

Custom HTML5| CSS3|JavaScript|Typescript

Delivery Plan

- 4 Hours Daily Session
- 2.5 Hours Delivery Session on day wise agenda
- 15 Min Tea Break
- 1 Hour Class Assessments (Participants will perform)
And during that time some of Participants can ask their doubts.
- 15 Min Qubit Test

HTML5 **(40 Hours)**

Session-1

An Introduction to Web Development

- Intro to the Web
- The Request/Response Cycle
- Front-End and Back-End
- What do HTML/CSS/JS do?
- The HTML5 Advantages
- HTML vs. HTML5
- Setting Up Our Developer Environment
- Editors: VSCode, Atom, IntelliJ, Notepad++, Sublime.

2. HTML5 Basics

- HTML Structure
- Setting Up Live Server (VSCode Extension)
- HTML Boilerplate
- Doctype & Basic Layout
- Meta Tags & Search Engines

Assesment-1

- Create a Web page including HTML basic skeleton using Offline HTML Editor and Online Sandbox Environment

Session-2

HTML5 Basics

- Headings, Paragraphs & Typography
- Links, Images & Attributes
- Lists & Tables

Assesment-2

- Create a Tribute Page
- Create a Table that represent Assessment Book Records

Session-3

HTML5 Basics

- Block & Inline Level Elements
- Divs & Spans, Classes & Ids
- HTML Entities
- Introduction to the Chrome Inspector

Assesment-3

- Create a Web Page Layout using div tags
- Deploy your First Web-Page on Git-Hub

Session-4

Semantic Markup and Selector APIs

- What Exactly Is HTML5?
- Semantic Markup
- Playing With Semantic Elements
- Screen Reader Demonstration

Assesment-4

- Create a Full screen Landing Page
- Create Page Layout using Semantic tags

Session-5

The Canvas API

- Introduction
- Understanding
- Browser Support & Alternate Content
- Working with Canvas

Assesment-5

- Create a Games Screen using CANVAS API

Session-6

Scalable Vector Graphics in HTML5

- Overview
- Working with SVG in HTML5

Assessment- 6

- Create Games Objects using SVG

Session-7

Multimedia in HTML5

- Introduction to Multimedia
- Codecs and Containers
- Browser support for Audio/Video
- Working with Audio/ Video Elements

Assessment- 7

- Create a web Page with multimedia content

Session-8

Working with Forms API

- Overview of Forms
- The Input Catalog
- Common Input Types
- HTML5 Input Types
- HTML5 Form Attributes and Functions

Assessment- 8

- Create a basic form to collect user data

Session-9

Working with Forms API

- Functional Forms
- HTML5 Input Types
- Validating Form Elements in HTML5

Assessment- 9

- Create a Good Vibes Form for Collecting User Input

Session-10

HTML5 Advance Features

- Geolocation
- WebStorage
- HTML5 - Application Cache
- HTML5 for Mobile Phones

Assessment- 10

- Create a Page with Live Clock, with Dynamic Greeting Background and
- Data Stored in Browser Local Storage

CSS3
(24Hours)

Session-11

1. Introduction to CSS3

- Brief Description
- Writing CSS
- Browser-specific Prefixes
- Adding Comments to a CSS

2. Basic Selectors

- Understanding Selectors
- The Document Object Model (DOM)
- Using DOCTYPE
- Types of Selectors
- Grouping Selectors
- Styling Links
- Playing with Cursor

Assessment- 11

- Style the Tribute Page with css

Session-12

3. Working with Sizes, Colors and Files

- Sizes and Measuring Units
- Exploring Colors
- Background Images

4. Styling Text

- Working with Fonts
- Dealing with Line Spacing
- Changing the Text Color
- Text Formatting
- Adding Text Shadows

5. Background, Borders and Shadows

- CSS Background
- Adding Multiple Images to the Background
- Defining Borders
- Additional Border Properties
- Using Border Images
- Adding Drop Shadows
- Outline Styling

Assessment- 12

- Style the Fullscreen Landing Page

Session-13

6. Gradients without Images

- Understanding Gradients
- Creating Linear Gradients
- Creating Radial Gradients
- Repeating Gradients
- Using Multiple Gradients

7. Advanced Selectors

- Why Advanced Selectors
- First, Last and Only Child Instances
- Styling Selectors Based on Positions
- Styling Selectors Based on Relationships
- Styling Selectors Based on States
- Negative Selectors
- Other Pseudo Classes

Assessment- 13

- Create a Custom Price Table Template

Session-14

8. Transforms and Transitions

- Transforms in CSS3
- CSS3 Transitions
- Adding Transformation to the Transition

9. Animating Elements with Keyframes

- Animation vs. Transitions
- Creating Animations Using Keyframes
- Setting the Animation Direction
- Setting the Speed Curve of Animation

Assessment- 14

- Create an animation Loader

Session-15

10. Elements Positioning

- Understanding the Elements Positioning
- Positioning Types
- Positioning Elements
- Creating Tooltips
- Drop Down Menus
- Masking an Absolutely Positioned Element

11. Working with Layouts

- Introduction to CSS Box Model
- Setting Element Dimensions
- Paddings and Margins
- Changing Layout with display
- Controlling Visibility
- Floating Elements

Assessment- 15

- Create a Card Layout using CSS layout properties

Session-16

12. Multi-Column Layouts with CSS3

- The Multi-Column Layout
- Multi-Column Properties
- Dealing with Column Breaks

13. Dealing with Cross Browser Layouts

- Creating Columnar Layouts using float
- Introducing Flexbox

14. Media Queries

- Understanding Media Queries
- Specifying Media Queries
- Setting Viewport
- Handling Images with Media Queries

Assessment- 16

- Create a Responsive Side-Bar Navigation Menu

JavaScript
(40 Hours)

Session-17

1. Introduction to JavaScript

- Introduction to web development and JavaScript
- How to create a JavaScript application
- How to test and debug a JavaScript application
- XHTML
- CSS

2. JavaScript Basics

- How to get input and displays output
- Primitives & The Console
- JavaScript Numbers
- What is NaN
- Variables & Let
- Updating Variables
- Const & Var
- Booleans
- Variable Naming and Conventions

Assessment- 17

- Create a Counter Page using JavaScript

Session-18

3. JavaScript Strings and More

- Introducing Strings
- Indices & Length
- String Methods
- String Methods with Arguments
- String Template Literals -SUPER USEFUL
- Undefined & Null
- Random Numbers & The Math Object

Assessment- 18

- Receive data from the Form and display on the Page

Session-19

4. JavaScript Decision Making

- Decision Making With Code??
- Comparison Operators
- Equality: Triple Vs. Double Equals
- Console, Alert, & Prompt
- Running JavaScript From A Script!
- If Statements
- Else-If
- Else
- Nesting Conditionals
- Nested Conditionals Practice
- Truth-y & False-y Values
- Logical AND
- Logical AND Mystery Exercise
- Logical OR
- Logical NOT
- The Switch Statement Is...A Lot

5. Loops

- Types of Loops
- Looping Over Arrays
- Nested Loops
- The Break Keyword
- The Lovely For...Of Loop
- Iterating Over Objects

Assessment- 18

- Create a Page with Live Clock, with Dynamic Greeting Background

Session-20

6. JavaScript Arrays

- Introducing Arrays
- Array Random Access
- Push & Pop
- Shift & Unshift
- Concat, indexOf, includes & reverse
- Slice & Splice
- Multi-Dimensional Arrays
- Nested Arrays Exercise

Assessment- 20

- Create an HTML page with Multi-Step Form

Session-21

7. JavaScript Functions

- Intro to Functions
- Our Very First Function
- Arguments Intro
- Functions With Multiple Arguments
- The Return Keyword
- Function Scope
- Block Scope
- Lexical Scope
- Function Expressions
- Higher Order Functions
- Returning Functions
- Defining Methods
- The Mysterious Keyword 'this'

Assessment- 21

- Create an HTML Form and Validate it with Javascript

Session-22

8. Callbacks & Array Methods

- The forEach Method
- The map Method
- Intro to Arrow Functions
- Arrow Function Exercise
- Arrow Function Implicit Returns
- Arrow Functions Wrapup
- setTimeout and setInterval
- The filter Method

Assessment- 22

- Image Carosusel using JavaScript

Session-23

9. DOM Scripting

- Basic DOM scripting
- event handling
- DOM manipulation
- How to script CSS
- How to script tables and forms
- Animation with DOM scripting

Assessment- 23

- Create Dynamic table and receive data from Firebase Database

Session-24

10. Asynchronous JavaScript: Promises, Async/Await and AJAX

- An Example of Asynchronous JavaScript
- Asynchronous JavaScript: The Event Loop
- Asynchronous JavaScript with Callbacks
- From Callback Hell to Promises
- From Promises to Async/Await
- AJAX and APIs
- Making AJAX Calls with Fetch and Promises
- Making AJAX Calls with Fetch and Async/Await

Assessment- 24

- Integrating a Covid API

Session-25

11. JavaScript: Advance JavaScript(ES6)

- What's new in ES6
- Variable Declarations with LET and CONST
- Strings in ES6
- Arrow Functions: Basics
- Arrow Functions: Lexical 'this' Keyword
- DE structuring
- Arrays in ES6
- The Spread Operator
- Rest Parameters
- Default Parameters
- Classes
- Inheritance
- Modules
- Named and Default Exports

Assessment- 25

- Assessment based on above topics

Session-26

12. Packaging JavaScript for Production Deployment

- Understanding Transpiler and Module bundling
- Creating Separate Packages for Cross Browser Support
- Introducing Node JS
- What Is Node Used For?
- Installing Node
- Introducing NPM
- Installing Packages - Jokes & Rainbow
- Adding Global Packages
- The All-Important Package.json
- Installing All Dependencies For A Project

Assessment- 26

- Deploy your Website on Git and netlify

Assessments for Typescripts is still under process.

TYPESCRIPT
(24Hours)

Session-27

1. Getting Started with Typescript

- What is typescript?
- Typescript installation
- Installing Typescript
- First Program

Session-28

2. Basics

- Variables
- Types and Types Assertions
- Number and Booleans
- Tuples and enums

Session-29

3. Arrays and Functions

- Arrays and Types
- Functions in TS
- Arrow Functions

Session-30

4. Getting started with OOPS concepts

- Creating Classes and class properties
- Methods
- Access Modifiers
- Constructor

Session-31

- Getters and Setters
- Static properties and methods
- Inheritance
- Interfaces

Session-32

5. Modules and Namespaces

- Introduction to Namespaces
- Namespaces Import
- Loading modules
- Importing and Exporting Modules