

Javascript Essentials And Advanced

Question 1: What is JSX in React.js? Why is it used?

Answer:

JSX (JavaScript XML) is a syntax extension for JavaScript used in React to describe the UI structure. It allows you to write HTML-like code inside JavaScript, which React then converts into `React.createElement` calls to render the UI.

Why is it used?

1. **Improved Readability:** Makes the code more readable and expressive.
 2. **Combines Logic and Markup:** Allows you to define UI and logic in one place.
 3. **Powerful Features:** Supports embedding JavaScript expressions and dynamic rendering.
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Question 2: How is JSX different from regular JavaScript? Can you write JavaScript inside JSX?

Answer:

- JSX is not regular JavaScript but a syntax extension that looks similar to HTML.
- It allows you to embed JavaScript expressions inside curly braces `{}`.
- Unlike regular JavaScript, JSX must follow specific rules:
 - JSX elements must have one parent element.
 - Attributes use camelCase (e.g., `className` instead of `class`).

Example of writing JavaScript inside JSX:

```
jsx
Copy code
const name = "Milan";
return <h1>Hello, {name}!</h1>;
```

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

Answer:

Curly braces `{}` in JSX are used to embed JavaScript expressions. They allow dynamic rendering of values, variables, and function calls inside JSX.

Examples of using curly braces:

1. **Variables:**

```
jsx
```

```
Copy code
const age = 20;
<p>Age: {age}</p>
```

2. Function Calls:

```
jsx
Copy code
<p>Random Number: {Math.random()}</p>
```

3. Conditional Rendering:

```
jsx
Copy code
<p>{isLoggedIn ? "Welcome back!" : "Please log in."}</p>
```

LAB EXERCISE

Task: React Component Rendering JSX Elements

Code Implementation:

```
jsx
Copy code
import React from "react";

const JSXExample = () => {
  const description = "JSX is a syntax extension for JavaScript that allows
you to write HTML-like code inside JavaScript. It makes building user
interfaces in React more intuitive and readable.";
  const dynamicValue = "React.js";

  return (
    <div>
      <h1>Welcome to JSX</h1>
      <p>{description}</p>
      <p>JSX is primarily used in {dynamicValue} for creating dynamic and
interactive UIs.</p>
    </div>
  );
};

export default JSXExample;
```