Objective:

　　To create a web page which demonstrates dynamic actions for user interactions using JavaScript document object model methods and events.

Description:

Document Object Model:

A Document object represents the HTML document that is displayed in that window. The Document object has various properties that refer to other objects which allow access to and modification of document content. The way a document content is accessed and modified is called the Document Object Model, or DOM.

Finding HTML Element by Id

var myElement = document.getElementById("intro");

Finding HTML Elements by Tag Name

var x = document.getElementsByTagName("p");

Finding HTML Elements by Class Name

var x = document.getElementsByClassName("intro");

Finding HTML Elements by CSS Selectors

var x = document.querySelectorAll("p.intro");

Attach event handler to the document

document.addEventListener("click", function()

{

  document.getElementById("demo").innerHTML = "Karunya";

});

JavaScript Events:

JavaScript's interaction with HTML is handled through events that occur when the user or the browser manipulates a page.

Event	Description
onload	Triggers when the document loads

onclick	Triggers on a mouse click
onchange	Triggers when an element changes
onkeyup	Triggers when a key is released
onkeydown	Triggers when a key is pressed
onmouseover	Triggers when the mouse pointer moves over an element
onmousedown	Triggers when a mouse button is pressed
onsubmit	Triggers when a form is submitted

Questions

Select two Questions as per the following formula

Question A = (Your Regno%5)+1

Question B = (Your Regno%5)+2

1. Create a web page with JavaScript program to perform basic mathematic operations such as addition, subtraction, multiplication, and division for the two given numbers (input from user). [use onclick event]
   Sample Output:

2. Create a web page with JavaScript program to calculate and display the BMI value for the given weight and heights (input from user). You should also describe the person's body type based on their BMI score using the following criteria: [Use onkeyup event]
   BMI = weight(kg)/[height(m)]^2
   - Underweight: < 18
   - Normal: 18 – 25

- Overweight: 25 – 30
- Obese: > 30

Body mass index (BMI)
A measure of body fat in adults

Weight

80 kg

Height

170 cm

27.7

Overweight BMI

3. Create a web page using HTML, CSS and JavaScript program to develop currency convertor. Keep at least 4 currencies via drop down list box (<select> Element) as given in the sample output. [Use onchange event]

Currency Converter

Amount:

11

From:

USD ∨

To:

INR ∨

Amount = 792

4. Design a webpage using HTML, CSS and **JavasScript** as per the following design and perform the Cake order calculation using **JavaScript.** [use onclick event]

5. Create a web application to develop the following Bank loan EMI calculator using client side Java Script. The formula for calculating the EMI is given below. Where, P is Loan Amount, R is a rate of interest and N is a tenure in months. [convert Year as months] [Use onkeyup event]

$$EMI = \frac{P \times R \times (1 + R)^N}{[(1 + R)^N - 1]}$$

EMI Calculator formula

R – Rate of Interest – Annual Interest Rate/12/100

Loan EMI Calculator

Loan Amount(Rs.):

500000

Annual Interest Rate(%):

15

Tenure(Years):

5

Loan Amount: ₹500000

Total Interest: ₹213698

EMI: ₹13,915

Total Repayment: ₹713698