

# Learnathon 2.0

## Class-1: Course Introduction and JS Fundamentals

### Topics:

- ✓ Why this course?
- ✓ What is JS?
- ✓ JS in browsers
- ✓ JS Engine
- ✓ Compiler and Interpreter
- ✓ Just in Time Compiler
- ✓ Basic idea about ES6

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## Class-2: JS Fundamentals

### Topics:

- ✓ JS variables and types
- ✓ JS Control Flow (Looping)
- ✓ Functions, Arrow Functions, Objects and Array
- ✓ JS scoping, hoisting
- ✓ Execution Context
- ✓ Polyfilling
- ✓ This keyword in JS

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## Class-3: Introduction to DOM and storage

### Topics:

- ✓ What is DOM?
- ✓ Basic DOM manipulation Techniques with example
- ✓ Query Selectors
- ✓ Event capturing and bubbling
- ✓ Event delegation and propagation
- ✓ Cookies, local and session storage

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## Class-4: Asynchronous JS

### Topics:

- ✓ What does this asynchronous term mean?
- ✓ Async/await keyword
- ✓ Callback
- ✓ Event Loop
- ✓ Callback Hell
- ✓ Promise
- ✓ Promise changing

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## Class-5: OOP concept in JS

### Topics:

- ✓ What is OOP?
- ✓ Class in JS
- ✓ Factory Pattern
- ✓ Constructor Pattern
- ✓ New Keyword in JS
- ✓ Getter/Setter method in JS
- ✓ Prototype and prototypical Inheritance
- ✓ Multi-level Inheritance

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## Class-6: Deep concepts of Objects and Functions

### Topics:

- ✓ Object creation, Object cloning, delete object property
- ✓ Deep copy and shallow copy
- ✓ Object destructuring
- ✓ Private properties and methods in an object
- ✓ Behavior of this inside of an object
- ✓ Global this
- ✓ Object key value pair concept
- ✓ Deep concept of spread operator
- ✓ Pure function
- ✓ Higher Order function
- ✓ Call, bind, apply

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## Class-7: ES6 to ES10 Features

### Topics:

- ✓ What is ES6 and tooling?
- ✓ Let, Const, Literals and Destructuring
- ✓ Spread Operator, rest and Default Parameter
- ✓ Find, fill
- ✓ for of and for in
- ✓ Maps and Sets
- ✓ Number, Math
- ✓ Modules, string padding
- ✓ Array.flat() and Array.flatMap()
- ✓ Optional chaining and Nullish Coalescing Operator
- ✓ Exponential Operator and Trailing Comma



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## Class-8: JS Error Handling and others

### Topics:

- ✓ Introduce to different types of errors
- ✓ Try-catch-finally
- ✓ Custom Error Throw
- ✓ Garbage Collection
- ✓ Memory Leak
- ✓ Recall asynchronous JS