JS - Day 1 - Tasks

**Task 1 :**  Write the expressions in JavaScript syntax for the following accounting equations (analyze the operation from the input and output) – use google if necessary:

* Cash flow ratio

**Sample Input:** cash: 1000, current liabilities: 500

**Sample Output:** 2

* Net income

**Sample Input:** revenues: 1000, expenses: 500

**Sample Output:** 500

* Total assets

**Sample Input:** liabilities: 1000, equity: 500

**Sample Output:** 1500

* Net income (using profit margin and sales)

**Sample Input:** profit: 1000, sales: 500

**Sample Output:** 500000

* Average

**Sample Input:** numbers: 7, 9, 2

**Sample Output:** 6

* Discount

**Sample Input:** price: 150, discount: 30%

**Sample Output:** 105

* Age limit (older than 18 and less than 30)

**Sample Input:** 20

**Sample Output:** true

* Exponential

**Sample Input:** number 1: 2, number 2: 3

**Sample Output:** 8

* Remainder

**Sample Input:** number 1: 10, number 2: 4

**Sample Output:** 2

**Task 2 :** Find the output for these expressions and justify the output according to JavaScript interpretation:

* typeof(100)
* typeof(73.9)
* typeof(NaN)
* typeof("Water")
* typeof(false)
* typeof(9 != 11)
* "Orang" + "e"
* "Orange" - "s"
* "4" + "8"
* "4" - "8"
* "name" + 3
* "name" - 3
* 82 \* "word"
* 1 + "hello"
* "hello" + 1
* 1 + true
* "hello" + true
* typeof (Infinity)
* 1 == '1'
* 1 === '1'

**Task 3 :** Write the code to make this string “Welcome to Orange” outputted in the following forms using string methods:

* **Output:** WELCOME TO ORANGE
* **Output:** TO
* **Output:** Hello from Orange
* **Output:** welcome to orange
* **Output:** 17
* **Output:** Welcome to “Orange”
* **Output:** Welcome to Orange Jordan

**Task 4 :** Create a simple HTML file that includes a JavaScript script to display a welcome message using an alert box.

**Task 5 :** Declare and initialize 50 variables of different data types (string, number, boolean, array, object) and display their values in the console.

**Task 6 :** Write a script that demonstrates the scope differences between let and var by trying to access variables outside their block scope.

**Task 7 :** Perform and display the results of specific arithmetic operations, comparisons, logical operations, and assignment operations using variables.

1. **Arithmetic Operations:**
   * Create two variables a and b with values 10 and 5 respectively.
   * Perform the following arithmetic operations and use console.log() to display the results:
     + Addition: a + b
     + Subtraction: a - b
     + Multiplication: a \* b
     + Division: a / b
     + Modulus (remainder): a % b
2. **Comparison Operations:**
   * Using the same variables a and b, perform the following comparison operations and use console.log() to display the results:
     + Greater than: a > b
     + Less than: a < b
     + Equal to: a == b
     + Not equal to: a != b
     + Greater than or equal to: a >= b
     + Less than or equal to: a <= b
3. **Logical Operations:**
   * Create two boolean variables x and y with values true and false respectively.
   * Perform the following logical operations and use console.log() to display the results:
     + AND: x && y
     + OR: x || y
     + NOT: !x and !y
4. **Assignment Operations:**
   * Using the variable a, perform the following assignment operations and use console.log() to display the results:
     + Add and assign: a += 5
     + Subtract and assign: a -= 5
     + Multiply and assign: a \*= 2

**Task 8 :** Create an HTML file that displays messages using innerHTML, document.write(), window.alert(), and console.log() when the page loads.