Js Lab Task-4
(Variables, Functions, Objects, Methods, Pop-up Boxes, Events)

Task -
Enhance Your Website with Interactive JavaScript Features

Task Overview
You have already created a basic HTML website based on a theme of your choice (portfolio, profile, business, travel, product, blog, etc.).

Your task is to enhance the same website by adding new interactive features using JavaScript fundamentals.

Each feature must be relevant to your website theme and must demonstrate proper usage of JavaScript concepts.
You must complete all the following sections within the same website.

1. Variables

Task
Add a dynamic section to your website that uses JavaScript variables to store, display, and update information related to your website theme.

- Declare variables using let and const
- Store meaningful data related to the theme (e.g., name, price, status, count, role, message)
- Display variable values on the webpage
- Update at least one variable dynamically using JavaScript
- Mandatory Coverage (Test Cases)
- Use both let and const
- Demonstrate reassignment using let
- Attempt reassignment of const and observe behavior
- Log variable values in the console
- Display variable values in the DOM

Example (Theme-based idea)
Portfolio: store and update user role or experience count
Product site: store product price and update discount
Blog: store author name and post count

2. Functions
Task
Create reusable JavaScript functions that perform actions on your website when triggered.

- Define and call multiple types of functions
- Use functions to update website content dynamically
- Reuse the same function in more than one place
- Mandatory Coverage (Test Cases)
- Function declaration
- Function expression
- Arrow function
- Function with parameters
- Function with return value

Example (Theme-based idea)
Calculate total price
Update profile information
Change welcome message dynamically
Toggle a feature state (active/inactive)

3. Objects
Task

Create an object that represents a real-world entity related to your website theme and use it to manage data.

- Create one JavaScript object
- Define key–value pairs (minimum 3 properties)
- Access object properties using JavaScript
- Display object data on the webpage
- Update object properties dynamically
- Mandatory Coverage (Test Cases)
- Dot notation access
- Bracket notation access
- Property update
- Console logging the object

Example (Theme-based idea)
User profile object (name, age, role)
Product object (name, price, availability)
Event object (title, date, location)

4. Methods
Task

Add methods (functions inside objects) to perform operations related to the object data.

- Define at least one method inside the object

- Use this keyword inside the method
- Call the method and display the result on the webpage
- Mandatory Coverage (Test Cases)
- Method accessing object properties
- Method updating object data
- Method triggered by user action (event)

Example (Theme-based idea)
Method to update user profile details
Method to calculate discounted price
Method to change status or availability

5. Pop-up Boxes
Task

Use JavaScript pop-up boxes to interact with the user and make decisions based on user input.

- Use all three types of pop-up boxes
- Use user responses to control website behavior
- Mandatory Coverage (Test Cases)
- alert() for notifications
- confirm() for yes/no decisions
- prompt() for user input
- Display user responses on the webpage

Example (Theme-based idea)
Confirm before updating profile
Prompt user to enter name or value
Alert user after successful action

6. Events and Event Listeners
Task

Make your website interactive by responding to user actions using events and event listeners.

- Attach events to HTML elements
- Trigger JavaScript functions using events
- Update the DOM based on user interaction
- Mandatory Coverage (Test Cases)
- Use at least two different event types (e.g., click, input, mouseover)
- Use addEventListener (not only inline onclick)
- One event should modify content
- One event should modify style or attribute

Example (Theme-based idea)
Button click updates content
Hover changes style
Input event shows live data
Click event loads an image or toggles a section