Difference between a framework and a library?

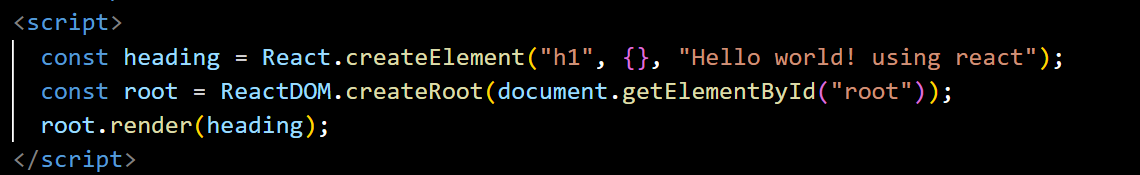
A library is a piece of code that can be called to perform a specific task. Whereas a framework provides a basic skeleton or structure to your application. A framework contains libraries. A library can be applied to modify a single element in the application without having to disturb others.

CDN: Content delivery networks help to import the react code from the server and make our project configured to use react.

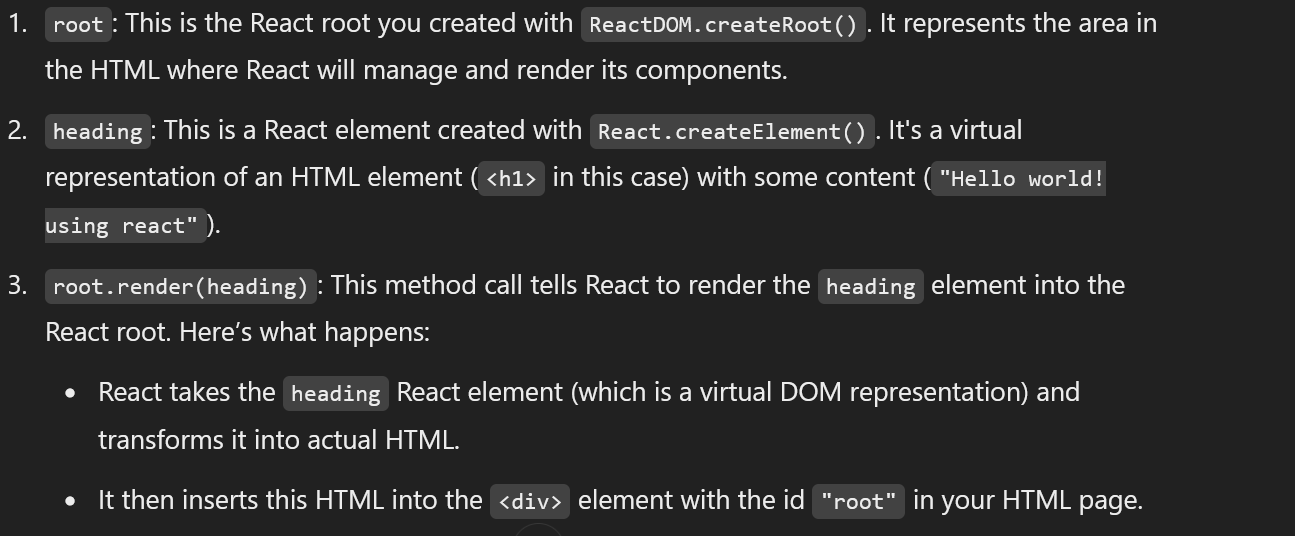
API: provides a way for 2 or more software applications to communicate with each other.

For example, in JS there’s a creteElement API that lets you create an html element using JS.

It hides out the implementation details and provides a way to perform a certain task.



The {} is for giving attributes to our tags like an id to the h1 tag in the above example.



The 1 line is to create an element and put content inside it using react.

The 2 line is for creating a react root inside the html element with id=”root”( so to put all the react elements inside it ).

The 3 line is for actually placing the element created inside the html.

In summary, root.render(heading) is what places the virtual React element (heading) into the specified HTML element (<div id="root">), making it visible on the webpage.

See first what we create using the createElement is an react object.

While rendering the the react object is converted to understandable html and puts it in the DOM.

DOM:

The costliest operation one can perform in a webpage is trying to manipulate the nodes of the DOM.

And every framework goal is essentially to optimize this.

The **DOM** is essentially a **tree-like structure** that the browser creates from the HTML (or XML) content. This structure makes it easier for developers to interact with, traverse, and manipulate the elements, attributes, and content of a webpage dynamically using **JavaScript**.

 The browser reads the static **HTML** file and turns it into a dynamic **DOM tree**.

 **JavaScript** allows developers to manipulate this tree, enabling them to:

* Change content (like text, images, etc.).
* Add or remove elements (like buttons, sections, etc.).
* Handle user interactions (like clicks, form submissions).

Modify styles (like colors, layouts).