Lab 4:

1. Task: Create a simple HTML page with:
   1. An inline JavaScript alert saying “Welcome to JavaScript”.
   2. An external JavaScript file that writes “This is from an external file” on the page using **document.write().**
   3. An **onclick** event on a button that shows an alert when clicked.
2. Task: Write a function:
3. Takes a string as input.
4. Counts and returns the number of vowels in the string.
5. Test it with different sentences.
6. Task: Write a script that:
7. Converts a numeric string to a number using Number(), parseInt(), and parseFloat(), showing the difference.
8. Uses Number.isNaN() and Number.isFinite() to check different values (NaN, Infinity, finite numbers).
9. Prints out Number.MAX\_VALUE, Number.MIN\_VALUE, and Number.EPSILON to understand their values.
10. Task: Experiment with the + operator:
    1. Add two numbers.
    2. Concatenate two strings.
    3. Add a number and a string, and observe the result.
    4. Task: Use typeof to display the type of various variables.
11. Task: Write:
    1. A named function that takes two numbers and returns their sum.
    2. An anonymous function assigned to a variable that multiplies two numbers.
    3. A function with default parameters (e.g., a greeting function with a default name of “Guest”).
12. Task: Write a function demonstrating:
    1. Local vs global scope (define a variable globally and locally with the same name, print inside and outside the function).
    2. Variable hoisting (log a variable before declaring it with var to see undefined).
13. Task: Write a function calculateHypotenuse(a, b) that:
    1. Uses a nested function square(x) to compute the squares.
    2. Returns the hypotenuse using the nested square function.
14. Task: Write a function sumAll() that:
    1. Uses the arguments object to sum any number of arguments passed to it.
    2. Test with sumAll(1, 2, 3, 4) and sumAll(10, 20).