**JavaScript Beginning to Mastery Syllabus**

(Beginner to Next Level Concepts)

* JavaScript vs EcmaScript
* Install vscode and run first program

1. **Basics of Programming in JavaScript:**
2. [Hello world program](https://github.com/Mohsin-Analyst/Javascript/blob/main/js-files/1.js)
3. [Variable Declaration](https://github.com/Mohsin-Analyst/Javascript/blob/main/js-files/2.js)
4. [String Indexing](https://github.com/Mohsin-Analyst/Javascript/blob/main/js-files/3.js)
5. [Useful string methods](https://github.com/Mohsin-Analyst/Javascript/blob/main/js-files/4.js)
6. [Template Strings](https://github.com/Mohsin-Analyst/Javascript/blob/main/js-files/5.js)
7. [Primitive Data Types](https://github.com/Mohsin-Analyst/Javascript/blob/main/js-files/6.js)
8. [Non-Primitive Data Types](https://github.com/Mohsin-Analyst/Javascript/blob/main/js-files/7.js)
9. [Operators](https://github.com/Mohsin-Analyst/Javascript/blob/main/js-files/8.js)
10. [Truthy and Falsy Values](https://github.com/Mohsin-Analyst/Javascript/blob/main/js-files/9.js)
11. [Conditionals & nested conditions](https://github.com/Mohsin-Analyst/Javascript/blob/main/js-files/10.js)
12. [Ternary Operator](https://github.com/Mohsin-Analyst/Javascript/blob/main/js-files/11.js)
13. [&& || operators](https://github.com/Mohsin-Analyst/Javascript/blob/main/js-files/12.js)
14. [Switch statement](https://github.com/Mohsin-Analyst/Javascript/blob/main/js-files/13.js)
15. [Loops (while, do while, for, forEach, for of, for in)](https://github.com/Mohsin-Analyst/Javascript/blob/main/js-files/14.js)
16. [Break and continue keyword](https://github.com/Mohsin-Analyst/Javascript/blob/main/js-files/15.js)
17. **Arrays in JavaScript:**
18. [Intro to arrays](https://github.com/Mohsin-Analyst/Javascript/blob/main/js-files/16.js)
19. [Push pop shift unshift splice](https://github.com/Mohsin-Analyst/Javascript/blob/main/js-files/17.js)
20. [Clone array & spread operator](https://github.com/Mohsin-Analyst/Javascript/blob/main/js-files/18.js)
21. [Array Destructuring](https://github.com/Mohsin-Analyst/Javascript/blob/main/js-files/19.js)
22. **Objects in JavaScript:**
23. [Intro to objects](https://github.com/Mohsin-Analyst/Javascript/blob/main/js-files/20.js)
24. [Dot vs Bracket Notation](https://github.com/Mohsin-Analyst/Javascript/blob/main/js-files/21.js)
25. [Object iterations](https://github.com/Mohsin-Analyst/Javascript/blob/main/js-files/22.js) (For in loop & Object.keys method)
26. [Computed properties](https://github.com/Mohsin-Analyst/Javascript/blob/main/js-files/23.js)
27. [Spread operator in objects](https://github.com/Mohsin-Analyst/Javascript/blob/main/js-files/24.js)
28. [Object Destructuring](https://github.com/Mohsin-Analyst/Javascript/blob/main/js-files/25.js)
29. [Objects inside an Array](https://github.com/Mohsin-Analyst/Javascript/blob/main/js-files/26.js)
30. [Nested Destructuring](https://github.com/Mohsin-Analyst/Javascript/blob/main/js-files/27.js)
31. **Functions in JavaScript:**
32. [Function declaration](https://github.com/Mohsin-Analyst/Javascript/blob/main/js-files/28.js)
33. [Function Expression](https://github.com/Mohsin-Analyst/Javascript/blob/main/js-files/29.js)
34. [Arrow Functions](https://github.com/Mohsin-Analyst/Javascript/blob/main/js-files/30.js)
35. [Function declarations are hoisted](https://github.com/Mohsin-Analyst/Javascript/blob/main/js-files/31.js)
36. [Function inside function](https://github.com/Mohsin-Analyst/Javascript/blob/main/js-files/32.js)
37. [Lexical Scope](https://github.com/Mohsin-Analyst/Javascript/blob/main/js-files/33.js)
38. [Block Scope Vs Function Scope](https://github.com/Mohsin-Analyst/Javascript/blob/main/js-files/34.js)
39. [Default Parameters](https://github.com/Mohsin-Analyst/Javascript/blob/main/js-files/35.js)
40. [Rest Parameters](https://github.com/Mohsin-Analyst/Javascript/blob/main/js-files/36.js)
41. [Parameter Destructuring](https://github.com/Mohsin-Analyst/Javascript/blob/main/js-files/37.js)
42. [Very brief intro to callback functions](https://github.com/Mohsin-Analyst/Javascript/blob/main/js-files/38.js)
43. [Functions returning Functions](https://github.com/Mohsin-Analyst/Javascript/blob/main/js-files/39.js)
44. **Array Methods in JavaScript:**
45. Foreach method
46. Map method
47. Filter
48. Reduce
49. Sort
50. Find
51. Every
52. Some
53. Fill method
54. Splice method
55. **More useful things in JavaScript:**
56. Iterables
57. Sets
58. Maps
59. Object.assign
60. Optional chaining
61. **OOP in JavaScript / Prototypal Inheritance:**
62. Methods
63. This keyword, Window object
64. Call, apply & bind method
65. Some warnings
66. This inside arrow functions
67. Short syntax for methods
68. Factory functions & discuss some memory related problems
69. First solution to that problem
70. Why that solution isn’t that great
71. What is \_\_proto\_\_ , [[prototype]]
72. What is prototype
73. Use prototype
74. New keyword
75. Constructor function with new keyword
76. More discussion about proto and prototype
77. Class keyword
78. Example using class keyword
79. Super keyword
80. Method overriding
81. Getters and setters
82. Static methods and properties

1. **How JavaScript Works:**
2. Global Execution context
3. This and window in global execution context
4. Hoisting
5. Are let and const are hoisted? What is a reference Error?
6. Function execution context
7. Scope chain and lexical environment
8. **Closures in JavaScript:**
9. Intro to closures
10. Closure example 1
11. Closure Example 2
12. Closure Example 3
13. **DOM in JavaScript:**
14. HTML and CSS (Around 30-40 minutes)
15. Async vs defer
16. Select elements using id
17. querySelector
18. textContent & innerText
19. Change the styles of elements using js
20. Get and set attributes
21. Select multiple elements and loop through them
22. innerHTML
23. Deeply understand dom tree, root node , element nodes, text nodes
24. classList
25. Add new elements to page
26. Create elements
27. Insert adjacent elements
28. Clone nodes
29. More methods to add elements on page
30. How to get the dimensions of the element
31. **Events in JavaScript:**
32. Intro to events
33. This keyword inside eventListener callback
34. Add events on multiple elements
35. Event object
36. How event listener works
37. Practice with events
38. Create demo project
39. More events
40. Event bubbling
41. Event Capturing
42. Event delegation
43. Create project using event delegation
44. **Asynchronous JavaScript:**
45. Is Javascript a synchronous or asynchronous programming language ?
46. SetTimeout()
47. SetTimeout() with 0 millisecond
48. Callback Queue
49. SetInterval and create little project with setInterval
50. Understand callbacks in general
51. Callbacks in asynchronous programming
52. Callback Hell and Pyramid of dom
53. **Promises & Network Requests:**
54. Intro to promises
55. Microtask Queue
56. Function that returns promise
57. Promise and settimeout
58. Promise.resolve and more about then method
59. Convert nested Callbacks to flat code using promises
60. Intro to Ajax, HTTP Request
61. XHR requests
62. Error handling in XHR requests
63. XHR request Chaining
64. Promisifying XHR requests and chaining using then method
65. Fetch API
66. Error Handling in Fetch API
67. Consume Promises with async and Await
68. **ES6 (ES2015) Modules:**
69. Split code into multiple files using ES6 modules.
70. Congratulations
71. Now you know javascript in Great Details
72. What next?