JS Assignment 2 (DTS Batch-3)

HTML Code:

<!DOCTYPE html>

<html lang="en">

<head>

    <meta charset="UTF-8">

    <meta name="viewport" content="width=device-width, initial-scale=1.0">

    <title>Document</title>

</head>

<body>

    <script src="script.js"></script>

</body>

</html>

JS Code:

// Function to calculate sum of array elements using arrow function

const sumArray = (arr) => arr.reduce((sum, num) => sum + num, 0);

const nums = [1, 2, 3, 4, 5];

console.log("Sum of array:", sumArray(nums)); // Output: 15

// Function to return second max and second min from an array

function secondMaxMin(arr) {

    const sorted = [...new Set(arr)].sort((a, b) => a - b); // Remove duplicates and sort

    return {

        secondMin: sorted.length > 1 ? sorted[1] : null,

        secondMax: sorted.length > 1 ? sorted[sorted.length - 2] : null,

    };

}

const nums2 = [10, 5, 3, 8, 8, 7, 2];

const secondMaxMinResult = secondMaxMin(nums2);

console.log("Second Min:", secondMaxMinResult.secondMin); // Output: 3

console.log("Second Max:", secondMaxMinResult.secondMax); // Output: 8

// Function to reverse an array

function reverseArray(arr) {

    return arr.reverse();

}

const nums3 = [1, 2, 3, 4, 5];

console.log("Reversed array:", reverseArray([...nums3])); // Output: [5, 4, 3, 2, 1]

// Function to update book year given title and new year

function updateBookYear(books, title, newYear) {

    const book = books.find((b) => b.title === title);

    if (book) {

        book.year = newYear;

        return book;

    }

    return null;

}

const books = [

    { title: "Book A", year: 2000 },

    { title: "Book B", year: 2010 },

    { title: "Book C", year: 2015 },

];

const updatedBook = updateBookYear(books, "Book B", 2023);

console.log("Updated Book:", updatedBook); // Output: { title: "Book B", year: 2023 }

console.log("Books after update:", books);

// Function to filter books published after a given year

function filterBooksByYear(books, year) {

    return books.filter((book) => book.year > year);

}

const filteredBooks = filterBooksByYear(books, 2010);

console.log("Books published after 2010:", filteredBooks);

// Output: [ { title: "Book C", year: 2015 }, { title: "Book B", year: 2023 } ]

OUTPUT:

