**Assignment 01 – Inception**

1. What is Emmet?
2. Emmet is a plugin for many popular text editors which greatly improves HTML and CSS workflow. It allows you to write shortcuts that are then expanded into full pieces of codes.
3. Difference between library and framework?
4. Frameworks and Libraries are code written by someone else that helps you to perform some common tasks in a less verbose way.

A framework inverts the control of the program. It tells the developer what they need. A library doesn’t. The programmer calls the library where and when they need it.

The degree of freedom a library or framework gives the developer will dictate how “opinionated” it is.

1. What is CDN?
2. An ideal CDN is a server group spread out globally. All CDNs should be in sync with each other and the origin server.

**Push CDN:**

In a push CDN the engineers must push new or updated files to the CDN propagating them to all of the CDNs server caches.

**Pull CDN:**

In a pull CDN the server cache is lazily updated that is when a user sends a static asset request to the CDN server and it doesn’t have it. It’ll fetch the asset from origin server populate its cache with that asset and then send it to the user.

1. Why is React known as React?
2. The name “React” was chosen because the library was designed to allow developers to react to changes in state and data with an application, and to update the user interface tin a declarative, and efficient manner.

“And it’s called React because it reacts. It was developed by Facebook (a site that constantly updates their data) to improve the user interface development and more effectively change (React to) what the user sees when they’re doing things like mouse clicking, submitting and typing.”

1. What is cross-origin in the script tag?
2. The cross-origin attribute, valid on the <valid>, <img>, <link>, <script> and <video> elements provides support for cross-origin resource sharing(CORS), defining how the element handles cross-origin requests, thereby enabling the configuration of the CORS requests for the elements fetched data. Depending on the element, the attribute can be a CORS settings attribute.

**Cross-Origin Resource Sharing (CORS) :**

Cross-Origin Resource Sharing is an HTTP-header based mechanism that allows a server to indicate any origins (domain, scheme, or port) other than its own form which a browser should permit wading resources.

CORS also relies on a mechanism by which browsers make a “preflight” requests to servers hosting the cross-origin resource, in order to check that the server will permit the actual request.

In that preflight, the browser sends headers that indicate the HTTP method and headers that will be used in the actual request.

1. What is the difference between React and ReactDOM?
2. React is a javascript library, designed for building better user interfaces.

ReactDOM is a complimentary library to React which glues React to the browser DOM.

React has nothing to do with a browser or web for that matter ReactDOM will binds the idea of React to browser.

1. What is difference between react.development.js and react.production.js files via cdn?
2. The development build is used as name suggests for development reasons. You have source Maps, debugging and often times hot reloading ability in those builds.

The production build, on the other hand, runs in production mode, which means this is the code running on your client’s machine. The production build runs uglify and builds your source files into one or multiple minimized files. It also extracts CSS and images and of course any other sources you’re loading with web pack. There’s also no hot reloading included. Source Maps might be included as a separate files depending on your web pack dev-tools settings.

What specifically separates products from development is dependent on your preferences and requirements, which can means it pretty much depends on what you write on your web pack configuration.

The very basic difference is that production build has ugly, minified (compressed) version of your JavaScript code, so this makes rendering of file on end user’s browser very quick and performance enhancing.

1. What are async and defer?
2. Normal

<script>

Parsing Parsing again

HTML Parsing --------------------- ---------------------

script ----------------- ------------------

fetching executing

Async

<script async>

Parsing Parsing again

HTML Parsing ------------------------------------- ---------------------

script ------------------- -------------------

fetching executing

Defer

<script defer>

Parsing

HTML Parsing ---------------------------------------------------------

script ----------------- ------------------

fetching executing