# JSX

JSX is a system used for embedding XML in JavaScript. You can say that JSX is a templating language for writing HTML/XML tags with Javascript.

With the help of JSX, HTML/XML can be written inside Javascript file. JSX enables conditional rendering of React components. React includes building step which converts JSX into Javascript code which is ultimately executed by browser in case of a web app or react Native in case of React Native.

# Virtual DOM vs Real DOM

<https://www.youtube.com/watch?v=RquK3TImY9U>

the simplest answer to "

# Why I can’t directly modify the state of a component?

Why can't I directly modify a component's state:

is all about **Updating phase.**

when we update the state of a component all its children are going to be rendered as well. or our entire component tree rendered.

but when I say our entire component tree is rendered that doesn’t mean that the entire DOM is updated. when a component is rendered we basically get a react element, so that is updating our virtual dom.

React will then look at the virtual DOM, it also has a copy of the old virtual DOM, **that is why we shouldn’t update the state directly**, so we can have two different object references in memory, we have the old virtual DOM as well as the new virtual DOM.

then react will figure out what is changed and based on that it will update the real DOM accordingly.