Types of CSS

Cascading Style Sheet(CSS) is used to set the style in web pages that contain HTML elements.

Inline CSS: An inline CSS is used to apply a unique style to a single HTML element.

Internal or Embedded CSS: An internal CSS is used to define a style for a single HTML page.

External CSS: External CSS contains separate CSS file which contains only style property with the help of tag.

Why Bootstrap

Bootstrap is the most popular HTML, CSS and JavaScript framework for developing a responsive and mobile friendly website. It facilitates you to create responsive designs.

CSS over Bootstrap

Cascading Style Sheet(CSS)	Bootstrap
CSS represent the style and the appearance of content like font, color, margin, padding, etc.	Bootstrap is a free and open-source CSS Framework that is used for developing responsive website.
CSS does not provide responsive pages or website.	In Bootstrap we can design a responsive website or webpages.
CSS is more complex than Bootstrap because there is no pre-defined class and design.	Bootstrap is easy to understand and it has much pre-design class.

JavaScript

JavaScript is a lightweight, cross-platform, and interpreted scripting language. It is well-known for the development of web pages. JavaScript can be used for Client-side developments as well as Server-side developments.

JS Object

A javaScript object is an entity having state and behavior. For example: car, pen, bike, chair, glass, keyboard, monitor etc javaScript is an object-based language.

BOM

The Browser Object Model (BOM) allows JavaScript to "interact with" the browser. The object of window represents a browser window and all its corresponding features.

JSON

JSON or JavaScript Object Notation is a lightweight text-based open standard designed for human-readable data interchange.

JS Arrow Functions

It allows you to create functions in a cleaner way compared to regular functions.

Syntax:

    Let myFunction=(arg1,arg2,….argN) =>{

    Statement(s)

    }

JS Callback Functions

A callback function can be defined as a function passed into another function as a parameter.. The callback function runs after the completion of the outer function.

JS Promises

Promises are used to handle asynchronous operations in JavaScript. They are easy to manage when dealing with multiple asynchronous operations

JS Async-Await Functions

async makes a function return a Promise   await makes a function wait for a Promise

Syntax of async :

```
Async funtionname(para1,para2,paraN)
{
Statements;
}
```

Await function syntax-   let result = await promise;

JS Error Handling

In programming, error handling is a process or method used for handling the abnormal statements in the code and executing them. It also enables to handle the flow control of the code.

Why Jquery

The main purpose of jQuery is to provide an easy way to use JavaScript on your website to make it more interactive and attractive. It is also used to add animation.

DOM Manipulation with Jquery

jQuery provides various methods to add, edit or delete DOM element(s) in the HTML page.

Method	Description
append()	Inserts content to the end of element.
before()	Inserts content before an element.
after()	Inserts content after an element.
prepend()	Insert content at the beginning of an element.

MVC Architecture

Model View Controller or MVC as it is popularly called, a software design pattern for developing web applications. A Model View Controller pattern is made up of the following three parts −
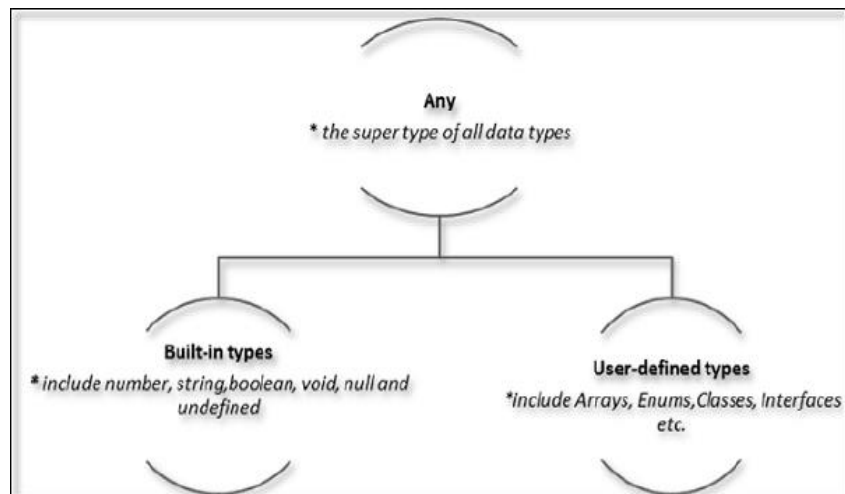
- Model − The lowest level of the pattern which is responsible for maintaining data.
- View − This is responsible for displaying all or a portion of the data to the user.
- Controller − Software Code that controls the interactions between the Model and View.

What is Typescript

By definition, "TypeScript is JavaScript for application-scale development." TypeScript is a strongly typed, object oriented, compiled language. TypeScript is both a language and a set of tools.

TypeScript Data types

TypeScript provides data types as a part of its optional Type System. The data type classification is as given below −

Typescript functions

Functions are the building blocks of readable, maintainable, and reusable code. A function is a set of statements to perform a specific task.

Sr.No	Funtions & Description
1.	<u>Defining a Function</u> A function definition specifies what and how a specific task would be done.
2.	<u>Calling a Function</u> A function must be called so as to execute it.
3.	<u>Returning Functions</u> Functions may also return value along with control, back to the caller.
4.	<u>Parameterized Function</u> Parameters are a mechanism to pass values to functions.

TypeScript Modules

A module is designed with the idea to organize code written in TypeScript. Modules are broadly divided into −

Internal Module -Internal modules came in earlier version of Typescript.

External Module- External modules in TypeScript exists to specify and load dependencies.

Angular features

1. Angular supports multiple platforms
2. High Speed, Ultimate Performance
3. Productivity
4. Full Stack Development

Angular architecture

The architecture of an Angular application relies on certain fundamental concepts. The basic building blocks of the Angular framework are Angular components that are organized into NgModules.

Project structure

Web applications have a directory structure, which is fully accessible from a mapping to the application's document root. The document root contains JSP files, HTML files, and static files such as image files.

Angular Lifecycle

Lifecycle hooks are a special functionality in Angular that allow us to "hook into" and run code at a specific lifecycle event of a component or directive. Angular manages components and directives for us when it creates them, updates them, or destroys them.

Angular components are a subset of directives, always associated with a template. Unlike other directives, only one component can be instantiated for a given element in a template.

Angular Data

In Angular, a service is an instance of a class that you can make available to any part of your application using Angular's dependency injection system.

Property Binding is a one-way data-binding technique. In property binding, we bind a property of a DOM element to a field which is a defined property in our component TypeScript code

Angular router is a core part of the Angular platform. It enables developers to build Single Page Applications with multiple views and allow navigation between these views.

Angular forms

Applications use forms to enable users to log in, to update a profile, to enter sensitive information, and to perform many other data-entry tasks.

Reactive forms	Provide direct, explicit access to the underlying forms object model
Template-driven forms	Rely on directives in the template to create and manipulate the underlying object model

Directives and pipes

Pipes are for formatting data, and directives are to alter the behavior of an element. A pipe is to manipulate data, while a directive is more for DOM manipulation

Angular services are objects that get instantiated just once during the lifetime of an application. They contain methods that maintain data.

ReactJS is a declarative, efficient, and flexible JavaScript library for building reusable UI components. It is an open-source, component-based front end library.

ReactJS Component

To build a complete solution today, we need to have at least four components: mobile (iOS and Android), web, and a server the provide the needed data.

React Lifecycle

Each component in React has a lifecycle which you can monitor and manipulate during its three main phases. The three phases are:

Mounting- Mounting means putting elements into the DOM.

Updating- A component is updated whenever there is a change.

Unmounting- When a component is removed from the DOM.

React Component Styling

There are about eight different ways to styling React Js components-

1. Inline CSS.
2. Normal CSS.
3. CSS in JS.
4. Styled Components.
5. CSS module.
6. Sass & SCSS.
7. Less.
8. Stylable

Redux is an architecture in which all of your app's state lives in one container. The only way to change state is to create a new state based on the current state and a requested change.

Node.JS

Node. js is primarily used for non-blocking, event-driven servers, due to its single-threaded nature. It's used for traditional web sites and back-end API services.

Node. js file system module allows you to work with the file system on your computer. To include the File System module, use the require() method.

Express. js is a free and open-source web application framework for Node. js. It is used for designing and building web applications quickly and easily.

MongoDB is a general-purpose document database designed for modern application development and for the cloud.

What is Mobile-First

Mobile First Approach refers to the practice of designing or developing an online experience for mobile before designing for desktop web or any other device.

What is mobile web

Mobile web involves accessing websites via smartphones and tablets. It is an entirely distinct media.

jQuery Mobile Framework

JQuery Mobile is a user interface framework, built on jQuery Core and used for developing responsive websites or applications that are accessible on mobile, tablet, and desktop devices.

AWS cloud

AWS (Amazon Web Services) is a comprehensive, evolving cloud computing platform provided by Amazon that includes a mixture of IaaS, PaaS and SaaS offerings.

AWS applications

AWS provides on-demand access to scalable web and application servers, storage, databases, content delivery, cache, search.

Advantages of AWS

AWS enables you to select the operating system, programming language, web application platform, database, and other services you need

AWS storage

Amazon FSx. Fully managed, cost-effective file storage offering the capabilities and performance of popular commercial and open-source file systems