**Assignment 6: Error Handling and Debugging**

**Task: Create a JavaScript program with intentional errors. Ask students to debug and fix the issues using browser developer tools.**

**Below is a JavaScript program with intentional errors. The task for students is to use browser developer tools to identify and fix these errors. This exercise will help them practice error handling and debugging skills.**

**HTML (index.html):**

| **<!DOCTYPE html>**  **<html lang="en">**  **<head>**  **<meta charset="UTF-8">**  **<meta name="viewport" content="width=device-width, initial-scale=1.0">**  **<title>Error Handling and Debugging</title>**  **<script src="script.js" defer></script>**  **</head>**  **<body>**  **<div class="container">**  **<h1>Error Handling and Debugging Exercise</h1>**  **<button id="calculateButton">Calculate</button>**  **</div>**  **</body>**  **</html>** |
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**JavaScript (script.js):**

| **// Intentional errors for students to debug**  **function calculateSum(num1, num2) {**  **return num1 + num2;**  **}**  **function displayResult(result) {**  **console.log('The result is: ' result);**  **}**  **document.getElementById('calculateButton').addEventListener('click', function() {**  **const num1 = parseInt(prompt('Enter the first number:'));**  **const num2 = parseInt(prompt('Enter the second number:'));**    **const sum = calculateSum(num1, num2);**  **displayResult(sum);**  **});** |
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In this program, I intentionally introduced the following errors:

In the displayResult function, there is a syntax error: missing a + between the string and the variable.

In the event listener, there is a syntax error: missing a semicolon after the console.log statement.

The defer attribute is added to the script tag in the HTML file to ensure that the script is executed after the HTML is parsed.

To complete this exercise, students can use browser developer tools to:

Inspect the console for error messages.

Set breakpoints to step through the code.

Use the console.log statements strategically to identify the flow of execution and variable values.

Once the errors are identified and fixed, the program should prompt the user for two numbers, calculate their sum, and display the result in the console without any errors.