**Logo, company name

Description automatically generatedCOMSATS University Islamabad, Department of Computer Science**

**Web Technologies**

**Fall 2023**

**Lab 6**

**Familiarization to: Javascript**

**Lab Task 1:** JavaScript Basics

Create an HTML page with a button. Write JavaScript code that shows an alert when the button is clicked.

**Lab Task 2:** BOM and Window Object

Write JavaScript code to display the current window's inner width and inner height using the window.innerWidth and window.innerHeight properties.

**Lab Task 3:** Events

Create an HTML page with a text input field. Write JavaScript code that listens for the keydown event and displays an alert with the key code when a key is pressed.

**Lab Task 4:** Functions

Write a JavaScript function that calculates the factorial of a number passed as an argument. Use this function to calculate and display the factorial of a number entered in an input field on an HTML page.

**Lab Task 5:** Form Data Retrieval

Create an HTML form with fields for the user's name and email. Write JavaScript code to retrieve the data entered into the form fields when the form is submitted. Display the data in an alert.

**Lab Task 6:** Using Local Storage

1. Create an HTML page with a text input field and a button. Write JavaScript code that saves the input's value to local storage when the button is clicked. Display the stored data on the page.
2. Extend the previous task by adding a "Clear Data" button. When clicked, it should clear the user's name and email data from localStorage.
3. Create an HTML page with a to-do list (a list of tasks) and an input field for adding new tasks. Write JavaScript code to allow users to add and remove tasks from the list. Store the to-do list in localStorage so that tasks persist between page loads.
4. Create an HTML page that displays the number of times a user has visited the page. Use localStorage to store and update the visit count. Increment the count each time the page is loaded.
5. Create an HTML page with a list of products. Add a "Add to Cart" button for each product. When a product is added to the cart, store the cart items in localStorage. Display the cart's contents on the page.
6. Create an HTML page with options for customizing the user's experience (e.g., background color or font size). Use localStorage to store and apply the user's preferences each time they visit the page.
7. Create a basic authentication system with a username and password. Use localStorage to store user credentials securely. Authenticate users against these stored credentials.