**List and Hooks**

1. **Explain Life cycle in Class Component and functional component with Hooks?**

**Class Component Lifecycle:**

**1. Mounting Phase**:

- constructor (): The component is initialized, and state can be set.

- ComponentWillMount (): Deprecated. Avoid using it.

- render() : The component UI is rendered.

- componentDidMount (): Called after the component is rendered into the DOM. You can perform tasks like data fetching here.

**2. Updating Phase:**

- shouldComponentUpdate(): Determines if the component should re-render.

- componentWillUpdate(): Deprecated. Avoid using it.

- render(): Re-renders the component.

- componentDidUpdate(): Called after a re-render, often used for side effects like updating the DOM or making network requests.

**3. Unmounting Phase:**

- componentWillUnmount(): Called just before the component is removed from the DOM. Cleanup tasks should be performed here.

**Functional Component with Hooks:**

**1. Mounting Phase:**

- useState(): Used to manage state.

- useEffect(() => {}, []): Replaces `componentDidMount` and `componentDidUpdate`. It's used for side effects and data fetching.

**2. Updating Phase:**

- useState(): Continues to manage state.

- useEffect(() => {}): Runs after every render. You can conditionally run effects by specifying dependencies as the second argument.

**3. Unmounting Phase:**

- useEffect(() => { return () => {} }, [])`: This is used for cleanup, similar to `componentWillUnmount`.