JS Theoretical Resources

Difficulty Level: Easy Medium & Hard (Day wise)

EASY STARTS

DAY 1

Topic 1 : Basic JS

☆ **What are the pros and cons of for loop**

☆ *Is JavaScript a compiled or interpreted language*

☆ *Is JavaScript a case-sensitive language*

☆ *What is the difference between == and === operators*

☆ *What is the use of preventDefault method*

☆ *Why is JavaScript treated as Single threaded*

☆ *What is ECMAScript*

☆☆ *What is eval*

☆☆ **How do you display the current date in javascript**

☆☆ **How do you compare two date objects**

☆ **What are break and continue statements**

☆ **What is a conditional operator in javascript**

☆ **What are various operators supported by javascript**

☆ **What is the purpose of switch-case**

☆ **What are primitive data types**

☆ **What are the two types of loops in javascript**

☆☆ **What is a comma operator**

☆☆ **What is the advantage of a comma operator**

☆ **What are the different methods to find HTML elements in DOM**

☆ **What is V8 JavaScript engine**

☆ **Why do we call javascript as dynamic language**

☆☆ **What is a void operator**

☆ **What is the difference between internal and external javascript**

☆☆ **What are the different ways to deal with Asynchronous Code**

Topic 2 : var,let,const & Variables

☆ *What is the purpose of the let keyword*

☆ *What is the difference between let and var*

☆ *What is the reason to choose the name let as a keyword*

☆ *How do you redeclare variables in switch block without an error*

☆☆ *What are the differences between undeclared and undefined variables*

☆ *What are global variables*

☆ *What are the problems with global variables*

☆ *What is NaN property*

☆ *What are the benefits of keeping declarations at the top*

☆ *What are the benefits of initializing variables*

☆ *What is the precedence order between local and global variables*

☆ *Can I redeclare let and const variables*

☆ *Is const variable makes the value immutable*

Topic 3 : Scope Chain, Scoping

☆☆ *What is scope in javascript*

Topic 4 : String Manipulation

☆☆ *How do you make first let er of the string in an uppercase*

☆☆ *How do you trim a string in javascript*

☆☆ *How do you trim a string at the beginning or ending*

☆☆ *How do you check whether a string contains a substring*

Topic 5 : Strict Mode

☆☆ *What is a strict mode in javascript*

☆☆ *Why do you need strict mode*

☆☆ *How do you declare strict mode*

Topic 6 : Array methods

Topic 7 : Null vs undefined
☆ **What is undefined property**
☆ **What is null value**
☆☆ **What is the dif erence between null and undefined**

Topic 8 : Decorator

Topic 9 : Event Loop, Queue ,Callstack, heap, event table

Topic 10 : Cookies, Session, Local Storage

☆☆ **What is a cookie**
☆☆ **Why do you need a Cookie**

☆☆ **How do you delete a cookie**

☆☆ **Why do you need web storage**

Topic 11 : Async await

Topic 12 : SetTimeout, SetInterval
☆☆ **What is the use of setTimeout**
☆☆ **What is the use of setInterval**
☆☆ **What is the purpose of clearTimeout method**
☆☆ **What is the purpose of clearInterval method**

Topic 13 : Generators

Topic 14 : Currying

Topic 15 : Regex

Topic 16 : Objects & Oops

☆☆ *What are the possible ways to create objects in JavaScript*

☆☆ *What is the purpose of delete operator*

☆☆ *How do you loop through or enumerate javascript object*
☆☆ *How do you test for an empty object*
☆☆ *How do you add a key value pair in javascript*

☆☆ *What are the different ways to access object*

properties

☆ *What are classes in ES6*
☆☆ *What is a constructor method*

☆☆ *How do you call the constructor of a parent class*
☆☆ *How do you extend classes*

Topic 17 : Spread-Rest Operator

Topic 18 : Destructuring

Topic 19 : Template Literals
☆ *What are template literals*

Topic 20 : Callback & Callback Hell
☆☆ *What is a callback function*

Topic 21 : Ajax

Topic 22 : Inbuilt Methods

DAY 2

Topic 23 : Call, bind, apply
☆☆ *What is the difference between Call, Apply and Bind*

Topic 24 : Closures
☆☆ *What are closures*

Topic 25 : HOF, FCF,FOF & Functions

☆☆ *What is an anonymous function*

☆☆ *What are default parameters*
☆☆ *What is the difference between a parameter and an argument*

Topic 26 : JS Errors & Error Handling

☆☆ *When you get a syntax error*

Topic 27 : Event Propagation, Bubbling, Capturing

Topic 28 : JS Arrays

☆☆ *How do you combine two or more arrays*

☆ *How do you empty an array*

Topic 29 : Function Borrowing

Topic 30 : JS Reduce function

Topic 31 : JS unshift
☆☆ Explain use of unshift with example

Topic 32 : Lambda/Arrow Function
☆☆ What are lambda or arrow functions

Topic 33 : Hoisting
☆☆ What is Hoisting

Topic 34 : Promise & Promise.all
☆☆ What is a promise
☆☆ Why do you need a promise
☆☆ What are the three states of promise

Topic 35 : Fetch, Axios

Topic 36 : IIFE
☆☆ What is IIFE(Immediately Invoked Function Expression)

Topic 37 : ES6

☆☆ What is ES6

Topic 38 : Prototypes, Prototype Chain, Prototype Inheritance

☆☆ Do all objects have prototypes

Topic 39 : Coercions

Topic 40 : JS Validations

Topic 41 : Object.freeze vs Object.seal vs const

☆☆ *How do you get enumerable key and value pairs*
☆☆ *How can you get the list of keys of any object*

Topic 42 : new keyword

Topic 43 : this keyword

Topic 44 : Transpilling
Answer in meta material

Topic 45 : Temporal Dead Zone

Topic 46 : Callback Hell

Topic 47 : Map & Weakmap, Weakset & set

Topic 48 : Pass by ref vs Pass by value

☆☆ *Explain pass by value vs pass by reference with example*

Topic 49 : JSON

☆☆ *What is JSON*
☆☆ *What are the syntax rules of JSON*
☆☆ *Why do you need JSON*

Topic 50 : Pure Function

Topic 51 : Memoization

Topic 52 : Babel
☆☆ **What is babel**

Topic 53 : JS Debugging

Topic 54 : Miscellaneous

☆☆ **What is the benefit of using modules**
☆☆ **What are modules**
☆☆ **Why do you need modules**

☆☆ **What is typeof operator**
☆☆ **What is the dif erence between window and document**

☆☆ **How do you change style of a HTML element**
☆☆ **What would be the result of 1+2+'3'**

<u>MEDIUM STARTS</u>

<u>DAY 3</u>

Topic 1 : Basic JS

☆☆☆ **Can you apply chaining on conditional operator**
☆☆☆ <u>**What are the differences between for...of and for...in statements**</u>

Topic 2 : var,let,const & Variables

Topic 3 : Scope Chain, Scoping

Topic 4 : String Manipulation

☆☆☆ <u>***How do you check if a string starts with another string***</u>

☆☆☆ ***How do you define multiline strings***

Topic 5 : Strict Mode

Topic 6 : Array methods

☆☆☆ <u>***What is the purpose of the array slice method***</u>

☆☆☆ ***What is the purpose of the array splice method***

☆☆☆ *What is the difference between slice and splice*

Topic 7 : Null vs undefined

Topic 8 : Decorator
☆☆☆☆ *What is a decorator*

Topic 9 : Event Loop, Queue ,Callstack, heap, event table
☆☆☆ *What is an event loop*
☆☆☆ *What are tasks in event loop*
☆☆☆ *What is call stack*
☆☆☆ *What is an event queue*
☆☆☆ *What is heap*
☆☆☆ *What is an event table*

Topic 10 : Cookies, Session, Local Storage
☆☆☆ *What is web storage*

☆☆☆ *What are the options in a cookie*

☆☆☆ *What are the dif erences between cookie, local storage and session storage*
☆☆☆ *What is the main dif erence between localStorage and sessionStorage*
☆☆☆ *How do you access web storage*
☆☆☆ *What are the methods available on session storage*

Topic 11 : Async await
☆☆☆ *What is an async function*

Topic 12 : SetTimeout, SetInterval

Topic 13 : Generators

☆☆☆ *What are the dif erent kinds of generators*
Explain generators with code

Topic 14 : Currying

☆☆☆ **What is the currying function**

Topic 15 : Regex

☆☆☆ *What is a Regular Expression*
☆☆☆ **What are the string methods available in Regular expression**
☆☆☆ *What are modifiers in regular expression*
☆☆☆ **What are regular expression pat erns**
☆☆☆ *How do you search a string for a pat ern*

Topic 16 : Objects & Oops

☆☆☆ **How do you compare Object and Map**
☆☆☆ *How do you check if a key exists in an object*
☆☆☆ **What are the recommendations to create new object**
☆☆☆ *How do you copy properties from one object to other*
☆☆☆ **What are the applications of assign method**
☆☆☆ *What is the difference between Shallow and Deep*

copy

☆☆☆ *What happens if you write constructor more than once in a class*

☆☆☆ **What are enhanced object literals**

Topic 17 : Spread-Rest Operator

☆☆☆ *What is a rest parameter*
☆☆☆ *What happens if you do not use rest parameter as a last argument*
☆☆☆ **What is a spread operator**
☆☆☆ **What are the dif erences between spread operator and rest parameter**

Topic 18 : Destructuring

☆☆☆ **What is destructuring assignment**
☆☆☆ **What are default values in destructuring assignment**
☆☆☆ **How do you swap variables in destructuring assignment**

Topic 19 : Template Literals

☆☆☆ **How do you write multi-line strings in template literals**

Topic 20 : Callback & Callback Hell

☆☆☆ **Why do we need callbacks**
☆☆☆ **What is a callback hell**
☆☆☆ **What is callback in callback**
☆☆☆ **What are the pros and cons of promises over callbacks**

Topic 21 : Ajax
☆☆☆ **What is AJAX**

Topic 22 : Inbuilt Methods

Topic 23 : Call, bind, apply

Topic 24 : Closures

Topic 25 : HOF, FCF,FOF & Functions

☆☆☆ **What is a higher order function**
☆☆☆ **What is a first class function**
☆☆☆ **What is a first order function**
☆☆☆ **What is a unary function**
☆☆☆☆ **Can we define properties for functions**

☆☆☆ **What are the function parameter rules**

☆☆☆ *What is the difference between Function constructor and function declaration*

☆☆☆ *What is the dif erence between function and class declarations*

Topic 26 : JS Errors & Error Handling

☆☆☆ *What is an error object*

☆☆☆ *What are the different error names from error object*

☆☆☆ *What are the various statements in error handling*

Topic 27 : Event Propagation, Bubbling, Capturing

☆☆☆ *What is an event flow*

☆☆☆ *What is event bubbling*

☆☆☆ *What is the use of stopPropagation method* (for stopping event bubbling)

☆☆☆ *What is event capturing*

Topic 28 : JS Arrays

☆☆☆ *What is for...of statement*

☆☆☆ *What happens if we add two arrays*

☆☆☆ *How do you map the array values without using map method*

☆☆☆ *How do you sort elements in an array*

☆☆☆ *How do you reversing an array*

☆☆☆ *How do you find min and max value in an array*

Topic 29 : Function Borrowing

☆☆☆☆ *Explain function borrowing with example*

Topic 30 : JS Reduce function

☆☆☆ *Explain JS Reduce with example*

Topic 31 : JS unshift

Topic 32 : Lambda/Arrow Function

Topic 33 : Hoisting

Topic 34 : Promise & Promise.all

☆☆☆ *What is promise chaining*
☆☆☆ *What is promise.all*
☆☆☆ *What is the purpose of race method in promise*
☆☆☆ *How do you prevent promises swallowing errors*

Topic 35 : Fetch, Axios

☆☆☆ *Fetch data from any api and console log the result*
☆☆☆ *Fetch data from any api using axios and console log the result*
☆☆☆☆ *What is same-origin policy*

Topic 36 : IIFE

DAY 4

Topic 37 : ES6

☆☆☆ *List down some of the features of ES6*

Topic 38 : Prototypes, Prototype Chain, Prototype Inheritance

☆☆☆ *What is prototype chain*
☆☆☆ *What is the dif erence between proto and prototype*

☆☆☆ *How do you get the prototype of an object*

☆☆☆ *What happens If I pass string type for getPrototype method*

☆☆☆☆ *How do you set prototype of one object to another*

Topic 39 : Coercions

☆☆☆ *Explain coercions in JS*

Topic 40 : JS Validations

☆☆☆ *How do you validate an email in javascript*

☆☆☆ *How do you perform form validation using javascript*

☆☆☆ *How do you perform form validation without javascript*

Topic 41 : Object.freeze vs Object.seal vs const

☆☆☆ *What is a freeze method*

☆☆☆ *What is the purpose of freeze method*

☆☆☆ *Why do I need to use freeze method*

☆☆☆ *What is the purpose of seal method*

☆☆☆ *What are the applications of seal method*

☆☆☆ *What are the differences between freeze and seal methods*

☆☆☆ *How do you determine if an object is sealed or not*

☆☆☆☆ *How do you create an object with prototype*

Topic 42 : new keyword

☆☆☆ *Explain use of new keyword.*

Topic 43 : this keyword

☆☆☆ *Explain this keyword in JS*

Topic 44 : Transpilling

Answer in meta material

Topic 45 : Temporal Dead Zone

☆☆☆ *What is the Temporal Dead Zone*

Topic 46 : Callback Hell

☆☆☆ *Explain callback hell with example.*

Topic 47 : Map & Weakmap, Weakset & set

☆☆☆☆ *What is a WeakSet*
☆☆☆☆ *What are the dif erences between WeakSet and Set*
☆☆☆☆ *List down the collection of methods available on WeakSet*
☆☆☆☆ *What is a WeakMap*
☆☆☆☆ *What are the dif erences between WeakMap and Map*

Topic 48 : Pass by ref vs Pass by value

Topic 49 : JSON
☆☆☆ *What is JSON and its common operations*

☆☆☆ *What is the purpose JSON stringify*
☆☆☆ *How do you parse JSON string*

Topic 50 : Pure Function
☆☆☆ *What is a pure function*

Topic 51 : Memoization
☆☆☆ *What is memoization*

Topic 52 : Babel

Topic 53 : JS Debugging
☆☆☆ *What are the tools or techniques used for debugging*

JavaScript code

Topic 54 : Miscellaneous

☆☆☆☆ *What is a service worker*

☆☆☆ *How do you access history in javascript*

☆☆☆ *What is isNaN*

☆☆☆ *What is an arguments object*

☆☆☆ *What is a debugger statement*

☆☆☆ *What is the purpose of breakpoints in debugging*

☆☆☆☆ *How do you detect a mobile browser*

☆☆☆☆ *What Is Obfuscation in javascript*

☆☆☆☆ *What is an enum*

☆☆☆☆ *Does javascript supports namespace*

☆☆☆☆ *How do you declare namespace*

☆☆☆☆ *How do you get the current url with javascript*

☆☆☆ *How do you generate random integers*

☆☆☆ *Can you write a random integers function to print integers with in a range*

☆☆☆☆ *What are the ways to execute javascript after page load*

☆☆☆ *How do you determine two values same or not using object*

☆☆☆☆ *How do you rounding numbers to certain decimals*

DAY 5

Complete Implementation Resource
Also Complete 4 JS Easy Projects