Date : 03 - 07 - 2020
Morning Session : 9 am – 11.00 PM
By ~ Sundeep Charan Ramkumar Today
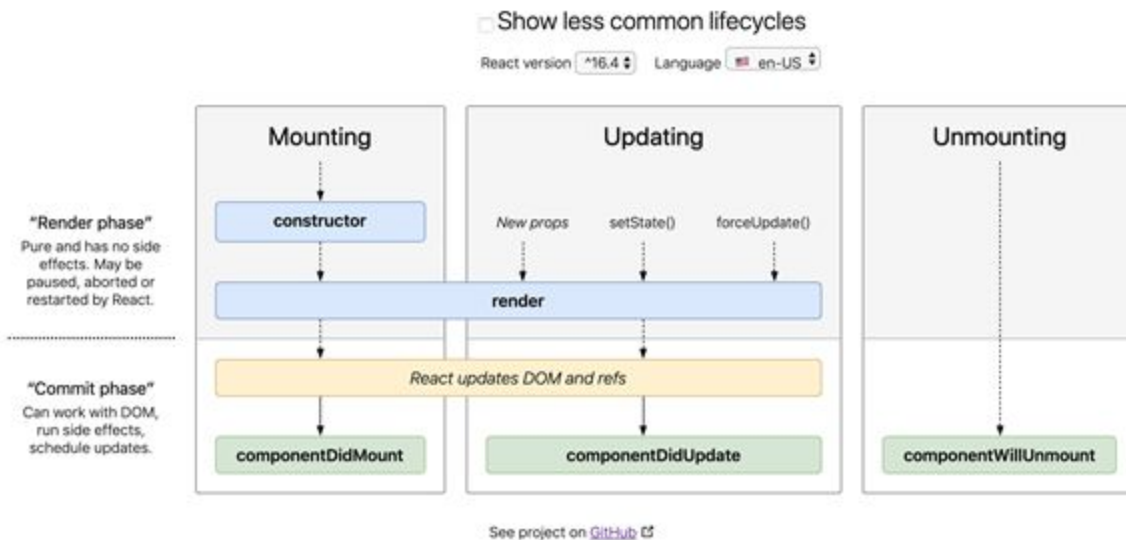
Topics: React Day 5 (Lifecycle Methods)

React Lifecycle:

What are Lifecycle Methods,in general?
- Everything has a lifespan, that applies for components of React too.
- Play special attention to will and did in Lifecycle methods
-

Lifecycles methods in React

- Each component in React has a lifecycle which you can monitor and manipulate during its three main phases.
- The three phases are: Mounting, Updating, and Unmounting.
- Can be accessed in Class based Components

In simple words,Each component has several "Lifecycle Methods" that we can override to run code at particular times in the process

- React provides the developers a set of predefined functions that if present is invoked around specific events in the lifetime of the component.
- Developers are supposed to override the functions with desired logic to execute accordingly.

    https://reactjs.org/docs/react-component.html

    https://www.w3schools.com/react/react_lifecycle.asp

```
28    1. constructor
29    * componentWillMount - Deprecated
30    2. render
31    3. componentDidMount
32    componentWillUnmount
33    getDerivedStateFromProps
34    componentShouldUpdate
35    componentWillUpdate - Deprecated
36    componentDidUpdate - Deprecated
37
38    Mounting phase
39    1. constructor
40    * componentWillMount - Deprecated
41    2. render
42    3. componentDidMount
43
44    Updating phase
45    shouldComponentUpdate
46    1. componentWillUpdate - Deprecated
47    2. render
48    3. componentDidUpdate
49
50    Unmounting phase
51    componentWillUnmount
52
```

https://www.robinwieruch.de/react-lift-state/

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.

Mounting:

Mounting is the phase of the component lifecycle when the initialization of the component is completed and the component is mounted on the DOM and rendered for the first time in the webpage. Now React follows a default procedure in the Naming Conventions of this predefined functions where the functions containing "Will" represents before some specific phase and "Did" represents after the completion of that phase. Mounting phase consists of two such predefined functions as described below.

- **componentWillMount() Function:** As the name clearly suggests, this function is invoked right before the component is mounted on the DOM i.e. this function gets invoked once before the render() function is executed for the first time.

- **componentDidMount() Function:** Similarly as the previous one this function is invoked right after the component is mounted on the DOM i.e. this function gets invoked once after the render() function is executed for the first time.

Updation:

React is a JS library that helps create Active web pages easily. Now active web pages are specific pages that behave according to its user. For example, let's take a webpage, the webpage acts differently with each user. User A might write some code in C in the Light Theme while another User may write a Python code in the Dark Theme all at the same time. This dynamic behavior that partially depends upon the user itself makes the webpage an Active web page.

Now how can this be related to Updation? Updation is the phase where the states and props of a component are updated followed by some user events such as clicking, pressing a key on keyboard etc. The following are the descriptions of functions that are invoked at different points of the Updation phase.

Unmounting:

This is the final phase of the lifecycle of the component that is the phase of unmounting the component from the DOM. The following function is the sole member of this phase.

- **componentWillUnmount() Function: This function is invoked before the component is finally unmounted from the DOM i.e. this function gets invoked once before the component is removed from the page and this denotes the end of the life cycle.**

In simple words:

- **Initialization:** This is the stage where the component is constructed with the given Props and default state. This is done in the constructor of a Component Class.
- **Mounting:** Mounting is the stage of rendering the JSX returned by the render method itself.
- **Updating:** Updating is the stage when the state of a component is updated and the application is repainted.
- **Unmounting:** As the name suggests Unmounting is the final step of the component lifecycle where the component is removed from the page.

componentDidUpdate is called before render method. True or False?

Attempted - 43 (86%) EASY ∧

☐ True	39.53%
☑ False	60.47%

Which class should be extended to make sure re-renders are avoided unnecessarily ?

Attempted - 43 (86%)   EASY   ∧

☐ Component	13.95%
☑ PureComponent	86.05%

Which lifecycle method is useful for fetching API?

Attempted - 42 (84%)   EASY   ∧

☐ componentWillMount	14.29%
☑ componentDidMount	76.19%
☐ componentWillUnmount	11.9%

Resources :

https://www.tutorialspoint.com/lifting-state-up-in-react-js

https://reactjs.org/docs/state-and-lifecycle.html

https://reactjs.org/docs/react-component.html

https://www.tutorialspoint.com/lifting-state-up-in-react-js

Codes:

https://github.com/sundeep-charan/Ramanujan-code-files/tree/master/JavaScript/React