**Reconciliation:**

* React compares the new virtual DOM with the current Fiber tree.
* The Fiber tree, built during the initial render, tracks the state, props, and effects of each component.
* Fibers are units of work, allowing asynchronous processing and task prioritization.

**Reconciliation Process:**

* React performs diffing, comparing elements based on their position in the tree.
* It creates a list of DOM operations (insertions, deletions, updates) needed to reflect state changes.

**Fiber Tree:**

* The Fiber tree is a mutable data structure representing the state and props of components.
* It allows efficient tracking and updating of components without recreating the entire tree.

**Asynchronous Rendering:**

* The Fiber reconciler can split rendering into chunks, prioritize tasks, and pause/resume work.
* This enables modern features like Suspense and improves performance by preventing long render blocks.







