Advanced JavaScript With TypeScript

Duration: 24 Hours (3 Days)

Overview

The Advanced JavaScript With TypeScript course is designed to provide a comprehensive understanding of sophisticated JavaScript concepts, going beyond the basics to explore objects, functions, Asynchronous patterns, ES6 features, and the powerful typing system of TypeScript. In Module 1: Advanced JavaScript: Objects and Functions, learners delve into Object-oriented programming in JavaScript, examining Inheritance, the Prototype chain, and the distinctions between primitives and objects. They also learn about first-class functions, including how to pass functions as arguments and use them as return values, as well as the utility of Immediately Invoked Function Expressions (IIFEs).As the course progresses through modules on Asynchronous JavaScript and ES6, participants are equipped to write more maintainable and efficient code. Module 4: TypeScript introduces TypeScript advanced concepts, enhancing JavaScript with Static typing, and covering object-oriented principles in TypeScript, including Classes, Interfaces, and Access modifiers. This course is ideal for those aiming to master modern JavaScript development, ensuring they are well-versed in TypeScript advanced features to improve code quality and collaboration in complex projects.

Audience Profile

The Advanced JavaScript with TypeScript course equips developers with cutting-edge web programming skills and modern best practices.

- Target Audience for the Advanced JavaScript with TypeScript Course:
- Front-end Developers
- Full-stack Developers
- Web Developers
- Software Engineers
- JavaScript Developers
- UI/UX Developers
- Technical Lead Managers
- Application Developers
- System Architects
- DevOps Engineers (who want to understand front-end development)
- Computer Science Students
- IT Professionals looking to upskill in advanced web technologies
- Freelancers seeking to expand their JavaScript and TypeScript proficiency

Course Syllabus

Module 1: Advanced JavaScript: Objects and Functions

- Object: Inheritance and the Prototype Chain o Creating Objects: Function
- Constructors
- The Prototype Chain in the Console
- Creating Objects: Object. Create
- Primitives vs. Objects
- First Class Functions: Passing Functions as Arguments

- First Class Functions: Functions Returning Functions
- Immediately Invoked Function Expressions (IIFE)

Module 2: 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

Module 3: JavaScript ES6

- Variable Declarations with LET and CONST o Strings in ES6
- Arrow Functions
- DE structuring
- Arrays in ES6
- The Spread Operator o Rest Parameters
- Default Parameters
- Classes

Module 4: TypeScript

- What is typescript?
- Typescript installation
- TypeScript vs. JavaScript o OOPs in TypeScript
- Creating Classes and class properties
- Methods
- Access Modifiers
- Constructor
- Getters and Setters
- Static properties and methods
- Inheritance
- Interfaces