**• Explain the need and benefits of component life cycle:**  
Every React component goes through different stages: it is created (mounted), updated, and finally removed (unmounted).  
The **Component Life Cycle** helps us to **run some code at specific points** during these stages.

**Why:**

**->**You can fetch data when the component loads

->You can clean up resources when it is removed

->You can update the UI or trigger functions when the data changes

**Benefits:**

->Better control of what happens and when

->Improves performance and efficiency

->Makes debugging and maintenance easier

**• Identify various life cycle hook methods:**

React provides different methods (called "hooks" or "life cycle methods") depending on the component type:

**For Class Components:**

* constructor() – Runs first, used to set initial state
* componentDidMount() – Runs after the component is added to the page
* componentDidUpdate() – Runs after the component is updated
* componentWillUnmount() – Runs just before the component is removed

**• List the sequence of steps in rendering a component:**

Here is the order of steps when a component is rendered (using class components here):

1. constructor() – Component is created
2. render() – JSX is returned and UI is shown
3. componentDidMount() – Component is fully loaded on screen

Later if the component gets updated:

1. componentDidUpdate() – Called after re-render due to state/prop change

Finally, when the component is removed:

1. componentWillUnmount() – Used to clean up before component disappears