***Assignment-1***

***Inception***

**Ques 1: What is Emmet?**

Ans: Emmet is a plug in for many popular text editors which greatly improves HTML & CSS workflow. Emmet uses different abbreviations and short expressions depending on what’s passed, and then dynamically converts the abbreviations into the full code.

**Ques 2: Difference between a Library and Framework?**

Ans:

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| --- | --- |
| ****Library**** | ****Framework**** |
| A set of assistance modules, objects, classes, functions, pre-written code, and so on. | Includes a variety of APIs, compilers, support applications, libraries, and so on. |
| Can be easily substituted by another library. | Are tough to replace. |
| When we call a method from a library, we are in control. | Inversion of control, i.e. the framework calls us. |
| Since developing a library needs less code, performance and load time are improved. | The construction of a framework necessitates large amounts of code, which reduces performance and increases load time. |
| Libraries can be simply linked into existing programs to add specific functionality. | It is tough to incorporate a framework seamlessly into an existing project. |

**Ques 3: What is CDN? Why do we use it?**

Ans: A content delivery network (CDN) is a geographically distributed group of servers that caches content close to end users. A CDN allows for the quick transfer of assets needed for loading Internet content, including HTML pages, JavaScript files, stylesheets, images, and videos.

The primary purpose of a content delivery network (CDN) is to reduce latency, or reduce the delay in communication created by a network's design. Because of the global and complex nature of the internet, communication traffic between websites (servers) and their users (clients) has to move over large physical distances. The communication is also two-way, with requests going from the client to the server and responses coming back.

**Ques 4: Why React is known as React?**

Ans: React is called "React" because of its core feature, which is its ability to "react" or respond dynamically to changes in data. React was originally created by Facebook in 2011 for use in their own web applications, and it was released as an open-source project in 2013.

**Ques 5: What is cross-origin in React?**

Ans: Cross-origin resource sharing (CORS) is a mechanism for integrating applications. CORS defines a way for client web applications that are loaded in one domain to interact with resources in a different domain. This is useful because complex applications often reference third-party APIs and resources in their client-side code. For example, your application may use your browser to pull videos from a video platform API, use fonts from a public font library, or display weather data from a national weather database. CORS allows the client browser to check with the third-party servers if the request is authorized before any data transfers.

**Ques 6: What is the difference between React and ReactDOM?**

Ans: The **react**package contains React.createElement(), React.Component, React.Children, and other helpers related to elements and component classes. You can think of these as the isomorphic or universal helpers that you need to build components. Whereas, The **react-dom** package contains ReactDOM.render(), and in react-dom/server we have server-side rendering support with ReactDOMServer.renderToString() and ReactDOMServer.renderToStaticMarkup().

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

Ans: In development mode, we can enable and utilize React developer tools, devtools profiler, debugging environment attached with source code. We can utilize various functionalities such as Hot Module Replacement, diagnostics so that development environment will help to debug code.

In production mode, compression and minification of Javascript and other resources happens to reduce size of the code which is not the case when it comes to development mode. Performance will be much faster in production mode when compared to development mode.

**Ques 8: What are async and defer?**

Ans:  Async allows your script to run as soon as it’s loaded, without blocking other elements on the page. Whereas, Defer means your script will only execute after the page has finished loading. In most cases, async is the better option — but there are exceptions.