

How React Works

Root Component:

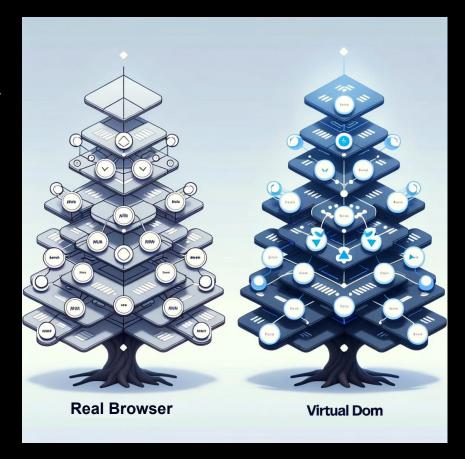
- The App is the main or root component of a React application.
- It's the starting point of your React component tree.

Virtual DOM:

- React creates an in-memory structure called the virtual DOM.
- Different from the actual browser DOM.
- It's a lightweight representation where each node stands for a component and its attributes.

Reconciliation Process:

- When component data changes, React updates the virtual DOM's state to mirror these changes.
- React then compares the current and previous versions of the virtual DOM.
- It identifies the specific nodes that need updating.
- Only these nodes are updated in the real browser DOM, making it efficient.





How React Works

React and ReactDOM:

- The actual updating of the browser's DOM isn't done by React itself.
- It's handled by a companion library called react-dom.

•Root Element:

- The root div acts as a container for the React app.
- The script tag is where the React app starts executing.
- If you check main.tsx, the component tree is rendered inside this root element.

•Strict Mode Component:

- It's a special component in React.
- Doesn't have a visual representation.
- Its purpose is to spot potential issues in your React app.

•Platform Independence:

- React's design allows it to be platform-agnostic.
- While react-dom helps build web UIs using React, ReactNative can be used to craft mobile app UIs.





React Vs Angular vs Vue

•React, Angular, and Vue:

- React is a library, while Angular and Vue.js are frameworks.
- React focuses on UI; Angular and Vue.js offer comprehensive tools for full app development.

•Library vs. Framework:

- A library offers specific functionality.
- A framework provides a set of tools and guidelines.
- In simpler terms: React is a tool; Angular and Vue.js are toolsets.

•React's Specialty:

- React's main role is crafting dynamic, interactive UIs.
- It doesn't handle routing, HTTP calls, state management, and more.

•React's Flexibility:

- React doesn't dictate tool choices for other app aspects.
- Developers pick what fits their project best.

About Angular and Vue.js:

- Angular, developed by Google, provides a robust framework with a steep learning curve.
- Vue.js is known for its simplicity and ease of integration, making it beginner-friendly.





Using Forms

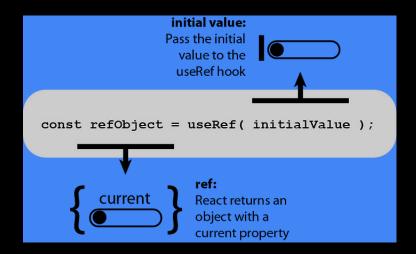
- 1. State Management: Each input's state is stored in the component's state.
- 2. Handling Changes: Use on Change to detect input changes.
- 3. Submission: Utilize onSubmit for form submissions and prevent default with event.preventDefault().
- 4. Validation: Implement custom validation or use third-party libraries.





Use Ref

- useRef allows access to DOM elements and retains mutable values without re-renders.
- Used with the ref attribute for direct DOM interactions.
- 3. Can hold previous state or prop values.
- 4. Not limited to DOM references; can hold any value.
- 5. Refs can be passed as props also





Update state from Previous State

- Spread Operator: Use to maintain immutability when updating arrays or objects.





Project: TODO App



Enter Todo here

dd/mm/yyyy

Buy Milk

4/10/2023

Delete

4/10/2023

Delete