

### **1. What is useState?**

- useState is a react hook that allows you to add a state variable (a variable storing data and can change overtime) to a functional component. It is used by passing an initial value to the useState and an array containing two elements, which are the state variable with the current value and the function that updates the state variable. When the state variable changes, React will render the components to reflect the changes.

### **2. What is props drilling and state lifting?**

- Props drilling refers to the process of passing data from parent component to deeply nested child component through multiple intermediate child components.
- State lifting refers to the process of passing data from a child component to a common ancestor component in order to share that state across multiple child components.

### **3. What is the 'key' attribute?**

- Key attribute is a special attribute that helps to identify which element has changed, added, or removed in a list of elements. It helps for rendering optimization because it allows React to only render the changed element instead of the entire list.

### **4. What is a synthetic event in React?**

- Synthetic event are wrapper around the browser's native event, it has the same methods as the browser native event, such as 'event.stopPropagation()' and 'event.preventDefault()', and same properties such as 'target', 'type', however, synthetic event work identically across all browsers.

### **5. What is virtual dom in React?**

- Virtual dom is a representation of the real dom. It is saved in memory which is synced with real dom. Virtual dom generates a new version of virtual dom when changes are detected and compares it with the previous virtual dom using a diffing algorithm, and updates the real dom, where changes happen only, then it removes the previous version of the virtual dom.