Practical No. 3
Study of Java Script

Problem Statement 1: Basics of Java Script

Write a JavaScript function that takes an array of numbers as input and returns the sum of all even numbers in the array. Additionally, create a simple HTML interface with an input field where the user can enter comma-separated numbers and a button to trigger the calculation. Display the result below the button.

Problem Statement 2: Implement a function that validates a password based on the following criteria:

- At least 8 characters long.
- Contains at least one uppercase letter, one lowercase letter, one digit, and one special character.

Create an HTML form with an input field for the password and a "Check Password" button. Display a message indicating whether the password is valid or not.

Problem Statement 3: Web Development

Create a basic web page for a fictional online bookstore using HTML, CSS, and JavaScript. The web page should have the following features:

- A header with the bookstore name and a navigation menu (Home, Books, Contact).
- An area to showcase featured books with their titles, authors, and cover images.
- A section where all available books are displayed in a grid format. Each book should have an image, title, author, and a button to "Add to Cart".
- Implement a simple shopping cart functionality using JavaScript. Allow users to add books to their cart and display the total number of items in the cart on the navigation menu.

Problem Statement 4: Responsive Design

- Implement responsive design techniques to make the website mobile-friendly.
- Ensure that the navigation menu collapses into a hamburger menu on smaller screens.
- Adjust the layout and font sizes for optimal viewing on various devices.

IMP: for problem statement 1 and 3 different groups should take different problems like for example for problem statement 1 instead of returning sum of all even numbers one might return sum of all odd numbers, any other mathematical operations, etc.

Also for problem statement you should create different websites, like online food ordering system or online grocery shop, etc.

Every group should have a different application. These are the basic guidelines provided to you.

Note:

1. Create a **document** of the above website with screenshots.
2. Scan the document and **create a pdf file** with **"ExamSeatNum_P#PS#" as its name**.
3. Upload the file on the **WCE Moodle/ERP** before the given deadline.