**HTML:**

* HTML Stands for Hypertext Markup Language.
* HTML is the standard markup language used to create and design web pages.
* HTML describes the structure of a Web page.
* For example, content could be structured within a set of paragraphs, a list of bulleted points, or using images and data tables.

**CSS:**

* CSS stands for Cascading Style Sheets.
* It is a style sheet language which is used to describe the look and formatting of a document written in markup language.
* The styling rules are defined by property-value pairs, determining aspects like font size, background color, and margin.

**JavaScript:**

* JavaScript is a high-level, versatile programming language primarily used for building dynamic web pages and adding interactivity to web applications.
* It is mainly executed in web browsers, enabling client-side scripting to enhance user interfaces and respond to user actions without the need for server-side interaction.
* The Document Object Model (DOM) represents the structure of HTML documents. JavaScript interacts with the DOM to dynamically update and modify web page content.
* JavaScript allows developers to respond to user actions (events) such as clicks, keypresses, and mouse movements. Event listeners are used to trigger functions in response to these events.

**Bootstrap:**

* Bootstrap is a popular open-source front-end framework developed by Twitter. It is a collection of HTML, CSS, and JavaScript components that simplifies the process of designing responsive and visually appealing web pages.
* Bootstrap is built with a mobile-first approach, ensuring that websites and web applications look and function well on various devices, from desktops to tablets and smartphones.
* One of Bootstrap's core features is its flexible grid system, which allows developers to create responsive layouts with a consistent and customizable structure. The grid system is based on a 12-column layout.

**Difference Between Angular, React and Vue ?**

Angular, React, and Vue.js are three popular JavaScript frameworks/libraries used for building user interfaces, particularly in the context of single-page applications (SPAs).

**React JS**

* React is an open-source frontend JavaScript library used for developing user interfaces based on components. It was developed by Facebook in 2013 and is now currently maintained by the open-source community and Facebook.
* While developing React applications, the amount of complexity and coding is less because of the reusable components in React. It brought more functionality and a clear codebase, which is also easy to maintain.
* React does not depend upon the conventional DOM and uses a JavaScript structure, virtual DOM. Using virtual DOM enhances the performance and increases the speed of the programs.
* Typically relies on external libraries for state management, with Redux being a popular choice. React also introduced the Context API to manage state in certain scenarios.

**Angular JS**

* Angular is a full-fledged web application framework based on TypeScript, free and open-sourced. It is widely used to create Single Page Applications. It was initially launched by Google in 2016 as a sequel to AngularJS, which was released in 2010.
* Since Angular is backed by Google, developers have an enormous amount of trust for building large-scale applications, knowing that it would be maintained for the long term.
* Working on an Angular project as a team is highly scalable, as any minor changes done by any member of the team do not require you to update the entire structure of the project. Moreover, the code base is highly consistent and readable, which increases the efficiency of the project.
* Has built-in tools for state management, including services and dependency injection. It also provides RxJS for reactive programming.

**Vue JS**

* Vue is an open-source progressive frontend framework that came into wide popularity for creating Single Page Applications (SPAs). SPAs are web applications that have only one HTML file rendering the entire code.
* In React and Angular, you are required to have to be skilled in TypeScript and JavaScript, respectively. However, Vue is beginner-friendly and does not mandate any prior skills.
* The size of your Vue project has several advantages, such as directly affecting the SEO of your webpage, as google search console rejects showing heavy websites in the front, which takes more time to load.
* Offers a built-in state management pattern using Vuex, which is inspired by Flux and Redux. It can be used for handling state in larger applications.

**Day 1**

**10/01/2024**