

# JavaScript Course Structure

## Cynohub

☰ Tags

### Javascript Fundamentals

1. Hello World Program
2. Linking JS File to HTML document
3. Variables
4. Data types
5. Let, Const & var
6. Operators
7. Operator Precedence
8. Strings & Template literals
9. String methods and String Manipulation
10. Type conversion ( coercion )
11. Logical Operators
12. Switch Statement
13. Expressions ( BODMAS )

### Javascript Fundamentals - Part 2

1. Activating Strict mode
2. Introduction to Functions
3. Introduction to Arrays

4. Array Methods
5. Math & Rounding Methods
6. Introduction to Objects
7. Dot vs Bracket Notation
8. Object Methods
9. Loops ( For Loop & While loop )
10. Iterating through Arrays
11. Break & Continue in array loops
12. Looping Object Keys, Values & entries

## **DOM & Event Fundamentals**

1. What is DOM & DOM Manipulation
2. Selecting & Manipulating Elements
3. Creating & Deleting elements
4. Styles, attributes & classes
5. Lifecycle DOM Events & Event Handlers ( Basic Event Handlers )
6. Passing arguments to event handlers
7. Intersection observer API
8. Handling Click events
9. Handling keyboard events
10. Introduction to Classes

## **JavaScript Behind the Scenes**

1. JavaScript Engine

2. Javascript Runtime
3. Execution Context & Call Stack
4. Scope & the Scope chain
5. scoping in practice
6. Hoisting
7. Temporal Dead Zone ( TDZ )
8. `this` keyword & examples
9. Regular functions vs arrow functions
10. Primitives vs Objects

## Data Structures

1. Destructuring arrays
2. Destructuring objects
3. Spread operator
4. Enhanced object literals
5. Sets
6. Maps & Iterations
7. Which Data Structure to use in difference scenarios

## Functions Deep Dive

1. Pass by Value & Pass By Reference
2. First Class & Higher order functions
3. Callback Functions
4. Call & Apply methods

5. The bind method
6. Immediately invoked function expressions.
7. Closures

## **Arrays Deep Dive**

1. Looping Arrays with Maps & Sets
2. Creating DOM Elements with Array information
3. Data transformations : Map, filter & reduce
4. Map Method
5. Filte Method
6. Reduce method
7. Find & FindIndex method
8. Some, every, flat & flatMap methods
9. Sorting Arrays

## **Dates & Timers**

1. Creating Dates
2. Operations with Dates
3. SetTimeout & SetInterval
4. Creating a countdown timer

## **Object Oriented Programming with JavaScript**

1. OOPS concepts

2. Constructor functions & **new** operator
3. Prototypes
4. Prototypal inheritance    Prototype chain
5. ES6 Classes
6. setters & getters
7. static methods
8. Object.create
9. Inheritance & use cases
10. Encapsulation : Concept & Use Cases
11. Encapsulation: Protected Properties and Methods
12. Encapsulation: Private Class Fields and Methods
13. Chaining Methods

## **Asynchronous JavaScript: Promises, Async/Await**

1. Request & Response
  2. Callback hell
  3. Promises
  4. The Event loop
  5. Getting Data through API
  6. Consuming Promises with Async/Await
  7. Handling errors with try & catch
  8. Returning values from async functions
  9. Returning promises in parallel
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## **3 Projects in JavaScript**