**Web Technologies**

1. **Create a web page for user registration using the HTML5 form elements**

<!DOCTYPE html>

<html lang="en">

<head>

    <meta charset="UTF-8">

    <meta name="viewport" content="width=device-width, initial-scale=1.0">

    <title>Our Registration Page</title>

</head>

<body>

    <form action="#" method="post" align="center">

        <h1 align="center">Register for "WEBSITE"</h1>

        <!-- Account Information -->

        <label for="username">Username</label>

        <input type="text" id="username" name="username" required>

        <br><br>

        <label for="password">Password</label>

        <input type="password" id="password" name="password" required>

        <br><br>

        <label for="confirm\_password">Confirm Password</label>

        <input type="password" id="confirm\_password" name="confirm\_password" required>

        <br><br>

        <!-- Personal Information -->

        <label for="fullname">Full Name</label>

        <input type="text" id="fullname" name="fullname" required>

        <br><br>

        <label for="email">Email Address</label>

        <input type="email" id="email" name="email" required>

        <br><br>

        <label for="phone">Phone Number</label>

        <input type="text" id="phone" name="phone">

        <br><br>

        <input type="submit" value="Register">

    </form>

</body>

</html>

1. **Design a webpage for illustrating various ways of adding styles to an HTML document.**

**Inline CSS Example**

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

<meta name="viewport" content="width=device-width, initial-scale=1.0">

<title>Inline CSS Example</title>

</head>

<body>

<h1 style="color: #3498db; text-align: center;">Inline CSS Example</h1>

<p style="color: #e74c3c; font-size: 18px;">This paragraph is styled using inline CSS. It has a red color and larger font size.</p>

<p style="background-color: #f1c40f; padding: 10px;">This paragraph has a yellow background and padding, all set using inline CSS.</p>

</body>

</html>

Internal CSS Example

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

<meta name="viewport" content="width=device-width, initial-scale=1.0">

<title>Internal CSS Example</title>

<!-- Internal CSS -->

<style>

body {

font-family: Arial, sans-serif;

}

h1 {

color: #2c3e50;

text-align: center;

}

.styled-paragraph {

color: #3498db;

font-size: 18px;

background-color: #ecf0f1;

padding: 10px;

border-radius: 5px;

}

</style>

</head>

<body>

<h1>Internal CSS Example</h1>

<p class="styled-paragraph">This paragraph is styled using internal CSS with a blue color, larger font, and rounded corners.</p>

<p class="styled-paragraph">Another paragraph with internal CSS styling, sharing the same properties as the previous paragraph.</p>

</body>

</html>

**External CSS Example**

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

<meta name="viewport" content="width=device-width, initial-scale=1.0">

<title>External CSS Example</title>

<link rel="stylesheet" href="styles.css">

</head>

<body>

<h1>External CSS Example</h1>

<p class="external">This paragraph is styled using external CSS, defined in a separate file called styles.css.</p>

<p class="external">Another example of external CSS styling, affecting multiple elements.</p>

</body>

</html>

External CSS File (styles.css)

/\* styles.css \*/

body {

font-family: Arial, sans-serif;

margin: 20px;

}

h1 {

color: #16a085;

text-align: center;

}

.external {

color: #8e44ad;

font-size: 18px;

font-style: italic;

background-color: #ecf0f1;

padding: 10px;

border-left: 5px solid #8e44ad;

}

1. **Design a web page for illustrating various selectors available in CSS3.**

<!DOCTYPE html>

<html lang="en">

<head>

<style>

p {

text-align: center;

color: red;

}

#paral {

text-align: center;

color: red;

}

.center {

text-align: center;

color: blue;

}

.p-center {

text-align: center;

color: green;

}

\* {

text-align: center;

color: blue;

}

h1 {

text-align: center;

color: purple;

}

h2 {

text-align: center;

color: orange;

}

</style>

</head>

<body>

<p>This is a paragraph</p>

<p id="paral">Me too!</p>

<p class="center">This is also a paragraph</p>

<h1>Hello World!</h1>

<h2>Smaller header!</h2>

</body>

</html>

1. Design a web page using the CSS3 Grid layout.

**.html**

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

<meta name="viewport" content="width=device-width, initial-scale=1.0">

<link rel="stylesheet" href="./styles.css">

<title>Grid Layout Example</title>

</head>

<body>

<div class="grid-container">

<div class="grid-item">1</div>

<div class="grid-item">2</div>

<div class="grid-item">3</div>

<div class="grid-item">4</div>

<div class="grid-item">5</div>

<div class="grid-item">6</div>

<div class="grid-item">7</div>

<div class="grid-item">8</div>

<div class="grid-item">9</div>

</div>

</body>

</html>

styles.css  
  
.grid-container {

display: grid;

grid-template-columns: repeat(3, auto); /\* Three columns \*/

background-color: #2196F3;

padding: 10px;

gap: 10px; /\* Added gap between items \*/

}

.grid-item {

background-color: rgba(255, 255, 255, 0.8);

border: 1px solid rgba(0, 0, 0, 0.8);

padding: 20px;

font-size: 20px;

text-align: center;

}

1. **Design a web page using the CSS3 Flexbox layout.**

<head>

    <meta charset="UTF-8">

    <meta name="viewport" content="width=device-width, initial-scale=1.0">

    <style>

        .flex-container {

            display: flex;

            background-color: blue;

        }

        .flex-container > div {

            margin: 10px;

            padding: 20px;

            font-size: 30px;

            background-color: #f0f0f0;

        }

    </style>

</head>

<body>

    <div class="flex-container">

        <div style="order: 4">1</div>

        <div style="order: 3">2</div>

        <div style="order: 2">3</div>

        <div style="order: 1">4</div>

    </div>

</body>

</html>

1. **Design a web page for applying transitions and animations to the contents of the web page**

**Transitions:**

<!DOCTYPE html>

<html lang="en">

<head>

    <meta charset="UTF-8">

    <title>Transitions</title>

    <style>

        body {

            display: flex; /\* Center the box in the viewport \*/

            justify-content: center;

            align-items: center;

            height: 100vh;

            background-color: #f0f0f0; /\* Light background for contrast \*/

        }

        .box {

            width: 60px;

            height: 60px;

            border: 1px solid black; /\* Solid border \*/

            background-color: red;

            transition-property: width, height, background-color, box-shadow; /\* Added properties \*/

            transition-duration: 0.5s; /\* Transition duration \*/

            transition-timing-function: ease-in-out;

            transition-delay: 0s; /\* No delay \*/

        }

        .box:hover {

            width: 300px;

            height: 300px;

            background-color: blue;

            box-shadow: 0px 0px 20px rgba(0, 0, 0, 0.5);

        }

    </style>

</head>

<body>

    <div class="box"></div> <!-- The box that will be animated -->

</body>

</html>

**Animations**

<!DOCTYPE html>

<html lang="en">

<head>

    <meta charset="UTF-8">

    <title>Animations</title>

    <style>

        div {

            width: 100px;

            height: 100px;

            background-color: red;

            animation-name: anim; /\* Corrected animation name \*/

            animation-duration: 5s; /\* Set duration in seconds \*/

            position: relative;

            animation-iteration-count: infinite; /\* Fixed property name \*/

        }

        @keyframes anim { /\* Corrected keyframes declaration \*/

            0% {

                top: 0px;

                left: 0px;

                background-color: beige;

            }

            25% {

                top: 0px;

                left: 600px; /\* Corrected the position \*/

                background-color: aquamarine;

            }

            50% {

                top: 600px;

                left: 600px;

                background-color: violet; /\* Corrected color name \*/

            }

            75% {

                top: 600px;

                left: 0px;

                background-color: gold; /\* Removed extra 'cord' \*/

            }

            100% {

                top: 0px;

                left: 0px;

                background-color: blue;

            }

        }

    </style>

</head>

<body>

    <div></div> <!-- Moved this inside the body tag -->

</body>

</html>

1. **Create a Responsive Web Design using Media Queries.**

<!DOCTYPE html>

<html lang="en">

<head>

    <meta charset="UTF-8">

    <title>FLEX</title>

    <link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/font-awesome/6.0.0-beta3/css/all.min.css">

    <link rel="stylesheet" href="./style.css">

    <meta name="viewport" content="width=device-width, initial-scale=1.0">

</head>

<body>

    <div class="flex-container">

        <div><a href="#">Home</a></div>

        <div><a href="#">About</a></div>

        <div><a href="#">Stock</a></div>

        <div><a href="#">Contact</a></div>

        <div><a href="https://facebook.com" target="\_blank"><i class="fab fa-facebook-square"></i></a></div>

        <div><a href="https://twitter.com" target="\_blank"><i class="fab fa-twitter-square"></i></a></div>

    </div>

</body>

</html>

<style>

    .flex-container {

        display: flex;

        padding: 10px;

        background-color: blueviolet;

        flex-wrap: wrap;

    }

    .flex-container div {

        padding: 10px;

        border: 3px solid grey;

        margin: 5px;

        background-color: lavender;

        flex: 1 1 100%;

        text-align: center;

    }

    @media screen and (max-width: 600px) {

        .flex-container div {

            flex: 1 1 100%;

            background-color: lavender;

        }

    }

</style>

**8. Create a responsive web page using the Bootstrap grid system by applying classes to it.**

<!DOCTYPE html>

<html lang="en">

<head>

    <meta charset="UTF-8">

    <meta name="viewport" content="width=device-width, initial-scale=1.0">

    <title>Bootstrap Grid</title>

    <link rel="stylesheet" href="https://maxcdn.bootstrapcdn.com/bootstrap/4.5.2/css/bootstrap.min.css">

</head>

<body>

    <div class="container">

        <div class="row bg-secondary">

            <div class="col-md-3">Id</div>

            <div class="col-md-3">Branch</div>

            <div class="col-md-3">Section</div>

        </div>

        <br>

        <div class="row bg-warning mt-2 pt-3">

            <div class="col-lg-3">One</div>

            <div class="col-lg-3">Two</div>

            <div class="col-lg-6">Three</div>

        </div>

    </div>

</body>

</html>

**9. Design a Responsive web page using the following Bootstrap components.**

**I. Lists II. Tables III. Buttons, and IV. Images**

<!DOCTYPE html>

<html lang="en">

<head>

    <meta charset="UTF-8">

    <meta name="viewport" content="width=device-width, initial-scale=1.0">

    <link href="style.css" rel="stylesheet"> <!-- Assuming you have a CSS file -->

    <style>

        img {

            margin-top: 30px;

            width: 200px;

            height: 100px;

        }

    </style>

</head>

<body>

    <div class="pic-btn">

        <button type="button" class="btn btn-primary">Click</button>

        <br>

        <img src="https://encrypted-tbn1.gstatic.com/images?q=tbn:ANd9GcQ7stGLtmEKOsAyJ3v5j6e5VSaVGALuXO1PR7h0-b9lH5tcSOb4" alt="css" />

    </div>

    <ul class="list-inline">

        <li class="list-inline-item">ONE</li>

        <li class="list-inline-item">TWO</li>

        <li class="list-inline-item">THREE</li>

    </ul>

    <ol class="list-inline">

        <li class="list-inline-item">ONE</li>

        <li class="list-inline-item">TWO</li>

        <li class="list-inline-item">THREE</li>

    </ol>

    <table class="table table-info">

        <tr>

            <th>#</th>

            <th>First</th>

            <th>Last</th>

            <th>Age</th>

        </tr>

        <tr>

            <td>1</td>

            <td>Sai</td>

            <td>prasad</td>

            <td>20</td>

        </tr>

        <tr>

            <td>2</td>

            <td>Kiran</td>

            <td>Reddy</td>

            <td>18</td>

        </tr>

    </table>

</body>

</html>

**10. Design registration page using the following Bootstrap form elements**

**I. TextBox II. TextArea III. Radio button IV. Checkbox V. Select VI. Datalist VII. Range VIII. Buttons**

<!DOCTYPE html>

<html lang="en">

<head>

    <meta charset="UTF-8">

    <meta name="viewport" content="width=device-width, initial-scale=1.0">

    <link href="../style.css" rel="stylesheet"> <!-- Assuming you have a CSS file -->

    <title>Registration Form</title>

</head>

<body>

    <div class="container mt-5">

        <h2 class="text-center mb-4">Registration Form</h2>

        <form>

            <!-- Text Box -->

            <div class="mb-3">

                <label for="fullName" class="form-label">Full Name</label>

                <input type="text" class="form-control" id="fullName" placeholder="Enter your name" required>

            </div>

            <div class="mb-3">

                <label for="email" class="form-label">Email Address</label>

                <input type="email" class="form-control" id="email" placeholder="Enter your email" required>

            </div>

            <div class="mb-3">

                <label for="address" class="form-label">Address</label>

                <textarea class="form-control" id="address" rows="3" placeholder="Enter your address" required></textarea>

            </div>

            <!-- Radio Buttons -->

            <div class="mb-3">

                <label class="form-label">Gender</label>

                <div class="form-check">

                    <input class="form-check-input" type="radio" name="gender" id="male" value="male" required>

                    <label class="form-check-label" for="male">Male</label>

                </div>

                <div class="form-check">

                    <input class="form-check-input" type="radio" name="gender" id="female" value="female" required>

                    <label class="form-check-label" for="female">Female</label>

                </div>

            </div>

            <!-- Select -->

            <div class="mb-3">

                <label for="country" class="form-label">Country</label>

                <select class="form-select" id="country" required>

                    <option selected disabled>Select your country</option>

                    <option value="US">United States</option>

                    <option value="CA">Canada</option>

                    <option value="UK">United Kingdom</option>

                </select>

            </div>

            <!-- Datalist -->

            <div class="mb-3">

                <label for="browser" class="form-label">Favourite Browser</label>

                <input class="form-control" list="browsers" id="browser" placeholder="Type to search..." required>

                <datalist id="browsers">

                    <option value="Chrome"></option>

                    <option value="Firefox"></option>

                    <option value="Safari"></option>

                    <option value="Edge"></option>

                    <option value="Opera"></option>

                </datalist>

            </div>

            <!-- Range -->

            <div class="mb-3">

                <label for="experience" class="form-label">Experience (0-10)</label>

                <input type="range" class="form-range" id="experience" min="0" max="10">

            </div>

            <!-- Button -->

            <div class="mb-3">

                <button type="submit" class="btn btn-primary me-2">Register</button>

            </div>

        </form>

    </div>

</body>

</html>

**11. Write a JavaScript code to print the Fibonacci series up to a given number using function**

<!DOCTYPE html>

<html lang="en">

<head>

    <meta charset="UTF-8">

    <meta name="viewport" content="width=device-width, initial-scale=1.0">

    <title>Fibonacci Series</title>

</head>

<body>

    <script>

        var n = window.prompt("Enter a number");

        n = parseInt(n);

        function fibo(n) {

            var n1 = 0;

            var n2 = 1;

            console.log("Fibonacci Series up to " + n + ":");

            while (n1 < n) {

                console.log(n1);

                var next = n1 + n2;

                n1 = n2;

                n2 = next;

            }

        }

        fibo(n);

    </script>

</body>

</html>

**12. Write a JavaScript code to demonstrate methods of an Array object.**

<!DOCTYPE html>

<html lang="en">

<head>

    <meta charset="UTF-8">

    <meta name="viewport" content="width=device-width, initial-scale=1.0">

    <title>JavaScript Array Manipulation</title>

</head>

<body>

    <h2>Check the Console for Output</h2>

    <script>

        let marks = [98, 89, 95, 100];

        console.log(marks);

        console.log("Element at index 2:", marks[2]);

        console.log("Length:", marks.length);

        marks.push(91);

        console.log("After push:", marks);

        const poppedValue = marks.pop();

        console.log("pop():", poppedValue);

        console.log("After pop:", marks);

        console.log("Reverse:", marks.reverse());

        const shiftedValue = marks.shift();

        console.log("shift():", shiftedValue);

        console.log("After shift:", marks);

        marks.unshift(87, 95);

        console.log("After unshift:", marks);

    </script>

</body>

</html>

**13. Write a JavaScript code for finding the factorial of a given number using functions.**

<!DOCTYPE html>

<html lang="en">

<head>

    <meta charset="UTF-8">

    <meta name="viewport" content="width=device-width, initial-scale=1.0">

    <title>Factorial Calculator</title>

    <script>

        // Function to calculate the factorial of a number

        function fac(n) {

            // Base case

            if (n === 0 || n === 1) {

                return 1;

            } else {

                return n \* fac(n - 1); // Recursive call

            }

        }

        // Function to prompt user input and display the result

        function calculateFactorial() {

            var n = parseInt(window.prompt("Enter a number")); // Prompt user for a number

            if (isNaN(n) || n < 0) {

                console.log("Please enter a valid non-negative integer.");

            } else {

                console.log("Factorial of " + n + " is: " + fac(n)); // Log the factorial

            }

        }

    </script>

</head>

<body>

    <h1>Factorial Calculator</h1>

    <button onclick="calculateFactorial()">Calculate Factorial</button>

</body>

</html>

**14. Create a Login Form and validate user credentials using regular expressions. If user credentials are valid display welcome message along with username else, display invalid credentials.**

<!DOCTYPE html>

<html lang="en">

<head>

    <meta charset="UTF-8">

    <meta name="viewport" content="width=device-width, initial-scale=1.0">

    <title>Login Form</title>

    <style>

        /\* Basic styling for the form \*/

        .form-container {

            width: 300px;

            margin: 0 auto;

            padding: 20px;

            border: 1px solid #ccc;

            border-radius: 5px;

        }

        .form-group {

            margin-bottom: 15px;

        }

        .error {

            color: red;

        }

    </style>

    <script>

        function validateForm() {

            var username = document.getElementById("username").value.trim();

            var email = document.getElementById("email").value.trim();

            var mobile = document.getElementById("mobile").value.trim();

            var message = "";

            if (username === '' || email === '' || mobile === '') {

                message = "All fields are required.";

            } else if (!validateUsername(username)) {

                message = "Invalid Username. It must be 3-15 characters long and contain only letters, numbers, or underscores.";

            } else if (!validateEmail(email)) {

                message = "Invalid email format.";

            } else if (!validateMobile(mobile)) {

                message = "Invalid mobile number format.";

            } else {

                message = "Welcome, " + username + "!";

            }

            document.getElementById('message').innerText = message;

        }

        function validateUsername(username) {

            var re = /^[a-zA-Z0-9\_]{3,15}$/;

            return re.test(username);

        }

        function validateEmail(email) {

            var re = /^[^\s@]+@[^\s@]+\.[^\s@]+$/;

            return re.test(email);

        }

        function validateMobile(mobile) {

            var re = /^[0-9]{10}$/;

            return re.test(mobile);

        }

    </script>

</head>

<body>

    <div class="form-container">

        <h2>Login</h2>

        <div class="form-group">

            <label for="username">Username:</label>

            <input type="text" id="username" placeholder="Enter your username" required>

        </div>

        <div class="form-group">

            <label for="email">Email:</label>

            <input type="email" id="email" placeholder="Enter your email" required>

        </div>

        <div class="form-group">

            <label for="mobile">Mobile Number:</label>

            <input type="tel" id="mobile" placeholder="Enter your mobile number" required>

        </div>

        <div class="form-group">

            <button type="button" onclick="validateForm()">Login</button>

        </div>

        <div class="form-group error" id="message"></div>

    </div>

</body>

</html>

**15. Write a JavaScript code to Build a Scientific calculator using JavaScript.**

<!DOCTYPE html>

<html lang="en">

<head>

    <meta charset="UTF-8">

    <meta name="viewport" content="width=device-width, initial-scale=1.0">

    <title>Scientific Calculator</title>

    <style>

        /\* Basic styling for the calculator \*/

        body {

            background-color: #f4f4f4;

            font-family: Arial, sans-serif;

        }

        .calculator {

            width: 300px;

            margin: 50px auto;

            padding: 20px;

            border: 1px solid #aaa;

            border-radius: 10px;

            box-shadow: 0px 0px 10px rgba(0, 0, 0, 0.2);

            background-color: #fff;

        }

        .display {

            width: 100%;

            height: 40px;

            margin-bottom: 20px;

            text-align: right;

            font-size: 18px;

            padding: 10px;

            box-sizing: border-box;

            border-radius: 5px;

            border: 1px solid #aaa;

            background-color: #f9f9f9;

        }

        .buttons {

            display: flex;

            flex-wrap: wrap;

        }

        .button {

            width: 25%;

            padding: 15px;

            margin: 5px;

            font-size: 18px;

            text-align: center;

            cursor: pointer;

            background-color: #e1e1e1;

            border-radius: 5px;

            border: 1px solid #aaa;

            box-sizing: border-box;

            transition: background-color 0.3s;

        }

        .button:hover {

            background-color: #d0d0d0;

        }

        .button.special {

            background-color: #57ff97;

        }

        .button.special:hover {

            background-color: #ffcc00;

        }

    </style>

</head>

<body>

<div class="calculator">

    <input type="text" id="display" class="display" readonly>

    <div class="buttons">

        <div class="button" onclick="appendToDisplay('7')">7</div>

        <div class="button" onclick="appendToDisplay('8')">8</div>

        <div class="button" onclick="appendToDisplay('9')">9</div>

        <div class="button special" onclick="clearDisplay()">C</div>

        <div class="button" onclick="appendToDisplay('4')">4</div>

        <div class="button" onclick="appendToDisplay('5')">5</div>

        <div class="button" onclick="appendToDisplay('6')">6</div>

        <div class="button special" onclick="appendToDisplay('/')">/</div>

        <div class="button" onclick="appendToDisplay('1')">1</div>

        <div class="button" onclick="appendToDisplay('2')">2</div>

        <div class="button" onclick="appendToDisplay('3')">3</div>

        <div class="button special" onclick="appendToDisplay('\*')">\*</div>

        <div class="button" onclick="appendToDisplay('0')">0</div>

        <div class="button" onclick="appendToDisplay('.')">.</div>

        <div class="button special" onclick="appendToDisplay('+')">+</div>

        <div class="button special" onclick="appendToDisplay('-')">-</div>

        <div class="button special" onclick="calculateResult()">=</div>

        <div class="button" onclick="calculateSquareRoot()">√</div>

        <div class="button" onclick="calculateSquare()">x²</div>

        <div class="button" onclick="calculateSin()">sin</div>

        <div class="button" onclick="calculateCos()">cos</div>

        <div class="button" onclick="calculateTan()">tan</div>

        <div class="button" onclick="calculateExp()">eˣ</div>

        <div class="button" onclick="calculateLog()">log</div>

    </div>

</div>

<script>

    // Append a character to the display

    function appendToDisplay(value) {

        document.getElementById("display").value += value;

    }

    // Clear the display

    function clearDisplay() {

        document.getElementById("display").value = "";

    }

    // Calculate the result of the expression in the display

    function calculateResult() {

        try {

            document.getElementById("display").value = eval(document.getElementById("display").value);

        } catch (error) {

            document.getElementById("display").value = "Error";

        }

    }

    // Scientific functions

    function calculateSquareRoot() {

        document.getElementById("display").value = Math.sqrt(eval(document.getElementById("display").value));

    }

    function calculateSquare() {

        let value = eval(document.getElementById("display").value);

        document.getElementById("display").value = Math.pow(value, 2);

    }

    function calculateSin() {

        let value = eval(document.getElementById("display").value);

        document.getElementById("display").value = Math.sin(value);

    }

    function calculateCos() {

        let value = eval(document.getElementById("display").value);

        document.getElementById("display").value = Math.cos(value);

    }

    function calculateTan() {

        let value = eval(document.getElementById("display").value);

        document.getElementById("display").value = Math.tan(value);

    }

    function calculateExp() {

        let value = eval(document.getElementById("display").value);

        document.getElementById("display").value = Math.exp(value);

    }

    function calculateLog() {

        let value = eval(document.getElementById("display").value);

        document.getElementById("display").value = Math.log(value);

    }

</script>

</body>

</html>

**Write a JavaScript code to demonstrate jQuery events (click, double click, mouse enter, mouse leave, mouse down, mouse up, hover, on, focus and blur events)**

<!DOCTYPE html>

<html lang="en">

<head>

    <meta charset="UTF-8">

    <meta name="viewport" content="width=device-width, initial-scale=1.0">

    <title>jQuery Demo</title>

    <script src="https://ajax.googleapis.com/ajax/libs/jquery/3.7.1/jquery.min.js"></script>

    <script src="jquery.js"></script>

</head>

<body>

    <h2>Mouse Enter/Leave Action</h2>

    <p>This is a paragraph.</p>

    <button id="clickButton">Click</button>

    <h3>Hover Example</h3>

    <form>

        <label for="name">Name:</label>

        <input type="text" id="name" name="name" placeholder="Enter name">

        <hr>

        <label for="email">Email:</label>

        <input type="email" id="email" name="email" placeholder="Enter email">

    </form>

    <script>

        $(document).ready(function () {

            $("#clickButton").click(function () {

                $("p").hide();

            });

            $("#clickButton").dblclick(function () {

                $("p").show();

            });

            $("h2").mouseenter(function () {

                $(this).css("color", "red");

            });

            $("h2").mouseleave(function () {

                $(this).css("color", "blue");

            });

            $("h3").on("mousedown", function () {

                $(this).css("background-color", "lightgreen");

            });

            $("h3").hover(function () {

                alert("Hover");

            });

            $("input").focus(function () {

                $(this).css("background-color", "lightblue");

            });

            $("input").blur(function () {

                $(this).css("background-color", "lightgreen");

            });

        });

    </script>

</body>

</html>

**17. Write a JavaScript code to demonstrate jQuery effects (show, hide, toggle)**

<!DOCTYPE html>

<html lang="en">

<head>

    <meta charset="UTF-8">

    <meta name="viewport" content="width=device-width, initial-scale=1.0">

    <title>jQuery Effects</title>

    <script src="https://ajax.googleapis.com/ajax/libs/jquery/3.7.1/jquery.min.js"></script>

</head>

<body>

    <h2>Toggle Paragraph</h2>

    <button id="btn">Toggle</button>

    <p>For Hide and Show</p>

    <button class="btn2">Click</button>

    <script>

        $(document).ready(function () {

            $(".btn2").click(function () {

                $("p").hide(1000);

            });

            $(".btn2").dblclick(function () {

                $("p").show("fast", function () {

                    alert("The element is visible");

                });

            });

            $("#btn").click(function () {

                $("p").toggle(700, function () {

                    alert("The paragraph is toggled");

                });

            });

        });

    </script>

</body></html>

**18. Write a JavaScript code to demonstrate jQuery Fading methods(fade in, fade out, fade toggle, fade to)**

<!DOCTYPE html>

<html lang="en">

<head>

    <meta charset="UTF-8">

    <meta name="viewport" content="width=device-width, initial-scale=1.0">

    <title>Fading Effects</title>

    <script src="https://code.jquery.com/jquery-3.6.0.min.js"></script>

</head>

<body>

    <div id="div1" style="width: 50px; height: 50px; background-color: orange;"></div><br>

    <div id="div2" style="width: 50px; height: 50px; background-color: blue;"></div><br>

    <div id="div3" style="width: 50px; height: 50px; background-color: green;"></div><br>

    <div id="div4" style="width: 80px; height: 50px; background-color: red;"></div><br>

    <button>Click to fade</button>

    <script>

        $(document).ready(function() {

            $("button").click(function() {

                $("#div1").fadeIn(500); // Fades in div1

            });

            $("button").click(function() {

                $("#div2").fadeOut(200); // Fades out div2

            });

            $("button").click(function() {

                $("#div3").fadeToggle("fast"); // Toggles div3

            });

            $("button").click(function() {

                $("#div4").fadeTo(1000, 0); // Fades out div4 to transparent

            });

        });

    </script>

</body>

</html>

**19. Write a JavaScript code to demonstrate jQuery Sliding methods(slide down, slide up, slide toggle)**

<!DOCTYPE html>

<html lang="en">

<head>

    <title>jQuery Sliding Methods</title>

    <meta charset="UTF-8">

    <style>

        div {

            padding: 10px;

            margin-top: 10px;

            background-color: pink;

            display: none;

        }

    </style>

    <script src="https://ajax.googleapis.com/ajax/libs/jquery/3.6.0/jquery.min.js"></script>

</head>

<body>

    <p>Hi, this is a demonstration of jQuery sliding methods.</p>

    <div id="div1">1000 sec</div>

    <div id="div2">2000 sec</div>

    <div id="div3">3000 sec</div>

    <button id="btn1">Slide Down</button>

    <button id="btn2">Slide Up</button>

    <button id="btn3">Slide Toggle</button>

    <script>

        $(document).ready(function() {

            $("#btn1").click(function() {

                $("#div1").slideDown(1000);

                $("#div2").slideDown(2000);

                $("#div3").slideDown(3000);

            });

            $("#btn2").click(function() {

                $("#div1").slideUp(1000);

                $("#div2").slideUp(2000);

                $("#div3").slideUp(3000);

            });

            $("#btn3").click(function() {

                $("#div1").slideToggle(1000);

                $("#div2").slideToggle(2000);

                $("#div3").slideToggle(3000);

            });

        });

    </script>

</body>

</html>