

JavaScript Practice Set 1

1. Given an array **AR12** = [25, 41, 74, 12, 65, 1, 40, 21, 78], using the default **sort()** function will not produce the correct numerical order. *What will the output be, and how can this sorting issue be fixed?* Write only the code snippet required to sort the array properly in ascending numerical order.
2. For the array **DU23** = [14, 56, 15, 72, 11, 23, 40, 35], a sequence of operations is performed in the following order: **push**(11, 22, 65), **unshift**(91, 28, 44), **pop()**, **push**(3), **shift()**, **pop()**, **shift()**, **pop()**, and **unshift**(2). What will be the final array after executing all these operations?

After that, if we apply the operation **splice**(2, 2, 51, 10, 13), what will be the resulting array?

3. Write a JavaScript program that calculates the **Factorial** of a number using a **Recursive Function** that relies solely on **Ternary Operators**, and then displays the result in a **Paragraph** element (with the class name **par1**) already defined in the HTML document, using **DOM manipulation**.
4. Write a JavaScript program that determines all **Prime Numbers** within the range **51** to **120** using a **User-Defined Function** that relies exclusively on **Switch-Case** statements (without using any if...else conditions). The output must be displayed in the **2nd** of **3** predefined ** tags** in the HTML document, **none of which** contain any **IDs**, **classes**, or **attributes**, using **DOM manipulation**.
5. Explain the differences between the **substr()** and **slice()** string functions, particularly in the context of **negative indexing**, and illustrate these differences with **examples** and their **expected outputs**.

Additionally, describe how **substring()** behaves when **negative indices** are used, supported by an example.

6. Write JavaScript code to add 2 matrices using only the **forEach** loop (without using any traditional for loops), then create a **<div>** element **dynamically through JavaScript** to display the result. Finally, insert the newly created element, along with the computed output, **inside the existing tag** in the HTML document.
7. Write a dynamic JavaScript program that toggles a light bulb **on** and **off** using a **double-click event**. The program should produce the output as shown below.

