**1. Define JSX**

* JSX (JavaScript XML) is a syntax extension for JavaScript used in React.
* It allows writing HTML-like code inside JavaScript.
* JSX makes it easier to describe the UI structure.

const element = <h1>Hello, world!</h1>;

**2. Explain about ECMAScript**

* ECMAScript (often abbreviated as ES) is the standardized version of JavaScript.
* It is maintained by ECMA International.
* Versions like ES6, ES7, etc., introduce new features such as let, const, arrow functions, classes, modules, and promises.
* React apps commonly use ES6 and later versions for modern, efficient code.

**3. Explain React.createElement()**

* React.createElement() is a core React method used to create a virtual DOM element.
* JSX is syntactic sugar for React.createElement().

Example using React.createElement():

const element = React.createElement('h1', { className: 'greeting' }, 'Hello, world!');

Equivalent JSX:

**jsx**

const element = <h1 className="greeting">Hello, world!</h1>;

**4. How to Create React Nodes with JSX**

* React nodes can be created by writing JSX code.
* Each JSX tag creates a virtual DOM node.
* These nodes can be nested to form a component tree.

Example:

jsx

const app = (

<div>

<h1>Welcome</h1>

<p>This is a paragraph.</p>

</div>

);

**5. How to Render JSX to DOM**

* Use ReactDOM.render() to render JSX into a real DOM element.

jsx

const element = <h1>Hello, JSX!</h1>;

ReactDOM.render(element, document.getElementById('root'));

* ReactDOM.render() takes two arguments:
  1. What to render (JSX/React element)
  2. Where to render (DOM container)

**6. How to Use JavaScript Expressions in JSX**

* You can embed any JavaScript expression inside JSX using curly braces {}.

Example:

jsx

const name = "Gobika";

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

* Valid expressions include variables, function calls, math operations, etc.

**7. How to Use Inline CSS in JSX**

* Inline CSS in JSX is written as a JavaScript object.
* Properties use camelCase (e.g., backgroundColor instead of background-color).

Example:

jsx

const style = {

color: 'blue',

backgroundColor: 'lightgray',

padding: '10px'

};

const element = <h1 style={style}>Styled Text</h1>;

Or directly:

jsx

<h1 style={{ color: 'red', fontSize: '24px' }}>Inline Style</h1>

Bottom of Form