

Class 1: Assignment

▼ Theory Assignment

▼ What is Emmet?

- Emmet is a built-in feature available in code editors. It can help write HTML and CSS code faster. It can create an HTML boilerplate with the help of a simple command.
- In vscode, open an HTML file, type '!' and hit 'Enter' or type 'html: 5' and hit 'Enter'. It will create a basic HTML page.

▼ What is the difference between a Library and a Framework?

When we use a library, we are in charge of the flow of the application. We choose when and where to call the library.

When a framework is used, the framework is in charge of the flow.

▼ What is CDN? Why do we use it?

- CDN stands for Content Delivery Network.
- CDN is a network of interconnected servers that speeds up webpage loading for data-heavy applications.
- When a user visits a website, data from the website's server has to travel across the internet to reach the user's computer. If the user is located far from the server, it will take a long time to load a large file like a video or image. Instead, the website content is loaded in CDN servers geographically closer to the users and reaches their computers much faster.
- The primary purpose of CDN is to reduce latency. Latency is the delay that occurs from the moment you request to load a web page to the moment its content actually appears on the screen.

▼ Why is React known as React?

React is named React because of its ability to react to changes in data. When the data in a React component changes, React will automatically re-render the component so that it reflects the new data.

▼ 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.
- A cross-origin request is a request for a resource from another domain. CORS is used to manage cross-origin requests.
- CORS stands for Cross-Origin resource sharing, it defines a way in which a browser and server can interact to determine whether it is safe to allow the cross-origin request.

▼ Difference between React and ReactDOM

React is a javascript library designed for building user interfaces.

ReactDOM is a javascript library that allows React to interact with the DOM.

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

- During the development phase, we will run our code locally using dev mode where there are many helpful warnings and tools for detecting and fixing problems in our code. But, these extra codes increase the size and hence run slowly.
- The production code minifies the code and optimizes assets. The warning messages will be suppressed. So, the bundle size is reduced and improves page load time

▼ What are async and defer?

- Async and defer are boolean attributes.
 - They are used along with the script tag to load the external scripts efficiently into our webpage.
- ▼ How does it work?
- When you load a webpage - 2 major things happen in your browser.
 1. HTML parsing
 2. Loading of the scripts. It has 2 parts:
 - Fetching the script from the network
 - Executing the script line by line.
- ▼ 3 scenarios:
1. Script tag: HTML Parsing goes on and as soon as the script tag is encountered, it fetches the script from the network and executes it right then. After that, HTML parsing continues.
 2. async tag: HTML parsing goes on and asynchronously (parallel) the scripts are fetched from the network. As soon as scripts are available, the script is executed and only after it's done HTML parsing continues.
 3. defer tag: HTML parsing goes on and asynchronously the scripts are fetched. No matter when the scripts are available they are executed only after the HTML parsing is completed.
- ▼ When to use them?
- The async attribute does not guarantee the order of execution of these scripts but defer does.
 - It means that if an async attribute is placed in multiple scripts that are dependent on each other, using an async tag does not guarantee that these scripts will be executed in a particular order. It may break the code. In this case, you should prefer using defer.
 - If you have to load external scripts like google analytics which are modular and independent of the code. We can use async.
 - Defer attribute maintains the order of execution of the scripts.