

Day-10 What is the React component lifecycle?

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In React, components go through a lifecycle of events:

1. Initialization (component is constructed with the given Props and default state)
2. Mounting (adding nodes to the DOM)
3. Updating (altering existing nodes in the DOM)
4. Unmounting (removing nodes from the DOM)

Initialization:

In this phase, the developer has to define the props and initial state of the component this is generally done in the constructor of the component. The following code snippet describes the initialization process.

```
class Clock extends React.Component {
  constructor(props)
  {
    // Calling the constructor of
    // Parent Class React.Component
    super(props);

    // Setting the initial state
    this.state = { date : new Date() };
  }
}
```

the first method invoked before the component is mounted to the DOM.

Mounting:

when the initialization of the component is completed and the component is mounted on the DOM and rendered for the first time on the webpage.

- i. `getDerivedStateFromProps()`: method is called right before rendering the element(s) in the DOM
- ii. `render()`:
- iii. `componentDidMount()`: method is called after the component is rendered.

Updating

The next phase in the lifecycle is when a component is *updated*.

A component is updated whenever there is a change in the component's **state** or **props**.

1. `getDerivedStateFromProps()`
2. `shouldComponentUpdate()`: return a Boolean value that specifies whether React should continue with the rendering or not.
3. `render()`: called when a component gets *updated*, it has to re-render the HTML to the DOM, with the new changes.
4. `getSnapshotBeforeUpdate()`: method you have access to the **props** and **state** before the update,
5. `componentDidUpdate()`: called after the component is updated in the DOM.

Unmounting

React has only one built-in method that gets called when a component is unmounted:

- `componentWillUnmount()`: called when the component is about to be removed from the DOM

