**REACT**

React is a popular, declarative, component-based, state-driven JavaScript library for building user interfaces, created by Facebook.

**Component-Based Design:**

* React components are the building blocks of user interfaces (UI).
* Components can be reused, combined, and nested to create complex UIs, like in applications such as Airbnb.

**JSX:**

* JSX is a special syntax used in React, combining elements of HTML, CSS, and JavaScript.
* It allows developers to describe the UI and its components declaratively, specifying what the UI should look like based on its current state.

**State and Reactivity:**

* State refers to the data that influences the UI.
* React keeps the UI in sync with the state, re-rendering the UI when the state changes, hence the name "React."

**Library vs. Framework:**

* React is a library focused on the view layer, not a full-fledged framework.
* To build complete applications, additional libraries for routing, data fetching, etc., are needed. Frameworks like Next.js and Remix extend React to provide more comprehensive solutions.

**Popularity and Ecosystem:**

* React is the most popular JavaScript library, with extensive adoption by large and small companies alike.
* It boasts a large developer community, extensive third-party library ecosystem, and high demand for React developers.

**History and Impact:**

* Created by Jordan Walke at Facebook in 2011, React was first used in Facebook’s newsfeed and chat.
* Open-sourced in 2013, React has since revolutionized front-end web development.

**Benefits of Using React:**

* **Reusability**:

Components can be used throughout the app and updated centrally.

* **Virtual DOM**:

React updates only the necessary components without re-rendering the entire app, improving speed and user experience.