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TP 2:

Exercise 1: Sum of Four Variables

Part 1: Using Four Variables

Prompt the user to enter four numbers, each number stored in a separate variable.

Calculate the sum of these four numbers.

Display the result.

Part 2: Using a Single Variable for Multiple Values

Prompt the user to enter multiple numbers in a single input, separated by commas (e.g., 1,2,3,4).

Split the input into an array of numbers, then convert each item in the array to a numeric value.

Calculate the sum of all numbers in the array.

Display the result.

Exercise 2: Sum of Numbers

Prompt the user to input two numbers. Use a while loop to calculate and print the sum of numbers between the two entered numbers, inclusive.

Example: If the user inputs 5 and 10, the program should calculate the sum of numbers from 5 to 10.

Exercise 3: Reverse an Array

Ask the user to input an array of numbers (e.g., through prompt or by providing a comma-separated string). Use a for loop to reverse the elements of the array without using the built-in .reverse() method.

Example: If the user inputs [1, 2, 3, 4, 5], the program should output [5, 4, 3, 2, 1].

Exercise 4: Find Even Numbers

Prompt the user to input a series of numbers (e.g., a comma-separated string). Use a for...of loop to iterate through the array of numbers and log only the even numbers.

Example: If the user inputs 1, 2, 3, 4, 5, the output should be 2, 4.

Exercise 5: Count Vowels in a String

Ask the user to input a string. Use a for loop to count the number of vowels (a, e, i, o, u) in the provided string, and then display the count.

Example: If the user inputs "Hello World", the program should output 3 vowels.

Exercise 6: Find the Largest Number

Prompt the user to enter an array of numbers. Use a for loop to iterate through the array and find the largest number.

Example: If the user inputs 1, 7, 3, 4, 9, the program should output 9 as the largest number.

Exercise 7: Sum of Object Values

Ask the user to create an object with various key-value pairs (e.g., some values can be numbers, others could be strings). Use a for...in loop to iterate through the object and sum up only the numeric values.

Example: For an object like { a: 1, b: "hello", c: 3, d: true }, the program should output 4 as the sum.

Exercise 8: Multiplication Table

Prompt the user to enter a number, then use a for loop to print the multiplication table for that number.

Example: If the user inputs 5, the program should display 5 x 1 = 5, 5 x 2 = 10, etc., up to 5 x 10 = 50.

Exercise 9: Filter Out Odd Numbers

Ask the user to input an array of numbers. Use a for loop to create a new array containing only the even numbers from the user's input.

Example: If the user inputs 1, 2, 3, 4, 5, the program should output [2, 4].

Exercise 10: Factorial Calculation

Prompt the user to enter a number. Use a while loop to calculate and display the factorial of the provided number.

Example: If the user inputs 5, the program should output 120 (as 5! = 5 x 4 x 3 x 2 x 1).

Exercice 11:

Asks the user to enter multiple values, allowing them to specify the type of each value through a menu. The program uses a switch statement to handle each choice and then stores the typed values in an array.