| 1. I1) INCEPTION   React is a library.  const heading=React.createElement(‘h1’,{id:”title”},”Hello World!”);  const root=ReactDOM.createRoot(document.getElementById{“root”));  root.render(heading);  React elements are objects. React backside takes arguments and converts it into Objects.  We inject React inside the root.  (generally, we have 1 root and 1 render method)  Render will manipulate DOM.  React overrides whatever is inside root div.  # Mostly,we say <div id=”root”>Not rendered</div>, so that if react isn’t able to load we will see Not rendered.  Script tag is inside the body tag.  There is a very little lag in loading react, because browser takes some time to load websites, and then starts reading code.  React came with the idea of writing html and css inside JS file only. So that we don’t have to go to different files. | 1) Read about Emmet  2)Read about CDN  3)Cross-origin  4)DOM  5) Difference between async and defer  6)check for classname,id, style, null  7) |
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**EMMET**

It is a web development tool that helps in writing easy, quick, efficient code.

For example , pressing ! in the html file in vscode, gives us a dummy html code.

**LIBRARY vs FRAMEWORK**

Both are reusable code written by someone else.

| In Libraries , developer has inversion of control. We control the flow of code/application. We decide when to call certain functions.  Libraries are flexible, we can use only some functions as per our requirement. We don’t need to use entire library  Libraries are typically smaller in scope and size. They focus on specific functionalities | Framework dictates flow of control. It come with a structure when we just have to inject our code. We don’t control when to call functions.  Framework has a set structure, it is not flexible as we can not choose to use only some component.  It is more extensive and provide a broader set of tools and conventions for building applications. |
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**CDN** : Content Delivery Network

Distributed network of servers around the world. Jab user internet pe kuch search karta hai toh information server se internet pe travel karke aati hai uspe, agar server bahot hi door hoga toh delat hota hai response aane mei. Toh ye servers geographically placed hain aur ispe website content served hai, taki used ko paas ke server se jaldi data mil jaye.

* **Faster Loading Times:** CDNs reduce latency by serving content from servers closer to the user, resulting in faster loading times for websites and web applications.
* **Scalability**: CDNs distribute the load across multiple servers, making it easier to scale resources and handle increased traffic, especially during peak periods or traffic spikes.
* **Reliability**: By having multiple servers geographically distributed, CDNs provide redundancy and ensure that content is still accessible even if one server goes down.
* **Cost Savings**: CDNs can help reduce the load on your origin server, potentially lowering hosting costs by offloading the delivery of static assets to the CDN.
* **Security**: Some CDNs offer security features, such as DDoS protection and SSL/TLS support, helping to enhance the overall security of web applications.

Instead of downloading and hosting the React library locally, you can include it directly from a CDN.

<!-- React -->

<script src="https://unpkg.com/react@17/umd/react.production.min.js"></script>

<!-- React DOM -->

<script src="https://unpkg.com/react-dom@17/umd/react-dom.production.min.js"></script>

**● Why is React known as React?**

React is called react because it reacts rapidly. It reacts as soon as there is some change in data or state. Change dekhke react karti hai aur UI pe efficiently dikha deti hai.

**● What is crossorigin in script tag?**

The crossorigin attribute is typically used with scripts fetched from different domains, especially when using a Content Delivery Network (CDN) to host scripts. It helps prevent certain security vulnerabilities, such as cross-site request forgery (CSRF) attacks, by controlling how the browser handles cross-origin requests.

**● What is diference between React and ReactDOM ?**

**REACT** is a library jisse UI based app banate hain.

Class, element, ye sab use karte hain toh React use hoti hai.

**REACTDOM** bhi ek complimentary library hai jisse DOM se interact karte hain hai.It is responsible for rendering DOM components in browser.ReactDOM.render() is a main function.

**● What is difference between react.development.js and react.production.js files via CDN?**

Development wali development ke liye use hoti hai.

* Size bada hota hai. Performance utni fast nhi hoti
* Debugging info, checks, warnings hoti hai.
* Mostly local mei use krte hain.

Production wali production mei use hoti hai.

* Minified size hota hai. Better performance.
* Faltu ki info, checks, warning nahi aaati.

**What is async and defer?**Both are boolean attributes used with script tag to load external scripts efficiently to our webpage.

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|  | If scripts are interdependable, its best to use Defer tag, as it executes scripts only after html is loaded. |
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