

Front End Developer Roadmap

Trainer

Usman Khalil & Team
DevNodes

Section

JavaScript

Duration

2 Week Approx.

Week I

Day One

Introduction to JavaScript

JavaScript

Code	Topic	Description	Assessment	Estimated Time (hr)
JS01	Introduction & Syntax		What is JavaScript? What is JavaScript used for? Where do we write JavaScript?	2
JS02	Editor		How do we create JS file? How do we link JS to HTML?	1
JS03	Getting and Setting		Execute a code that HTML content from a paragraph. Write down code that sets the value to that same paragraph. Create a counter that implements addition and reset functionalities	4
JS04	Trivial Details		How does script tag works? What are external scripts	1

Week I

Day Two

JavaScript Output

JavaScript

Code	Topic	Description	Assessment	Estimated Time (hr)
JS05	Executing JavaScript to DOM		How is innerHTML is different from document.write()? What are use cases for console.log()?	1

JS06	Variables	What are variables? How do we declare variables? What's the difference between let/const/var? What do we mean by Arithmetics in JavaScript?
JS07	Hoisting and Scope	What is hoisting? Does declaring variable with let/const allow hoisting? What do we mean by block-scope?
JS08	Comments	How do we write JavaScript comments? What's the use case for comments? What role do they play in code documentation?
JS09	Arithmetic Operations	Write few basic arithmetic operators. Write few JavaScript statements that perform basic operations.

Week I

Day Three

JavaScript Statements and Data Types

JavaScript

Code	Topic	Description	Assessment	Estimated Time (hr)
JS10	Statements		What is a statement? When does a statement considered completed? What is a code block? Mention few reserved keywords in JavaScript	2
JS11	Primitives		What are JavaScript primitives? How do we differ between number, string and boolean? What's the behavior of adding two strings? Why do addition doesn't work between number and string?	2
JS12	Non-Primitives		Why do you think we have objects and arrays? Create an object detailing about yourself with maximum number of data types. Create a list of even numbers. Create a list of countries in South Asia	2

JS13 Mutability vs Immutability

What is mutation? Which JavaScript data types are immutable? Create an object in JavaScript and mutate it with a new property. 2

Week I

Day Four

Functions and Events

JavaScript

Code	Topic	Description
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JS14	Declaring and Invoking Functions	
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Assessment	Estimated Time (hr)
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What is a function? How do we declare a function? Destructure function into number of segments to explain its contents	2
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JS15	Arguments	
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What are function arguments? How many arguments can we receive from function? What's the importance of return statement?	2
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JS16	Events	
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What is a JavaScript event? Name few events.	1
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JS17	Events Exercise	
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Create a project having a single button. When user hovers over the button, the background of the documents gets black and when he hovers out, background is set back to original color	3
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Week I

Day Five

More into Strings, Numbers and Objects

JavaScript

Code	Topic	Description
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Assessment

Estimated Time (hr)

JS18	String Methods	How to check length of string? Explain slice and substring method. Can we modify the content of string to uppercase/lowercase? How to join two strings? Calculate how many words does this string have: 'A quick brown fox jumps over a lazy dog'.	2
JS19	Number Methods	What is NaN in JavaScript? Can we access infinity in JavaScript? How can we convert string into number? Write a function that accepts a number and returns with max two float points.	2
JS20	Exporing Objects		2
JS21	JavaScript Math	Make a head/tails program. What's the difference between ceil and floor	2

Week II

Day One

Conditionals & Loops

CSS

Code	Topic	Description	Assessment	Estimated Time (hr)
JS22	If Else		Create a program which takes user age as input and verify that user age is greater than 18. In case of age less than 18, display alert that user is underage.	2
JS23	Switch Statement		For which scenario would one prefer switch over if/else statement? Create a program which returns user grade based on user's score. Evaluation is as follows: A = 80, B = 60, C = 40, F = <30	3
JS24	For Loop		What's a loop? Why do we need a loop? Loop over an array and display the array items in console.	2

JS25	Loop Exercise	Take user's input and create a table based on that	2
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Week II

Day Two

DOM Native APIs

CSS

Code	Topic	Description	Assessment	Estimated Time (hr)
JS26	Creating and Appending		Create and append a HTML button through JavaScript	2
JS27	Creating Data by User Input		Take user's input and add a content to a list item	2
JS28	Deleting Data		Create a button that deletes the HTML content	2
JS29	Deleting Data Created By User		Following JS27, add an additional delete button to list item. Clicking on delete should remove the data from DOM	2

Week II

Day Three

Todos List - I

CSS

Code	Topic	Description	Assessment	Estimated Time (hr)
JS30	Basics		Create a basic todos list. Each item should have the text input by user, a checkbox, an edit button and delete button	4
JS31	Checking/Unchecking		Handle update of the list but looking for events on checkbox. If checkbox is checked, todo item text should be striked through	3
JS32	Editing Todo		Click on edit button should move the todo text to input box. Similarly, add button should be replaced by update button	2

Week II

Day Four

Arrays and Iterations

CSS

Code	Topic	Description	Assessment	Estimated Time (hr)
JS37	For loop vs forEach		Create a list of todos with both for loop and forEach loop	2
JS38	Basic Iterators		<pre>var elements = ['Hydrogen', 'Helium', 'Oxygen', 'Uranium', 'Nitrogen']</pre> 1- Find the index of element 'Polonium' 2- Filter elements that have length less than 7. 3- Map the word 'Element-' with each element. 4- Check if element 'Radium' exists in the array.	4
JS39	Conditions not matched		Describe returns values for find, some, filter, findIndex if conditions do not match	2
JS40	Differences		Differentiate between some and every. Differentiate between forEach and map.	2

Week II

Day Five

Todos List - II

CSS

Code	Topic	Description	Assessment	Estimated Time (hr)
JS33	Updating Todo		On click of update, todo should be updated in the list	3
JS34	Searching Todos		Add a searchbar over the todos list. The result should correspond to the search query	4

JS35 Filtering Todos

Create a dropdown with following possible values ['all', 'completed', 'uncompleted']. Selecting each value should display the relevant results

4

Week III

Day One

Todos List - III

CSS

Code	Topic	Description	Assessment	Estimated Time (hr)
JS36	Paginating Todos		Read about pagination and the concept	2
JS37	First and Last		Implement the first and last buttons for paginator component	4
JS38	Next and previous		Implement the next and previous buttons for paginator	4

Week III

Day Two

Web Storage

CSS

Code	Topic	Description	Assessment	Estimated Time (hr)
JS39	Local Storage		Local storage and it's methods	2
JS40	Session Storage		Difference between local and session storage	4
JS41	Issue with non-string data		Store and retrieve an array in local storage. What problems do we face in both scenario?	4
JS42	Exercise		Implement the cookie acceptance banner	

Week III

Day Three

ES6 and Features

CSS

Code	Topic	Description	Assessment	Estimated Time (hr)
JS40	Fetch		Fetch a list of users from 2 jsonplaceholder	
JS41	ES6		Read about the new features in ES6	4
JS42	Promises		What is a promise? Write a structure of a promise? What are states of promise	4
JS43	Classes		Explain JavaScript classes?	

