React Hooks, Fiber, and Reconciliation Explained

1. Hooks: These allow you to manage component logic, such as state and side effects, within function components.

They let you "hook into" React's state and lifecycle features without writing a class.

2. Reconciliation: This is the process where React updates the changes made to the virtual DOM (due to state changes, props, etc.)

and then efficiently applies those changes to the real DOM.

3. React Fiber: Before Fiber, React updated the virtual DOM in a synchronous manner, meaning all changes were processed in a single batch,

which could potentially block the main thread and make the UI less responsive.

- With Fiber, the update process is broken down into small units of work that can be paused, resumed, or aborted.

This means React can prioritize more urgent updates, like user interactions, over less critical updates, improving the app's responsiveness.

4. Putting It All Together:

- Hooks allow you to manage logic within your components.

- React Fiber ensures that the update process is smooth by breaking down the reconciliation process into manageable pieces that can be processed incrementally.

- Reconciliation then applies these updates efficiently to the real DOM.

In essence, Hooks manage component logic, Fiber optimizes how updates are processed, and Reconciliation applies these updates to the DOM.