• Question 3: Discuss the importance of using curly braces {} in JSX expressions.

In JSX, **curly braces {}** are used to embed **JavaScript expressions** within the JSX markup. The curly braces tell JSX to evaluate and insert JavaScript expressions into the output. Here's why they are important:

1. **Embedding JavaScript in JSX**: Curly braces are used to insert JavaScript expressions directly into JSX code. This allows you to dynamically render content based on variables, expressions, or function calls.

**Example**:

jsx

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const name = "React";

const element = <h1>Hello, {name}!</h1>;

In this example, {name} is a JavaScript expression that will be evaluated, and the value of name will be displayed in the h1 tag.

2. **Conditional Rendering**: Curly braces are essential for embedding conditional logic (like the ternary operator) or other JavaScript expressions, allowing you to render different content based on conditions.

   **Example**:

   const isLoggedIn = true;

   const greeting = <h1>{isLoggedIn ? "Welcome!" : "Please log in"}</h1>;

3. **Dynamic Content**: Using curly braces, you can dynamically update the content in your components based on the values of variables or the result of function calls.

   **Example**:

   const items = ["Apple", "Banana", "Cherry"];

   const list = (

    <ul>

      {items.map(item => <li key={item}>{item}</li>)}

    </ul>

   );

4. **Expression-Only Syntax**: Curly braces are used to limit the evaluation to expressions only. Statements like if or for are not allowed inside JSX, but can be handled outside JSX or using expressions like ternary operators or .map() for loops.