Q is JSX is mandatory in React Js?

Ans:-

* No it’s not , cause React has it’s own feature to write element in html. So anything you want to do with JSX , it can also be done by plan javascript.
* JSX is just the light html syntax. Which used to call React.createElement(“element”,{},”data”).
* But using react without JSX make code unreadable and create complexity.

Q is ES6 is mandatory for React js ?

Ans:-

* To use react without ES6, we need to install node module create-react-class.
* Hence it is not mandatory, cause react use this module to create class and make component.
* But using react without ES6 make code unreadable and create complexity.

Q what is virtual DOM ?

Ans:-

* Virtual DOM is just the concept that way we keep the lightweight-in-memory representation of the actual DOM (with us) in our code.
* Because of reconciliation in react we need this virtual DOM. It is used to improve the performance of updates and changes to the
* actual DOM by reducing the number of expensive DOM Manipulations.

Q how does virtual DOM works?

Ans:-

* It work by comparing the current virtual tree with the new tree and then apply the minimal set of changes to the actual DOM.
* This process is knows as reconciliation which uses the diff algorithm of comparing existing tree to new tree and updated only the specific part insisted the whole tree.

Q what is Reconciliation in React?

Ans:-

* **The algorithm react uses to diff one tree with another to determine which parts need to be changed.**
* **Update: , a change in the data used to render a React App. Usually the result of “setState”.**
* Reconciliation is the algorithm behind what is popularly understood as the "virtual DOM."
* It is the process that React uses to determine the minimal set of changes to be made to the actual DOM.
* It compare the existing virtual DOM tree with a new virtual DOM tree, and then applies the minimal set of changes to the actual DOM.

Q what is Diff algorithms ?

Ans:-

* React compares the virtual copy of✨ Real DOM to an updated Copy of Virtual DOM, compares or picks out the changes, and finally renders it to real Dom.
* This process is called Diffing and the algorithm used is called Diffing Algorithm.

Q How Reconciliation work?

Ans:-

* When a component(node) state or props changes, React decides whether it should render the changes or Real DOM or not.
* So, if the states/props of two nodes/components are not the same, then it renders the changes to real DOM.
* This process is called Reconciliation.
* Reconciliation is dependent on:-
* Virtual DOM
* Diffing algorithm
* And hence React is fast.

Q why we use key in React ? and where do we need to use key in react?

Ans:-

* The purpose of key in react is to differentiate or distinguish between elements from each other( add/delete/edit/create).
* This will increase the performance of react when diffing between the virtual and real dom.
* To use key , simply added key whenever we render an array of react element, each one must have a unique key prop.

Q can we use index as keys in React?

Ans:-

* Its not recommended to use index as key in react , cause it could impact performance negatively and could lead to some unstable component behaviour.
* No key <<index as key <<<< unique key ( order of choice).

Q what is react fiber?

Ans:-

* Fiber is the new reconciliation engine in React 16. Its main goal is to enable incremental rendering of the virtual DOM.
* React Fiber Tree is a low-level implementation detail that helps React manage the order and priority of updates to the Virtual DOM.
* Goal or react fiber:-
* Fiber focuses on animations and responsiveness.
* It has the ability to split work into chunks and prioritize tasks.
* We can pause work and come back to it later.
* We can also reuse previously completed work or maybe abort it if it is not needed.
* As opposed to the old React reconciler, it is asynchronous.

Q what is props in React ?

Ans:-

* In React js , the props, is type of object where the value of attributes of tag is stored.
* The word props implies properties.
* It is is to store data that can be accessed by the children of react component.
* They are like parameter we pass in child component and when we invoke child component while passing attribute with value, then we can access the data/value from this props, when It invoke.
* Props are read only and are immutable. Where state is change asynchronously and is mutable.

Q what is Configuration driven UI ?

Ans:-

* It is the layout, style and other properties of UI elements are defined in a configuration file or database, which can be easily modified without requiring changes to the code base.