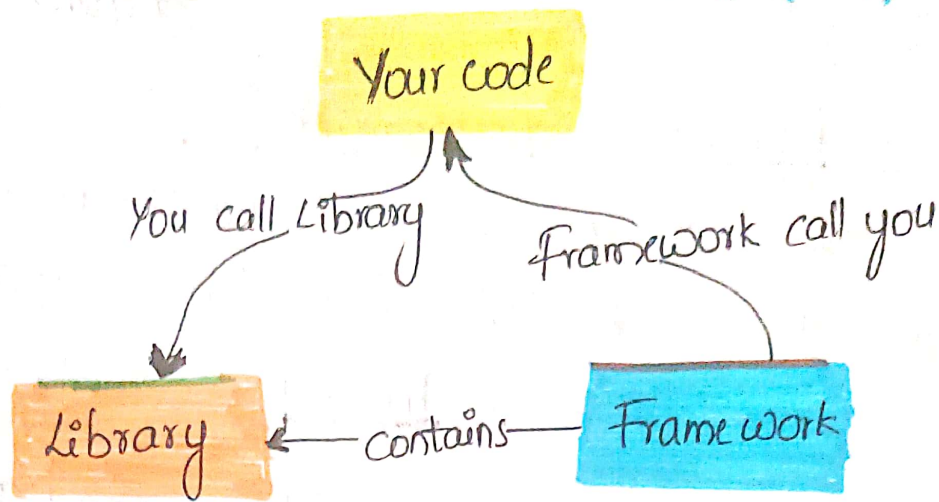# Chapter-01 ⇒ Inception

Aruna

React is a Library (or) framework?

React is written in JavaScript and it is Used to make better JavaScript applications. We refer to React Specially as a library.

What is difference between a library and a framework?

Both libraries and frameworks are reusable code written by Someone else. Their purpose is to help you solve common problems in easier ways.

Difference between a framework and library lies in term called inversion of control. When you use a library, you are in charge of the application flow. You choose when and where to call the library. When you use a framework, the framework is in charge of the flow. It provides you with a few places to plug in your code, but it calls the code you plugged in as needed.

Your code

You call Library → Framework call you

Library ← contains → Framework

Frameworks:

frameworks created by dedicated teams,
and ship with everything you needed to build
large-scale applications.

These teams provide official style guides
that follow best practices.

Libraries:

Libraries focus only on how to use it, which
means that the team doesn't support libraries
for global state management, like HTTP, routing
forms, etc...

And that is a choice, it gives the user the
ability of picking libraries that he wants.

That means using libraries, giving us full

control of our application, you only add what you want, which makes the application smoother.

1) **What is Emmet?**

Emmet is full of snippets for HTML and CSS which allow you to write a small line of code that will generate a bunch of HTML or CSS based on the Emmet code you write. It is built into VSCode. and

index. html code.

Writing Code in html

```
<head>
    <title> Namaste React </title>
</head>
<body>
    <h1> Namaste kaise ho aap! log!</h1>
</body>
```

Writing Code in JavaScript

→ Everything happens inside root.

```
<body>
    <div id = "root"></div>
</body>
```

We can write the same html code in
JavaScript by Using <u>DOM manipulation</u>

We can write our javascript in <script>
tags.

This is how we create
a "hi" tag using Js.

```
<script>

        document.CreateElement("hi");


</script>



        ꞂꞂ ꞆꞙꞋ
<html>
    <body>
        <div id="root"></div>
    </body>
    <script>

        Const heading = document.creatElement("hi");

        heading.innerHTML = "Namaste kaise ho
                    aap log! ";

        Const root = document.getElementById("root");

        root.appendChild(heading);
    </script>
</html>
```

Q: Can you tell me that how browser run the above code. How does browser get to know that What is document, createElement?

That comes from browser APIs. Brower has Js engine. Brower knows about a Window.

JavaScript Engine gives us Window.document functionality.

H/W

What is CDN?

Content Delivery Networks is a network of Servers that delivers content to users. Both React and ReactDOM are available over a CDN.

What is inside JavaScript files (CDN Links)?

It's Basically intense code. But at the end it's JavaScript. This is the javascript Someone else is wrote for us (Fb developer's

How to inject script tag?

`<script crossorigin src="https:...js"></script>`

This indicates that the script should be loaded from different origin.

What is crossorigin?

The crossorigin attribute sets the moode of the request to an HTTP CORS Request.

CORS stands for Cross-Origin Resource Sharing

Cross origin attribute provide support for CORS If we serve React from a CDN, keep crossorigin attribute set.

Why There are two files inside React and ReactDOM?

React is not just limited to browsers. React also works on mobile devices, works on rendering. That There are so many things whi react has comeup.

For that Reoreason These two script files.

```
<script crossorigin src = "https://unpkg.com/react@18/---
</script>

<script crossorigin src = "https://unpkg.com/react-dom@
/---></script>
```

react@18 means 18th version, this is the latest version of react.

react-dom@18

dom means web version of React.

1st file is core library of React.

2nd file is the library which gives you access to the document object model.

Const heading = React.createElement ("h1", {}," ·
              "Namaste Everyone)

React Api   We pass 3 argument
                              to this

"h1" ⟶ tag what we are going to create.

{} ⟶ Or Object. [Whatever we give here goes into h1]
       ⟶ id="title" It'll appear <h1 id="title"> ... </h1>
   Ex:
"Namaste EveryOne" ⟶ What you need to put in
                       h1 tag.

What is React element?

It's an object.

root.render(heading); ?

Passing a react element inside the root.

When we pass react element inside render method, this render method. takes react element and modifies our DOM.

render override (Not rendering).

* All applications whether how big it is most of the time will only have One **root** and One **render** method.

In General practice Developers write `<div id="root">` Not Rendered `</div>`

● If you see **Not Rendered** in your app mean — there's an issue

* Whenever we reload our page It'll take Sometime for react to get installed into our page.

We cannot avoid this ms lag, There are ways we can optimise it to be very less that user doesnot know.

Q: What will happen if we put script tag first then CDN Links?

It says Not Rendered. we will get an error: React is not defined.

* Loading React in a correct order matters a lot.