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EPISODE-1

→ Keywords like
- innerHTML
- document.createElement
- appendchild

} Browser understand this keyword as it have a JavaScript engine init that executes these JS.

Que: Do our browsers understand react ?
Ans- No Browsers doesnot understand react.
- We need to get react into our project (1st step)

↳ 1st way to inject react into our project: With the help of CDN.

* CDN stands for Content Delivery Network

Que: What is CDN ?
↳ It's a system of servers located in different parts of would. Instead of loading resources (like scripts, images or videos) directly from one server, the content is delivered from the server closet to the user.

Example:-
Imagine you're at a restaurant with a huge menu. If the kitchen is far away, it takes longer to get your food. But if there's a small kitchen closer by with the most popular dishes ready, you get your food much faster! A CDN is like that small kitchen

In short:
* Main Website - Like the main kitchen with all dishes
* CDN Servers - Like small kitchen with popular dishes closer to customers.
* Users - You, waiting for website content
* fastest Delivery - Getting your content from the nearest CDN server instead of the main website.

Que: Why do we use CDN ?

Ans – ↳ **Speed**: Content loads faster because it's delivered from a server close to you.

↳ **Reliability**: If one server gets down, another server can take over, so the content is still available.

↳ **Scalability**: A CDN can handle lots of users at once without slowing down.

Que: What is cross origin ?

Ans: Crossorigin is an attribute used in HTML when you're loading resources (like scripts, images etc.) from a different domain (server).

– It tells the browsers to handle requests for these resources especially in terms of security.

So, CDNs help websites load faster, especially for users who are far away from the main server. This makes websites more enjoyable to use and keeps users happy!

React CDN Development Links

```
<script

      Crossorigin
      src="https://unpkg.com/react@18/umd/react.development.js"
    ></script>
    <script
      crossorigin
      src="https://unpkg.com/react-dom@18/umd/react-dom.development.js"
    ></script>
```

https://unpkg.com/react@18/umd/react.development.js

Above is the websites where plane js code of react is uploaded, as react is a js library, it is written into js.

https://unpkg.com/react-dom@18/umd/react-dom.development.js

Above is the react DOM library code in js which is useful for DOM (Document Object Model) manipulation.

What is ReactDOM ?

ReactDOM is a package in React that provides DOM-specific methods that can be used at the top level of a web app to enable an efficient way of managing DOM elements of the web page. ReactDOM provides the developers with an API containing the various methods to manipulate DOM.

React does not only works on browsers, it also work on phone as react native so there are different types of places where react are used so there are different methods or functions which are being used between different places where react are used such as on browser or on phone.

So that's the reason why we have 2 different links in our CDN, First one is the core react and second one is like a bridge between the react and the Dom of different places where react is being used such as browser or phone.

For using react on phone we have some different functions and same for browser.

What is crossorgin in script tag of react ??

The "crossorigin" attribute is a security measure that allows a script tag to access resources from a different domain than the one where it is loaded. This is useful when working with online APIs or external libraries, as it allows them to be used without having to be served from the same domain.

* Hello World Code Using React.

Example :-

```
<Script>
// 1st : Create h1 tag
Const heading = React.createElement("h1", { }, "Hello World");
```

Content which we want to write inside tag.

Tag, Object, Children

It contains 3 arguments i.e.

as any tag is just a part of core React.

(It is an object (i.e. the object is a react element of type 'h1')

```
// 2nd : Create root
Const root = ReactDOM.createRoot(document.getElementById("root"));
```

as root is part of ReactDOM

In HTML body where we want to render our code.

// Now we have created root for our react library

4th : Render heading inside the root.

```
root.render(heading);
```

- root → place where we want to render
- render → keyword
- heading → Code which we want to render.

</script>

> Note :- React comes with a simple philosophy i.e. Do DOM manipulation using JS.

→ In React.createElement() there are 3 arguments in that one argument is object.

```
React.CreateElement("h1", {}, "Hello World")
```

This object is the place where we will give "attributes" to our tag.

Que: What is attribute ?

Suppose we want to give id to the h1 tag then we will use attribute i.e.

```
React.createElement("h1",
                    { id: "heading", xyz: "abc" },
                    "Hello World");
```

(id and xyz: attribute)

> Note :- React Element (Object) ⟹ HTML (Browser Understand)
>
> i.e. React element is nothing but a JS object.
>
> → This object will be converted into HTML while it get render.

→ But to createElement we will not use React.createElement, we will use JSX. It will make our life more easier.

↳ ~~Thing~~ Topics that are covered in Code Editor —

1st : Creating Nested Elements in React.

2nd : Creating Siblings
↳ for creating siblings, we will use array of children.

3rd : Suppose there are more than one child.
↳ for this we also use array of children.

* Point to Remember : —

→ Before rendering the component. Suppose there is a "h1" tag inside div. i.e. `<h1> Kirti is here </h1>`

→ then what will happen when we use render.
It will simply replace the content of it.

↳ In render() we can only pass single attribute at a time

↳ React can be applied to any one single tag in an HTML.
for example : - React can only be used at footer / Header.

i.e. React can work independently in a small portion of app (That's why it is a library)

→ React can work on a single part of HTML also.

Note : — We should write code in Sequence only

e.g. If we write
`<script src = "./App.js"></script>`
Then CDN links.
Then it will show error "React is not defined".