Chapter 1 - Inception

What is Emmet?

Basically, most text editors out there allow you to store and re-use commonly used code chunks, called *“snippets”*. While snippets are a good way to boost your productivity, all implementations have common pitfalls: you have to define the snippet first and you can’t extend them in runtime.

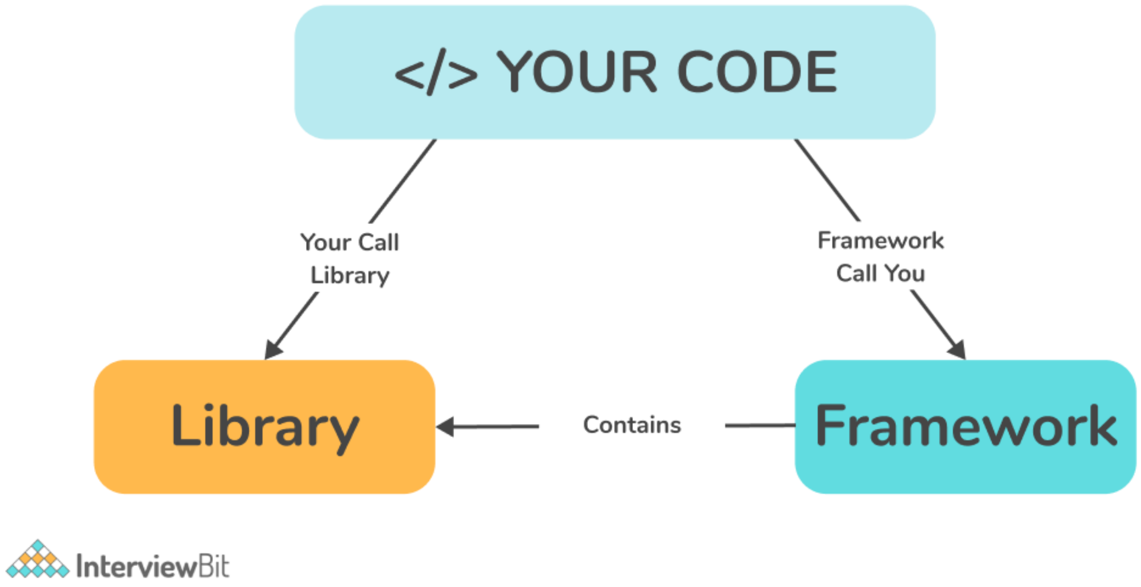
Emmet takes the snippets idea to a whole new level: you can type *CSS-like* expressions that can be dynamically parsed, and produce output depending on what you type in the abbreviation. Emmet is developed and optimised for web-developers whose workflow depends on HTML/XML and CSS, but can be used with programming languages too.

What is the difference between a library and framework?

JS frameworks and JS libraries are both pieces of code authored by others to solve everyday problems. They are, nonetheless, distinct.

JS libraries give developers predefined methods and classes to help them work faster and more efficiently. On the other hand, the JS framework acts as a framework for developers to construct apps for specific platforms.

The term "inversion of control" describes the technical distinction between a framework and a library. You have complete control over the application's flow when you use a library. You get to decide when and where you want to call the library. While when using a framework, the flow is controlled by the framework itself. It gives you various locations to plug in your code, but it only calls the code you've plugged in when it's needed.



What is CDN? Why do we use it?

A content delivery network (CDN) refers to a geographically distributed group of servers which work together to provide fast delivery of Internet content.

A CDN allows for the quick transfer of assets needed for loading Internet content including HTML pages, javascript files, stylesheets, images, and videos. The popularity of CDN services continues to grow, and today the majority of web traffic is served through CDNs, including traffic from major sites like Facebook, Netflix, and Amazon.

Why is React know as React?

React is called React because it was designed to be a declarative, efficient, and flexible JavaScript library for building user interfaces.
The name "React" was chosen because the library was designed to allow developers to "react" to changes in state and data within an application, and to update the user interface in a declarative and efficient manner.

What is cross origin in script tag?

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, iframes, images, fonts, or scripts) from another domain.CORS is used to manage cross-origin requests.CORS stands for Cross-Origin Resource Sharing, and is a mechanism that allows resources on a web page to be requested from another domain outside their own domain.

What is the difference between React and ReactDOM?

In order to work with React in the browsers, we need to include 2 libraries: React and ReactDOM. React library is responsible for creating views. The react package holds the react source for components, state, props and all the code that is react.

ReactDOM library is responsible to actually render UI in the browser.The react-dom package as the name implies is the glue between React and the DOM. Often, you will only use it for one single thing: mounting your application to the index.html file with ReactDOM.render().

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

```
<script src="https://unpkg.com/react@16/umd/react.production.min.js"></script>
```

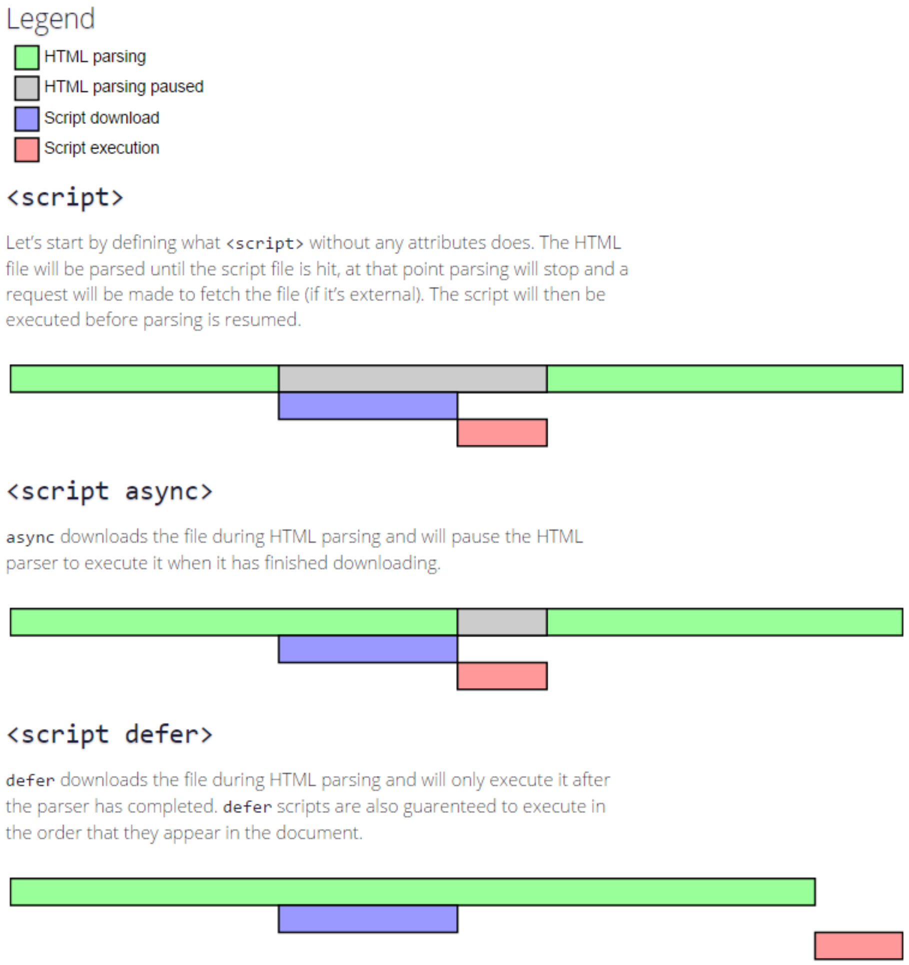
<script src="https://unpkg.com/react-dom@16/umd/react-dom.production.min.js"></script>

react.development.js provides us extra features like debugging, hmr(Hot module reloading) and lots of other stuffs that you might use while developing app with the help of bundlers like webpack, parcel, vite. The development build is used - as the name suggests - for development reasons. You have Source Maps, debugging and often times hot reloading ability in those builds.

This bundler bundles and minifies our code to be deployed on production.These minified files will be deployed on production which removes lots of unnecessary files which will not be used by our app for this we have react.production.js to make our much faster(as bundlers and lots of other files have done there work and are not required now).The production build, on the other hand, runs in production mode which means this is the code running on your client's machine.

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

This image explains normal script tag, async and defer



Legend

🟩 HTML parsing

⬜ HTML parsing paused

🟦 Script download

🟥 Script execution

`<script>`

Let's start by defining what `<script>` without any attributes does. The HTML file will be parsed until the script file is hit, at that point parsing will stop and a request will be made to fetch the file (if it's external). The script will then be executed before parsing is resumed.

`<script async>`

`async` downloads the file during HTML parsing and will pause the HTML parser to execute it when it has finished downloading.

`<script defer>`

`defer` downloads the file during HTML parsing and will only execute it after the parser has completed. `defer` scripts are also guarenteed to execute in the order that they appear in the document.

- Async scripts are executed as soon as the script is loaded, so it doesn't guarantee the order of execution (a script you included at the end may execute before the first script file)
- Defer scripts guarantees the order of execution in which they appear in the page.