

SoftLogics JavaScript Syllabus (Arun Raj)

1. Introduction to JavaScript

- 1.1 What is JavaScript?
- 1.2 Role of JavaScript in Web Development
- 1.3 Setting Up the Environment (Browser Console, Code Editors)
- 1.4 JavaScript Syntax and Structure

2. Basics of JavaScript

- 2.1 Variables and Constants (var, let, const)
- 2.2 Data Types (String, Number, Boolean, Undefined, Null, Object)
- 2.3 Operators (Arithmetic, Assignment, Comparison, Logical)
- 2.4 Conditional Statements (if, else, else if, switch)
- 2.5 Loops (for, while, do-while, for...in, for...of)

3. Functions in JavaScript

- 3.1 Defining and Calling Functions
- 3.2 Function Parameters and Return Values
- 3.3 Arrow Functions (=>)
- 3.4 Callback Functions
- 3.5 IIFE (Immediately Invoked Function Expression)

4. JavaScript Objects

- 4.1 Introduction to Objects
- 4.2 Object Properties and Methods
- 4.3 Object Destructuring
- 4.4 Object-Oriented Programming Concepts
 - 4.4.1 Classes and Constructors
 - 4.4.2 Prototypes and Inheritance

5. Arrays and Array Methods

- 5.1 Creating and Accessing Arrays
- 5.2 Common Array Methods (push, pop, shift, unshift)
- 5.3 Advanced Array Methods (map, filter, reduce, forEach)
- 5.4 Multidimensional Arrays

6. DOM Manipulation

- 6.1 What is the DOM?
- 6.2 Selecting Elements (getElementById, querySelector, etc.)
- 6.3 Changing Element Content and Styles
- 6.4 Adding and Removing Elements (appendChild, removeChild)
- 6.5 Event Handling (addEventListener, Inline Events)

7. JavaScript Events

- 7.1 Mouse Events (click, dblclick, mouseover, etc.)
- 7.2 Keyboard Events (keydown, keyup)
- 7.3 Form Events (submit, change, input)
- 7.4 Event Bubbling and Capturing

8. JavaScript Error Handling

- 8.1 Understanding Errors in JavaScript
- 8.2 try, catch, finally Blocks
- 8.3 Throwing Custom Errors

9. Advanced JavaScript Concepts

- 9.1 Closures and Scope
- 9.2 Asynchronous JavaScript
 - 9.2.1 Callbacks
 - 9.2.2 Promises
 - 9.2.3 async and await
- 9.3 ES6+ Features
 - 9.3.1 Template Literals
 - 9.3.2 Destructuring
 - 9.3.3 Default Parameters
 - 9.3.4 Spread and Rest Operators

10. JavaScript APIs

- 10.1 Introduction to Browser APIs
- 10.2 Working with the fetch API
- 10.3 Local Storage and Session Storage
- 10.4 Geolocation API
- 10.5 Working with JSON

11. Debugging and Best Practices

- 11.1 Debugging in the Browser
- 11.2 Using console.log and Breakpoints
- 11.3 Writing Clean and Modular Code
- 11.4 Avoiding Common Mistakes

12. Introduction to Frameworks and Libraries

- 12.1 What are JavaScript Frameworks and Libraries?
- 12.2 Introduction to jQuery
- 12.3 Overview of Modern Frameworks (React, Angular, Vue.js)

13. Project

- 13.1 Building an Interactive Web Page
- 13.2 Implementing Dynamic Content with JavaScript
- 13.3 Using APIs for Data Fetching
- 13.4 Adding Event Handling and DOM Manipulation