screen.

Output:





Student Score Details

Name: Harshitha Tunuguntla

School: KL University

Total Score: 450

Goal: 5

Average Score: 90

App.js:

```jsx
import React from 'react';
import './App.css';
import CalculateScore from './Components/CalculateScore'; //
import './Stylesheets/mystyle.css'; // Optional: Import custo

function App() {
  return (
    <div className="App">
      {/* Optional Header */}
      <header className="App-header">
        <h1>Welcome to the Score Calculator App</h1>
      </header>

      {/* Render the CalculateScore component with props */}
      <CalculateScore
        name="Harshitha Tunuguntla"
        school="KL University"
        total={450}
        goal={5}
      />
    </div>
  );
}

export default App;
```

Mystyle.css:

src > Stylesheets > # mystyle.css > p

```css
/* mystyle.css */
div {
  padding: 20px;
  margin: 10px;
  border: 1px solid #ccc;
  background-color: #f9f9f9;
}

h2 {
  color: #333;
}

p {
  font-size: 16px;
}
```

Calculatescore.js: