

# Assignment -3

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**Semester:** December-April 2026  
**Date:** 22-01-2026 3:00 PM

**Subject:** Skill Development Course-II  
**Deadline:** 22-01-2026 6:00 PM

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**Topics:** JavaScript Event Handling, Functions, Loops, and Arrays

**Question:**

Design and develop a **dynamic and interactive web application** using **HTML, CSS, and JavaScript** that demonstrates the effective use of **DOM and Client Side Validation**.

The assignment must address the following sections and questions.

**Section A: Build a DOM Interactive Webpage**

**1. Smooth Scroll Navigation**

- Create navbar with 3 sections: Home, Gallery and Playground
- Clicking nav items should smooth scroll to the section.

**2. Dynamic Text Change**

In Home section:

- show heading: "Welcome!"
- add a button: Change Text
- on click → heading changes to "Hello DOM World!"

**3. Scroll Animation Reveal**

When scrolling down:

- About/Gallery/Contact sections must fade in / slide in (use `classList.add("show")`)

**4. Scroll Progress Bar**

- Add a progress bar at the top that updates as user scrolls.

**5. Image Scrolling / Crousel**

In Gallery section:

- add at least 6 images
- implement horizontal scrolling carousel
- include:
- Prev button
- Next button

- Smooth scrolling

## **6. Create a new section called Playground that contains a ball.**

Ball color change

- input: <input type="color">
- ball color updates instantly

Ball movement using input

- input: X position slider (Left/Right)
- input: Y position slider (Up/Down)
- ball position updates instantly on screen
- Jump button (ball jumps up and comes down)
- Slide left / right buttons (ball slides smoothly)

## **Section B: Client Side Validation**

### **1. Create a Faculty and Student registration forms and login pages. Apply proper CSS for all web pages.**

#### **i. All fields are Mandatory**

#### **ii. EmpId-Number-Size (6 digits)**

- Validations: Check whether entered input is number or not?
- Number of digits in that number
- Start the number with 5

#### **iii. EmpName-Characters (Size-25)**

- No Special Characters
- Size validation

#### **iv. Gender-Radio Button**

#### **v. DOB-(DD-MM-YYYY)**

- Validate the age is at least 25 years and above.
- Age must be less than less than or equal to 65 years.

#### **vi. DOJ-(DD-XXX-YYYY)**

- Not allow future date.
- Use proper regular expressions to validate date.

#### **vii. MailId**

- @,., Proper Domain(com, in, edu, corp, edu)

#### **viii. Password**

- Should contain one capital letter, one special character, it should not start with any number.

#### **ix. Mobile Number**

- 10 digits
- Any character entered