

# React Interview Questions

Class Components & Basic React (Interview Ready)

## Class Component Interview Questions

### 1. What is a class component in React?

A class component is a JavaScript class that extends `React.Component` and uses a `render()` method to return JSX. It supports state and lifecycle methods.

### 2. Explain lifecycle methods.

Mounting (`constructor`, `render`, `componentDidMount`), Updating (`shouldComponentUpdate`, `componentDidUpdate`), Unmounting (`componentWillUnmount`), and Error handling (`componentDidCatch`).

### 3. How does `setState` work and why is it asynchronous?

`setState` updates component state and triggers re-rendering. It is asynchronous because React batches updates for better performance.

### 4. What is `PureComponent`?

`PureComponent` performs a shallow comparison of props and state to prevent unnecessary re-renders, improving performance.

### 5. What are error boundaries?

Error boundaries catch JavaScript errors in child components using lifecycle methods like `componentDidCatch`. They require class components because hooks do not support them.

## Basic React Interview Questions

### 6. What is React?

React is a JavaScript library for building user interfaces using reusable components and efficient UI updates.

### 7. What is JSX?

JSX is a syntax extension that allows writing HTML-like code inside JavaScript, which is compiled to `React.createElement`.

### 8. Difference between props and state?

Props are immutable and passed from parent components, while state is mutable and managed within a component.

### 9. What is Virtual DOM?

The Virtual DOM is a lightweight copy of the real DOM. React updates only changed parts using diffing for better performance.

### 10. What is a component?

A component is a reusable UI building block. Main types are functional and class components.