**Virtual DOM & Fiber**

* React Virtual DOM-
* It is the light copy of DOM that React uses to update the UI more efficiently.
* Real DOM is like a tree of objects that represents the webpage structure. But it get slow down when it needs to update many elements.
* Virtual DOM creates the virtual copy of the DOM in memory. Whenever the changes occur it first changes the virtual DOM.
* React compare the old and new virtual DOM and calculates the smallest number of changes required. It then updates only the changed part in the Real DOM instead of re-rendering the entire page.
* This process is much faster.
* This process is known as Diffing.
* React Fiber-
* It improves the way to update the UI in React.
* It makes the updates smoother and more efficient.
* When React updates the UI, some updates take a long time and then the fiber breaks these tasks into smaller pieces and allows the react to pause and resume work, gives priority to more important updates.
* Fiber ensures that the UI stays responsive, during the complex tasks. It decides which task to focus on first and make the UI updates smoother.