**WEEK 6(Superset ID: 6361172)**

1. Explain the need and benefits of component lifecycle

The component lifecycle helps React manage a component’s creation, update, and removal from the UI.  
Benefits:

* You can run code at specific stages (e.g., after render or before removal)
* Helps in fetching data, cleaning up resources, and handling errors
* Makes your component more efficient and controlled

2. Identify various lifecycle hook methods

Lifecycle methods are functions that run during specific stages. In class components, the main ones are:

1. constructor() – Runs when the component is created
2. render() – Returns the UI (JSX)
3. componentDidMount() – Runs after the component appears on screen
4. componentDidUpdate() – Runs after component updates (re-render)
5. componentWillUnmount() – Runs before the component is removed
6. componentDidCatch() – Catches and handles errors in the component

3. List the sequence of steps in rendering a component

When a class component is rendered, this is the order:

1. constructor() – Initialize state and props
2. render() – Return JSX
3. componentDidMount() – Runs after the component is added to the DOM

When the component updates:

1. render()
2. componentDidUpdate()

When the component is removed:

1. componentWillUnmount()