Week 6 : HANDSON 2 : REACT

1. Explain React components

React components are **building blocks** of any React app. They're **reusable**, **self-contained** pieces of UI logic that return JSX (HTML-like syntax).

React lets you build UIs by **breaking them into components**, like Lego blocks

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2. Identify the differences between components and JavaScript functions

React Component	JavaScript Function
Returns JSX (UI)	Returns data or executes logic
Used for building UI	Used for general programming logic
Can have lifecycle methods (in class)	No lifecycle methods
Can manage state (hooks or class)	No built-in state

So yeah, React components *look* like functions, but they're special functions that return **UI**, not just data.

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3. Identify the types of components

There are 2 main types:

1. **Class Components**
2. **Functional Components**

Both do the same job, but functional components are now the most popular due to **React Hooks**.

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4. Explain Class Component

Class components are ES6 classes that **extend React.Component** and have access to lifecycle methods like `componentDidMount()`.

```jsx
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import React, { Component } from 'react';

class Welcome extends Component {
  render() {
    return <h1>Hello, Class Component!</h1>;
  }
}
```

They used to be the only way to manage state, but now we prefer functional components with hooks.

5. Explain Function Component

Functional components are **JavaScript functions** that return JSX.

```jsx
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function Welcome() {
  return <h1>Hello, Function Component!</h1>;
}
```

They're simpler, cleaner, and with Hooks like `useState` and `useEffect`

6. Define Component Constructor

In a **class component**, the `constructor()` method is used to:

- Initialize state
- Bind methods to `this`

Example:

```jsx
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constructor(props) {
  super(props);
  this.state = { count: 0 };
}
```

7. Define render() function

In class components, the `render()` method is **required** and it defines **what will be displayed on the screen**.

```jsx
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render() {
  return (
    <div>Hello World</div>
  );
}
```

Every class component **must** have a `render()` method that returns JSX.

After fixing in the code , then run the **npm start** command to see the result