**EPISODE-1 INCEPTION**

**Theory**

**1. What is Emmet?**

Emmet is the essential toolkit for web-developers. It allows you to “type shortcuts” that are then expanded into full pieces of code for writing HTML&CSS based on an abbreviation structure most developers already use that expands into full-fledged HTML markup and CSS rules.

“Emmet is a plug in for many popular text editor which greatly improves HTML & CSS workflow.”

Emmet is a toolkit that helps developers to write down large code blocks in html in a few lines code using Emmet shortcuts.

Emmet shortcuts help us in writing large HTML code blocks in a few seconds by just writing a few lines of code.’'

|  |  |  |
| --- | --- | --- |
| **Emmet shortcuts** | **output** | **Meaning** |
| ! or html:5+enter | <!DOCTYPEhtml>  <htmllang="en">  <head>  <metacharset="UTF-8">  <metahttp-equiv="X-UA-Compatible"content="IE=edge">  <metaname="viewport"content="width=device-width, initial-scale=1.0">  <title>Document</title>  </head>  <body>  </body>  </html> | It gives a basic skeleton of html |
| div{I’m Janani} | <div>I'm janani</div> | Elements with text content inside them |
| ul>li | <ul>         <li></li>     </ul> | Nested element use ‘>’ operator |
| div#main  div.container.responsiveor .container.responsive  #main or p#example  p#idName.className | <divid="main"></div>  <divclass="container responsive"></div>   <pid="example"></p>  <pid="idName"class="className"></p> | We can create id by using “#” and class by using “.” |
| div+p+nav | <div></div>  <p></p>  <nav></nav> | We can generate sibling by using ‘+” |
| ul>li\*3>a | <ul>         <li><ahref=""></a></li>         <li><ahref=""></a></li>         <li><ahref=""></a></li>     </ul> | Nested element use ‘>’ operator |
| ul>li{$}\*3 | <ul>      <li>1</li>      <li>2</li>      <li>3</li>  </ul> | Nested element use ‘>’ operator |
| ul>li{$@10}\*5 | <ul>      <li>10</li>      <li>11</li>      <li>12</li>      <li>13</li>      <li>14</li>  </ul> | Nested element use ‘>’ operator (Adding child) |
| p[title="Scaler academy"]  td[rowspan=2 colspan=3 title]  a{Click here}  div>(header>ul>li\*2>a)+footer>p em>.classul>.classtable>.row>.col | <ptitle="Scaler academy"></p>  <tdrowspan="2"colspan="3"title=""></td>  <ahref="">Click here</a>  <div>      <header>          <ul>              <li><ahref=""></a></li>              <li><ahref=""></a></li>          </ul>      </header>      <footer>          <p></p>      </footer>  </div>  <em><spanclass="class"></span></em>  <ul>  <liclass="class"></li>  </ul>  <table>  <trclass="row">  <tdclass="col"></td>  </tr>  </table> |  |

**2. Difference between library and Framework:**

A Library is a collection of packages that perform specific operations whereas a framework contains the basic flow & architecture of an application. The major difference between them is the complexity. Libraries contain a number of methods that a developer can just call whenever they write code. React jsis library and Angular is Framework.

The framework provides the flow of a software application & tells the developer what it needs and calls the code provided by the developer as required. If a library is used, the application calls the code from the library.

**Library:**

It works independently only small portion itself.

It’s not a fully-fledged framework

It target a specific functionality

**Framework:**

It tries to provide everything required to develop a complete application.

**3. What is CDN? Why do we use it?**

CDN means Content Delivery­ Network. Its use a Browser understand what is react. Which will improve our website speed by placing our content in different edge server around the globe & delivering it into our visitor from nearest server?

We are using CDN because we are just starting with react or have a pre-built website & need to include react components. CDN are handy and they require minimal setup. It helps our work started in fewer lines of code.

It’s a network of servers that delivers content to users. Both react &reactDOM are available over a CDN.

**4. Why is React known as React?**

React is called React because it is a library that reacts to changes in data and updates the user interface accordingly. It was originally developed by Facebook and was released as an open-source project in 2013. The name “React” reflects its purpose of reacting to changes in data / state and rendering the appropriate changes in the user interface. What the user sees when they are doing things like mouse clicking, submitting and typing.

**5. What is cross-origin in the script tag?**

The cross-origin attribute sets the mode of the request to an HTTP CORS Request. Web pages often make requests to load resources on other servers. Here is where CORS comes in. A cross-origin request is a request for a resource (e.g. style sheets, frames, images, fonts, or scripts) from another domain.

**6.What is the difference between React and React DOM**.

**React** – React library is responsible for creating views

**React DOM** – It is responsible to actually render UI in the browser

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

**React.production.js:**

This file is optimized for production environments. It’s smaller in size due to various optimizations like minification and removal of development-Specific checks and warnings. Performance is prioritized over debugging & development convenience. It’s suitable for use in the final version of your application that will be deployed to users.

**React.development.js:**

This file is meant for development and debugging purposes. It included additional checks, warnings & development related features that assist developers in identifying issues & debugging code. It’s larger in size compared to the production version because of the extra development features.

When using a CDN, it is common to load the development version(react.development.js) during development and debugging stages. This allows developers to take advantage of the detailed error messages & warnings provided by the development version for easier debugging. However in Production environment, it is recommended to use the Production version(react.production.js) for better performance and reduced file size.

**8. What are async and defer?**

Async and defer are Boolean attributes which are used along with script tags to load the external scripts effectively in our web page. There are three possible ways using script tags:-

* Normal script tag
* Async using script tag
* Defer using script tag

We loading our webpage two things happen which is HTML parsing and loading script tag. In script tag two things happen one is fetching script from network and another one is actually executing script line.

**HTML parsing & scripts:**

In this case the HTML file will be paused until the script file is hit, at that point parsing will stop & a request will be made to fetch the file (its external) the script will then be executed before parsing is returned.

**HTML parsing & async:**

Async downloads the file during HTML parsing & will pause the HTML parser to execute it when it has finished downloading.

**HTML parsing & defer:**

Defer downloads the file during HTML parsing & will only execute it after the parser has completed. Defer scripts are also guaranteed to execute in the order that they appear in the document.