# Assessment: JavaScript Logic & DOM Manipulation

## Part A: JavaScript Basics (Logic Building)

*Instructions: Write the code for these tasks and check the output in the browser Console.*

**Task 1: The Calculator**

Write a function named `sum(a, b)` that takes two numbers as input and prints their total sum in the console.

- **Hint:** You need to use the addition operator (`+`) inside `console.log`.

**Task 2: The Examiner**

Create a variable named `marks`. Write a condition: if the marks are **greater than 50**, print "Pass"; otherwise, print "Fail".

- **Hint:** Use `if / else` statements along with a comparison operator (`>`).

**Task 3: The Counter**

Write a Loop that prints counting numbers from **1 to 10** in the console.

- **Hint:** Your loop needs a starting point (`let i = 1`), an ending condition, and an increment (`++`).

**Task 4: The Array Hunter**

Create an array: `["Cat", "Dog", "Lion"]`. Write code to print **only** "Dog" in the console.

- **Hint:** In programming, counting starts from 0. Check which index number "Dog" is sitting on.

**Task 5: The Object Reader**

Create an object named `mobile` with two properties: `model` and `storage`. Print only the value of **storage** in the console.

- **Hint:** Use the "dot notation" (.) to access a specific property inside an object.

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# Part B: DOM Manipulation (Interactivity)

*Instructions: Create the necessary HTML elements and use JavaScript to make them interactive.*

**Task 6: Text Swapper**

Create an `<h1>` tag with the text "Start" and a Button. When the button is clicked, the heading text should change to **"Finish"**.

- **Hint:** Select the element by ID, then assign a new string to its `.innerText` property.

**Task 7: The Traffic Light**

Create a `<div>` box with some text. Create a Button. When the button is clicked, the background color of the box should turn **Red**.

- **Hint:** You need to access the `.style` object of the element. Remember that CSS properties like `background-color` become `backgroundColor` in JS.

**Task 8: Identity Card**

Create an **Input field** and a **Button**. When the user types their name and clicks the button, show their name in an `alert()`.

- **Hint:** Normal tags use `innerText`, but input fields hold their data in a different property starting with `v`.

**Task 9: The Magician**

Create a box (div). When a user clicks on the box itself, it should **disappear** from the screen.

- **Hint:** You don't need to delete it; just hide it using CSS via JavaScript. Which CSS property controls visibility?

**Task 10: Element Factory**

Create a Button named "Create". When clicked, a new `<p>` tag containing the text **"Hello World"** should appear on the webpage.

- **Hint:** This is a 3-step process: 1. Create the element. 2. Add content to it. 3. Append it to the body.

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# Part C: Advanced Challenges (Mini Projects)

**Task 11: Mini Image Gallery**

Display an image of a **Car** using an `<img>` tag. Create two buttons below it: **"Red Car"** and **"Blue Car"**.

- Clicking "Blue Car" should change the image to a blue car.
- Clicking "Red Car" should change it back to a red car.
- **Hint:** The image file path is stored in the `src` attribute. You can change this attribute just like you change text or style.

**Task 12: Mini To-Do List**

Create an Input field, an "Add" Button, and an empty <ul> list.

- When the button is clicked, take the text from the input and add it as a new item (<li>) inside the list.
- **Hint:** Combine the logic from **Task 8** (getting value) and **Task 10** (creating & appending elements).