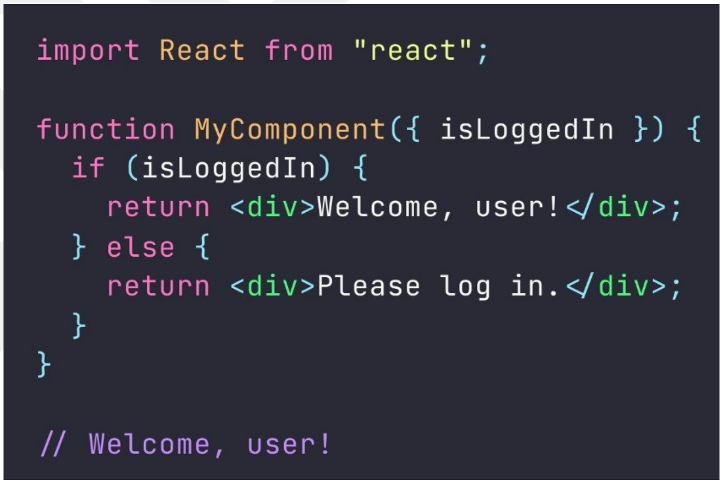
Conditional Rendering

- In React, conditional rendering is a **powerful technique** that allows you to display **different components or content** based on certain conditions.
- React provides **multiple ways** to achieve conditional rendering, depending on the complexity and requirements of your application.
    - **If-Else Statements**
    - **Ternary Operators**
    - **Logical && Operator**
    - **Conditional Render with**
    - **Components**

- **Using If-else Statements:**
    - You can use JS if-else statements inside the render() method of a component to conditionally render different content.



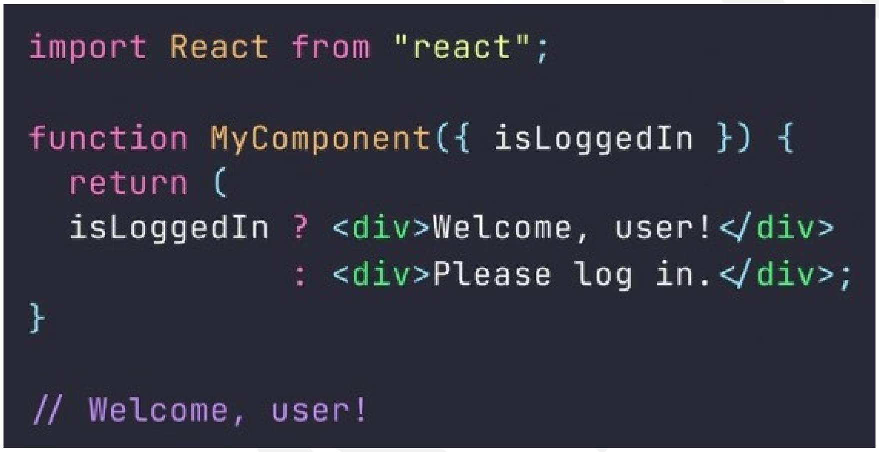
```
import React from "react";

function MyComponent({ isLoggedIn }) {
  if (isLoggedIn) {
    return <div>Welcome, user!</div>;
  } else {
    return <div>Please log in.</div>;
  }
}

// Welcome, user!
```

- **Note :**
  - In JSX (JavaScript XML), you cannot directly use statements such as if, for, or while within the curly braces ({ }) as you would in regular JavaScript.
  - This is because JSX is a syntax extension of JavaScript that aims to provide a declarative way of describing the structure and logic of UI components.

- **Using Ternary Operator:**
  - You can use the ternary operator (? :) inside curly braces { } to conditionally render content within JSX.

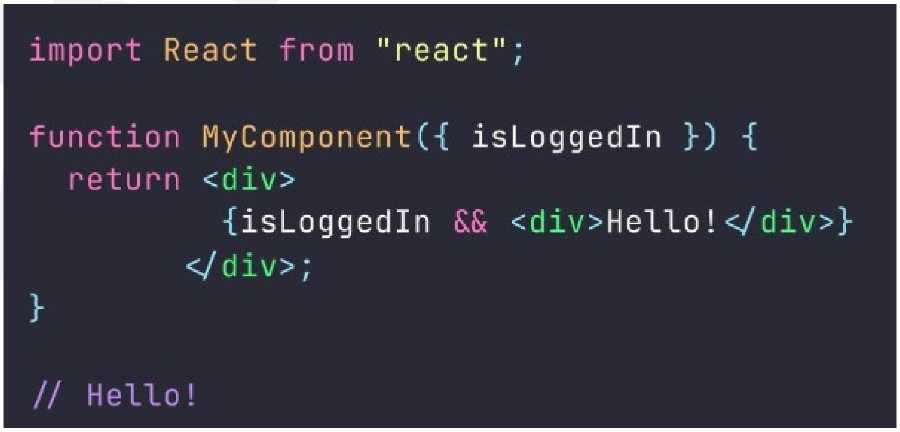


```
import React from "react";

function MyComponent({ isLoggedIn }) {
  return (
  isLoggedIn ? <div>Welcome, user!</div>
             : <div>Please log in.</div>;
}

// Welcome, user!
```

- **Using Logical && Operator:**
  - When the condition is true, the component is rendered; otherwise, it is skipped.
  - This is particularly useful when you want to render nothing or a default state when a condition is false.

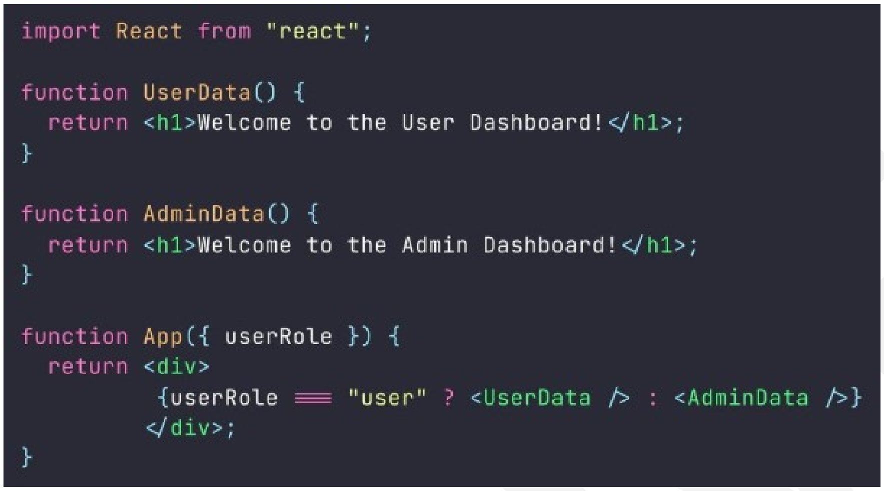


```
import React from "react";

function MyComponent({ isLoggedIn }) {
  return <div>
          {isLoggedIn && <div>Hello!</div>}
        </div>;
}

// Hello!
```

- **Conditional Rendering with Components:**
    - In more complex scenarios, you may want to render different components based on conditions.



```
import React from "react";

function UserData() {
  return <h1>Welcome to the User Dashboard!</h1>;
}

function AdminData() {
  return <h1>Welcome to the Admin Dashboard!</h1>;
}

function App({ userRole }) {
  return <div>
          {userRole === "user" ? <UserData /> : <AdminData />}
         </div>;
}
```

- ✓ These are just a few examples of conditional rendering in React.
- ✓ Depending on your requirements, you can combine these techniques, use switch statements, or leverage more advanced approaches such as rendering based on **state** or **iterating through arrays**.
- ✓ React's flexible nature allows for various conditional rendering approaches to suit different use cases.