


These are designed for practice and strong conceptual clarity, with **1–4 small assignments per topic**.

✓ 1. Introduction to JavaScript & Syntax

Assignment 1: Create a script that prints “Hello, Mahendra!” to the console.

Assignment 2: Alert the user with the message “Welcome to my website!”.


Assignment 3: Log the sum of two numbers in the console.

 *Practice console output, alert, script linking, and syntax basics.*

✓ 2. Variables & Data Types

Assignment 1: Declare variables of all basic data types: string, number, boolean, null, undefined.

Assignment 2: Create a program that takes your name and age in variables and logs a sentence like: "My name is Mahendra and I am 20 years old."

 *Understand let, const, and typeof.*

✓ 3. Control Flow + Conditional Statements + Loops

Assignment 1: Create a program that checks if a number is even or odd using if-else.

Assignment 2: Take a number and use switch to print “Low”, “Medium”, or “High” based on value.

Assignment 3: Print numbers 1 to 10 using for, while, and do-while loops.

 *Solidifies logic building and flow control.*

✓ 4. Functions

Assignment 1: Write a function to greet a user: greet("Mahendra") → "Hello Mahendra!"

Assignment 2: Create a function that returns the square of a number.

Assignment 3: Create a function to check if a number is prime.

 *Practice function declarations, parameters, return values.*

✓ 5. Objects & Arrays

Assignment 1: Create an object for a student with name, age, branch, isGraduate.

Assignment 2: Create an array of your 5 favorite foods.

Assignment 3: Add a new food item to the array, remove one, and print the updated list.


 *Explore basic structure of JavaScript objects and arrays.*

✓ 6. DOM Manipulation & Event Handling

Assignment 1: Create a simple HTML button. On click, it should show an alert "Button clicked!".

Assignment 2: Write a script that changes the background color when a button is clicked.

Assignment 3: Display a live character counter for a text input field.

 *Learn to interact with HTML using JS (`document.querySelector`, `.addEventListener`).*

✅ 7. Modern ES6+ Features & Asynchronous JS

Assignment 1: Rewrite a traditional function using an arrow function.

Assignment 2: Use destructuring to extract values from an object and array.

Assignment 3: Create a program using `fetch()` to get data from a public API and display it on the page.

Assignment 4: Use Promise and `async/await` to simulate a delay using `setTimeout`.

 *Get hands-on with modern JavaScript practices and async behavior.*

Solutions :

✅ Topic 1: Introduction to JavaScript & Syntax

Assignment 1: Console log "Hello, Mahendra!"

html

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```
<script>
```

```
  console.log("Hello, Mahendra!");
```

```
</script>
```

 *Logs message in DevTools console.*

Assignment 2: Alert message

html

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```
<script>
```

```
  alert("Welcome to my website!");
```

```
</script>
```

 *Shows popup alert when page loads.*

Assignment 3: Sum of two numbers

html

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<script>

```
let a = 5;
```

```
let b = 10;
```

```
let sum = a + b;
```

```
console.log("The sum is: " + sum);
```

</script>

 *Basic variable usage and logging result.*

☒ Topic 2: Variables & Data Types

Assignment 1: Declare variables of all data types

html

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<script>

```
let name = "Mahendra";    // String
```

```
let age = 21;              // Number
```

```
let isStudent = true;     // Boolean
```

```
let address = null;       // Null
```

```
let job;                  // Undefined
```

```
console.log(typeof name, typeof age, typeof isStudent, typeof address, typeof job);
```

</script>

Assignment 2: Personal info log

html

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<script>

```
let name = "Mahendra";
```

```
let age = 21;

console.log("My name is " + name + " and I am " + age + " years old.");

</script>
```

☒ Topic 3: Control Flow + Conditional Statements + Loops

Assignment 1: Even or odd checker

html

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```
<script>

let number = 7;

if (number % 2 === 0) {

  console.log("Even");

} else {

  console.log("Odd");

}

</script>
```

Assignment 2: Switch example

html

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```
<script>

let rating = 4;

switch(rating) {

  case 1: console.log("Low"); break;

  case 2:

  case 3: console.log("Medium"); break;

  case 4:

  case 5: console.log("High"); break;

  default: console.log("Invalid");

}
```

</script>

Assignment 3: Print 1 to 10 using different loops

html

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<script>

```
for(let i = 1; i <= 10; i++) console.log("For:", i);
```

```
let j = 1;
```

```
while(j <= 10) {
```

```
    console.log("While:", j);
```

```
    j++;
```

```
}
```

```
let k = 1;
```

```
do {
```

```
    console.log("Do-While:", k);
```

```
    k++;
```

```
} while(k <= 10);
```

</script>

☒ Topic 4: Functions

Assignment 1: Greeting function

html

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<script>

```
function greet(name) {
```

```
    console.log("Hello " + name + "!");
```

```
}
```

```
greet("Mahendra");
```

</script>

Assignment 2: Square function

html

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<script>

```
function square(num) {  
    return num * num;  
}  
  
console.log("Square is: " + square(5));
```

</script>

Assignment 3: Prime checker

html

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<script>

```
function isPrime(n) {  
    if (n < 2) return false;  
    for (let i = 2; i <= Math.sqrt(n); i++) {  
        if (n % i === 0) return false;  
    }  
    return true;  
}  
  
console.log("Is Prime: " + isPrime(7));
```

</script>

☒ Topic 5: Objects & Arrays

Assignment 1: Student object

html

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```
<script>

let student = {
  name: "Mahendra",
  age: 21,
  branch: "CSE",
  isGraduate: false
};

console.log(student);

</script>
```

Assignment 2: Food array

html

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```
<script>

let foods = ["Pizza", "Biryani", "Pasta", "Dosa", "Burger"];

console.log(foods);

</script>
```

Assignment 3: Add & remove items

html

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```
<script>

foods.push("Ice Cream");    // Add

foods.splice(2, 1);         // Remove at index 2

console.log("Updated:", foods);

</script>
```

☒ Topic 6: DOM Manipulation + Event Handling

Assignment 1: Button click alert

html

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```
<button onclick="showAlert()">Click me</button>
```

```
<script>
```

```
function showAlert() {  
    alert("Button clicked!");  
}
```

```
</script>
```

Assignment 2: Change background color

html

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```
<button onclick="changeColor()">Change Background</button>
```

```
<script>
```

```
function changeColor() {  
    document.body.style.backgroundColor = "lightblue";  
}
```

```
</script>
```

Assignment 3: Live character counter

html

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```
<input type="text" id="inputBox" oninput="countChars()" placeholder="Type something..." />
```

```
<p>Character count: <span id="charCount">0</span></p>
```

```
<script>
```

```
function countChars() {  
    let text = document.getElementById("inputBox").value;  
    document.getElementById("charCount").innerText = text.length;  
}
```

```
</script>
```

☑ Topic 7: Modern ES6+ & Async JavaScript

🔗 Assignment 1: Arrow function

html

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```
<script>

  const greet = (name) => console.log("Hello " + name);

  greet("Mahendra");

</script>
```

🔗 Assignment 2: Destructuring

html

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```
<script>

  let person = { name: "Mahendra", age: 21 };

  const { name, age } = person;

  console.log(name, age);

</script>
```

🔗 Assignment 3: Fetch API (using a public API)

html

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```
<button onclick="getData()">Get Joke</button>

<p id="joke"></p>

<script>

  async function getData() {

    const res = await fetch("https://api.chucknorris.io/jokes/random");

    const data = await res.json();

    document.getElementById("joke").innerText = data.value;

  }

</script>
```

</script>

Assignment 4: Promise with setTimeout

html

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<script>

```
function wait() {  
  return new Promise(resolve => {  
    setTimeout(() => resolve("Finished after 2 seconds"), 2000);  
  });  
}
```

```
async function run() {  
  const result = await wait();  
  console.log(result);  
}
```

```
run();
```

</script>