

## 1). Write a brief about the differences between props and state? When do we use each?

### State:

A state must be kept as simple as possible . It represents the component's local state or information . It can only be accessed or modified inside the component or by the component directly. The state is an updatable structure that is used to contain data or information about the component and can change over time . The change in state can happen as response to user action or system event . It is the heart of the react component which determines the behaviour of the component and how it will render. State is mutable. State changes can be asynchronous. State holds information about the components. State cannot be accessed by child components. State can be used for rendering dynamic changes with component. Stateless components cannot have state. State cannot make components reusable. The state is internal and controlled by the React component itself.

### Props:

Props or properties are read-only components. It is an object which stores the value of attributes of tag and work similar to the HTML attributes . It allows passing data from one component to other components . It is similar to function arguments and can be passed to the component the same way as arguments passed in a function. Props are immutable so we cannot modify the props from inside the component. Props are read only . Props are immutable. Props allow you to pass data from one component to other components as an argument. Props are used to communicate between components . Stateless components can have props. Props make components reusable. Props are external and controlled by whatever renders the component.

State and props both are plain JS object.

State and props both can contain default values.

State and props both are read only when they are using by this.

The main difference between state and props is that props are immutable. This is why the container component should define the state that can be updated and changed , while the child components should only pass data from the state using props.

When we need immutable data in our component, we can just add props to `ReactDOM.render()` function in `main.js` and use it in our component. You can also set default property values directly on the component constructor instead of adding it to the `ReactDOM.render()` element.

However, after the introduction of React Hooks, state can now be used both in class and functional components. If your project is not using React Hooks , then you can only use state in class components.

## **2.) What are the limitations of props.?**

The prop is used to pass in an initial value; the child component wants to use it as a local data property afterwards.

The prop is passed in as a raw value that needs to be transformed.

React Props are like function arguments in JavaScript *and* attributes in HTML.

Props are also how you pass data from one component to another, as parameters.

React Props are read-only .You will get an error if you try to change their value