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Web Lab Exercise-5

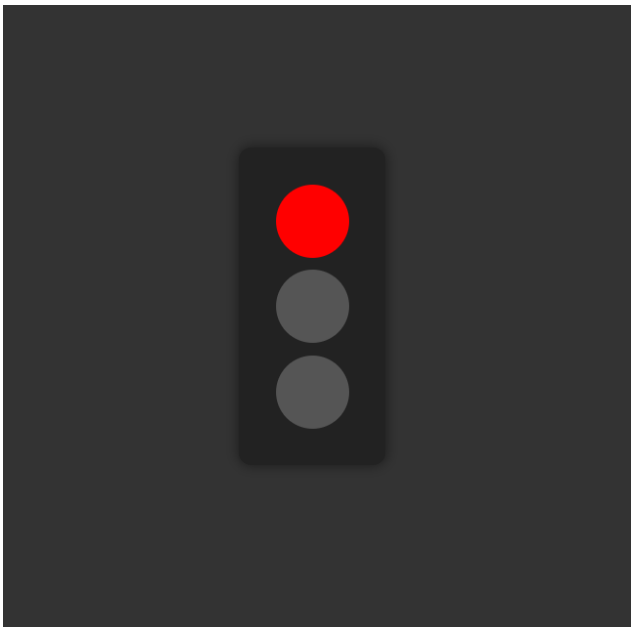
1) Traffic Light Signal

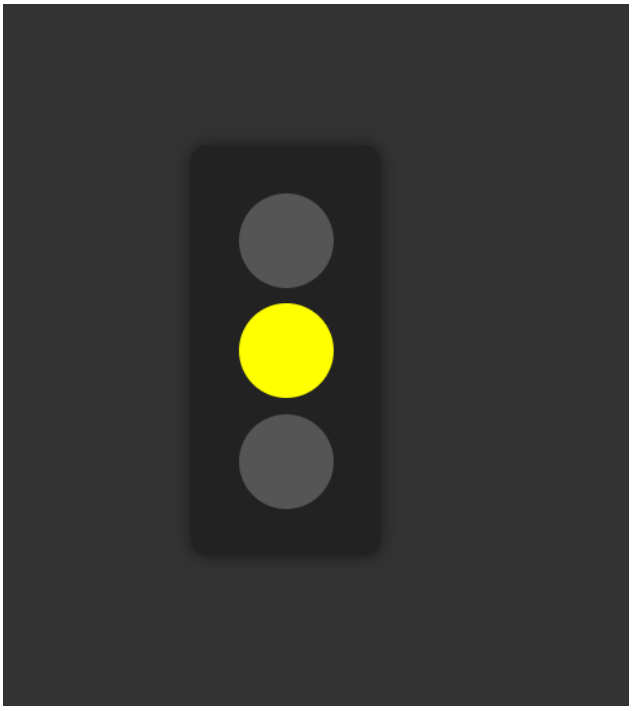
Code:

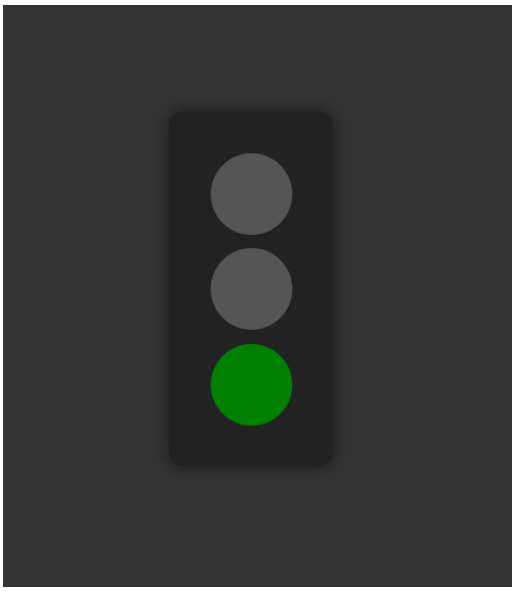
```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Traffic Light</title>
    <style>
        body {
            display: flex;
            justify-content: center;
            align-items: center;
            height: 100vh;
            margin: 0;
            background-color: #333;
        }
        .traffic-light {
            width: 80px;
            background-color: #222;
            padding: 20px;
            border-radius: 10px;
            box-shadow: 0 0 10px rgba(0, 0, 0, 0.5);
        }
        .light {
            width: 60px;
            height: 60px;
            background-color: #555;
            border-radius: 50%;
            margin: 10px auto;
            transition: background-color 0.5s;
        }
        .red.active { background-color: red; }
        .yellow.active { background-color: yellow; }
        .green.active { background-color: green; }
    </style>
</head>
<body>
```

```
<body>
    <div class="traffic-light">
        <div class="light red" id="red"></div>
        <div class="light yellow" id="yellow"></div>
        <div class="light green" id="green"></div>
    </div>

    <script>
        let currentLight = 0;
        const lights = ['red', 'yellow', 'green'];

        function changeLight() {
            lights.forEach(light => {
                document.getElementById(light).classList.remove('active');
            });
            document.getElementById(lights[currentLight]).classList.add('active');
            currentLight = (currentLight + 1) % lights.length;
        }
        setInterval(changeLight, 1000);
        changeLight();
    </script>
</body>
</html>
```

Output:







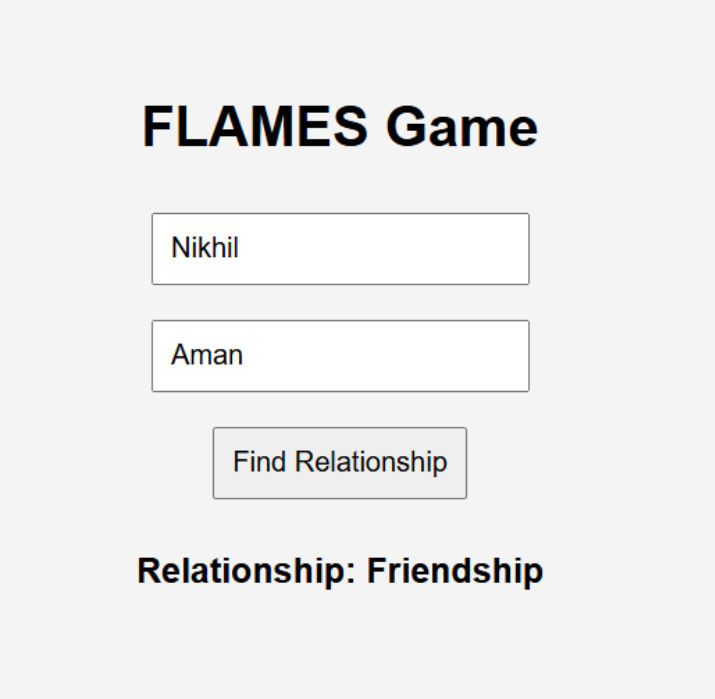
2) Flames

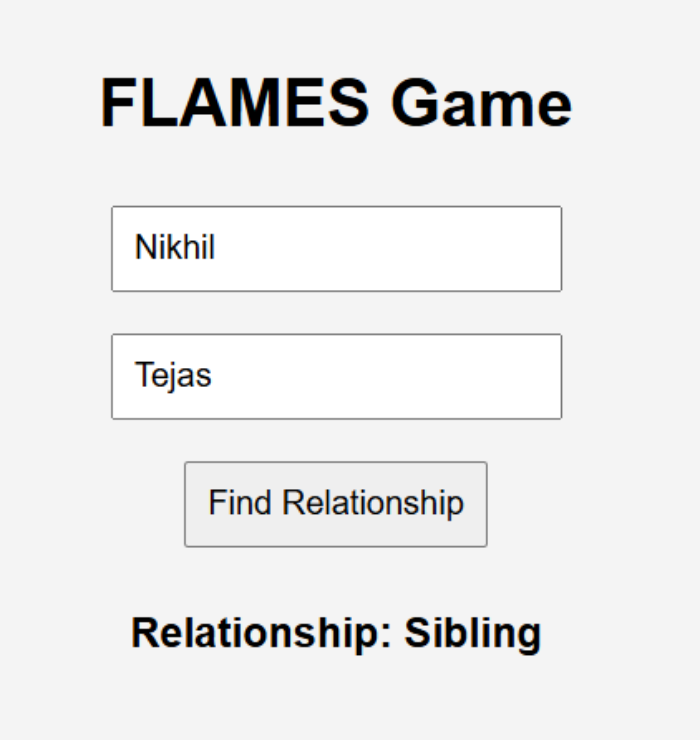
Code:

```html
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>FLAMES Game</title>
    <style>
        body {
            display: flex;
            flex-direction: column;
            align-items: center;
            justify-content: center;
            height: 100vh;
            background-color: #f4f4f4;
            font-family: Arial, sans-serif;
        }
        input, button {
            margin: 10px;
            padding: 10px;
            font-size: 16px;
        }
        #result {
            margin-top: 20px;
            font-size: 20px;
            font-weight: bold;
        }
    </style>
</head>
<body>
    <h1>FLAMES Game</h1>
    <input type="text" id="name1" placeholder="Enter first name">
    <input type="text" id="name2" placeholder="Enter second name">
    <button onclick="calculateFLAMES()">Find Relationship</button>
    <div id="result"></div>
```

```
    <script>
        function calculateFLAMES() {
            let name1 = document.getElementById("name1").value.toLowerCase().replace(/\s+/g, '');
            let name2 = document.getElementById("name2").value.toLowerCase().replace(/\s+/g, '');

            if (!name1 || !name2) {
                document.getElementById("result").innerText = "Please enter both names.";
                return;
            }

            let name1Array = name1.split('');
            let name2Array = name2.split('');

            name1Array.forEach(letter => {
                let index = name2Array.indexOf(letter);
                if (index !== -1) {
                    name2Array.splice(index, 1);
                    name1Array.splice(name1Array.indexOf(letter), 1);
                }
            });

            let remainingLetters = name1Array.length + name2Array.length;
            let flames = ['Friendship', 'Love', 'Affection', 'Marriage', 'Enemy', 'Sibling'];

            while (flames.length > 1) {
                let index = (remainingLetters % flames.length) - 1;
                if (index >= 0) {
                    flames.splice(index, 1);
                } else {
                    flames.splice(flames.length - 1, 1);
                }
            }

            document.getElementById("result").innerText = "Relationship: " + flames[0];
        }
    </script>
</body>
</html>

```

Output:


FLAMES Game
Nikhil
Aman
Find Relationship
Relationship: Friendship


FLAMES Game
Nikhil
Tejas
Find Relationship
Relationship: Sibling

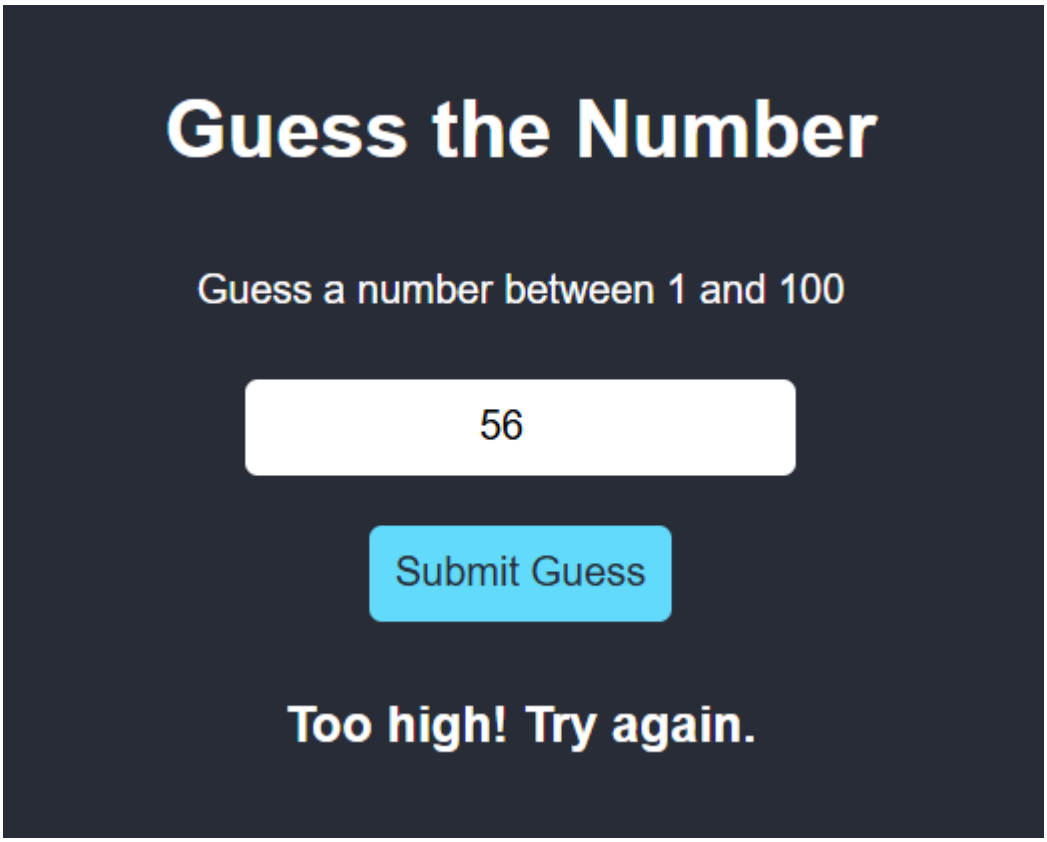
3) Guess the number

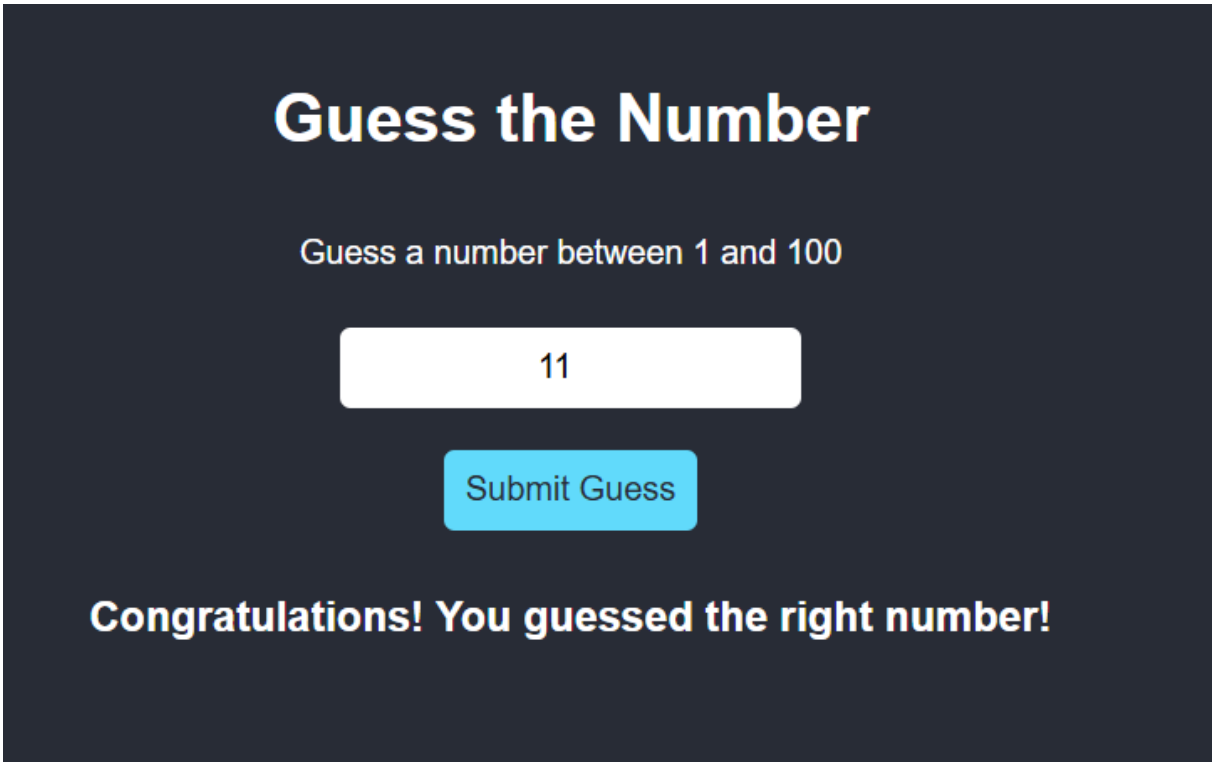
Code:

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Guess the Number</title>
    <style>
        body {
            display: flex;
            flex-direction: column;
            align-items: center;
            justify-content: center;
            height: 100vh;
            background-color: #282c36;
            font-family: Arial, sans-serif;
            color: white;
        }
        input, button {
            margin: 10px;
            padding: 10px;
            font-size: 16px;
            border-radius: 5px;
            border: none;
        }
        input {
            width: 200px;
            text-align: center;
        }
        button {
            background-color: #61dafb;
            color: #282c36;
            cursor: pointer;
            transition: background-color 0.3s;
        }
        button:hover {
            background-color: #21a1f1;
        }
        #message {
            margin-top: 20px;
            font-size: 20px;
            font-weight: bold;
        }
    </style>
</head>
<body>
```

```html
<body>
    <h1>Guess the Number</h1>
    <p>Guess a number between 1 and 100</p>
    <input type="number" id="guess" placeholder="Enter your guess">
    <button onclick="checkGuess()">Submit Guess</button>
    <div id="message"></div>

    <script>
        let randomNumber = Math.floor(Math.random() * 100) + 1;

        function checkGuess() {
            let userGuess = document.getElementById("guess").value;
            let message = document.getElementById("message");

            if (!userGuess) {
                message.innerText = "Please enter a number!";
                return;
            }

            userGuess = parseInt(userGuess);

            if (userGuess < 1 || userGuess > 100) {
                message.innerText = "Number must be between 1 and 100!";
            } else if (userGuess < randomNumber) {
                message.innerText = "Too low! Try again.";
            } else if (userGuess > randomNumber) {
                message.innerText = "Too high! Try again.";
            } else {
                message.innerText = "Congratulations! You guessed the right number!";
            }
        }
    </script>
</body>
</html>
```

Output:


Guess the Number
Guess a number between 1 and 100
56
Submit Guess
Too high! Try again.


Guess the Number
Guess a number between 1 and 100
11
Submit Guess
Congratulations! You guessed the right number!

4) To-do list

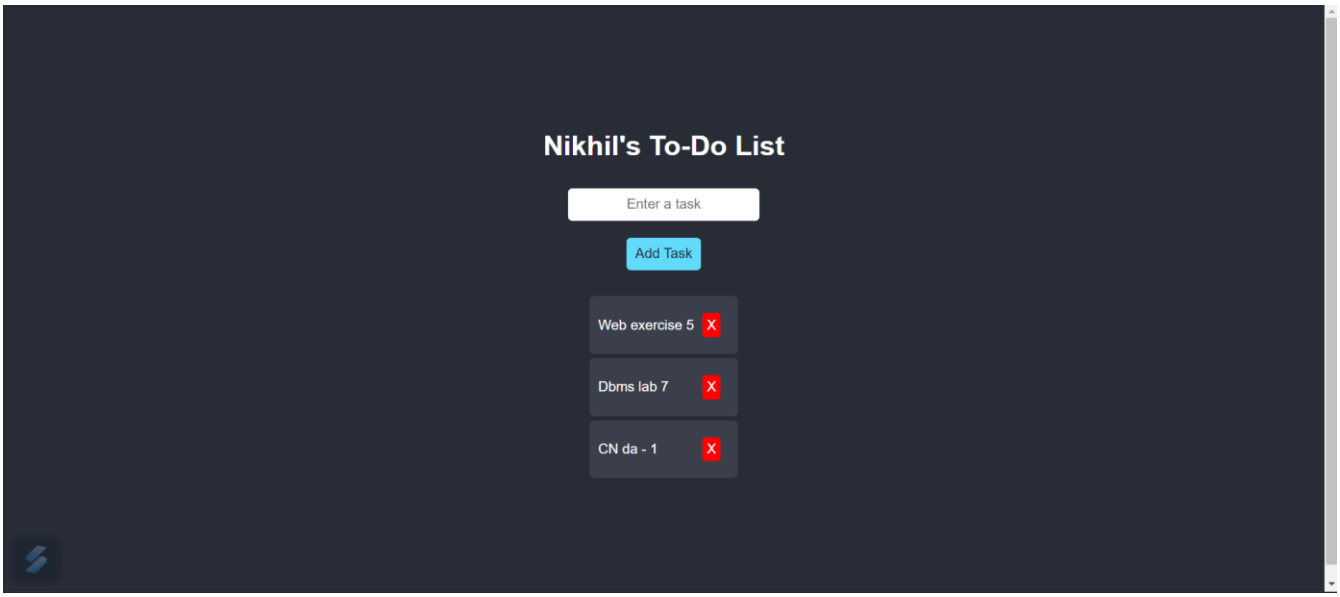
Code:

```html
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>To-Do List</title>
    <style>
        body {
            display: flex;
            flex-direction: column;
            align-items: center;
            justify-content: center;
            height: 100vh;
            background-color: #282c36;
            font-family: Arial, sans-serif;
            color: white;
        }
        input, button {
            margin: 10px;
            padding: 10px;
            font-size: 16px;
            border-radius: 5px;
            border: none;
        }
        input {
            width: 200px;
            text-align: center;
        }
        button {
            background-color: #61dafb;
            color: #282c36;
            cursor: pointer;
            transition: background-color 0.3s;
        }
        button:hover {
            background-color: #21a1f1;
        }
```

```
        ul {
            list-style-type: none;
            padding: 0;
        }
        li {
            background: #3a3f4b;
            margin: 5px;
            padding: 10px;
            border-radius: 5px;
            display: flex;
            justify-content: space-between;
            align-items: center;
        }
        .delete {
            background: red;
            color: white;
            border: none;
            padding: 5px;
            cursor: pointer;
            border-radius: 3px;
        }
        .delete:hover {
            background: darkred;
        }
    </style>
</head>
```

```
<body>
    <h1>Nikhil's To-Do List</h1>
    <input type="text" id="task" placeholder="Enter a task">
    <button onclick="addTask()">Add Task</button>
    <ul id="taskList"></ul>

    <script>
        function addTask() {
            let taskInput = document.getElementById("task");
            let taskValue = taskInput.value.trim();
            if (taskValue === "") return;

            let li = document.createElement("li");
            li.innerHTML = `${taskValue} <button class='delete' onclick='removeTask(this)'>X</button>`;
            document.getElementById("taskList").appendChild(li);

            taskInput.value = "";
        }

        function removeTask(button) {
            button.parentElement.remove();
        }
    </script>
</body>
</html>
```

Output:


Nikhil's To-Do List
Enter a task
Add Task
Web exercise 5 X
Dbms lab 7 X
CN da - 1 X

5) Draw shapes

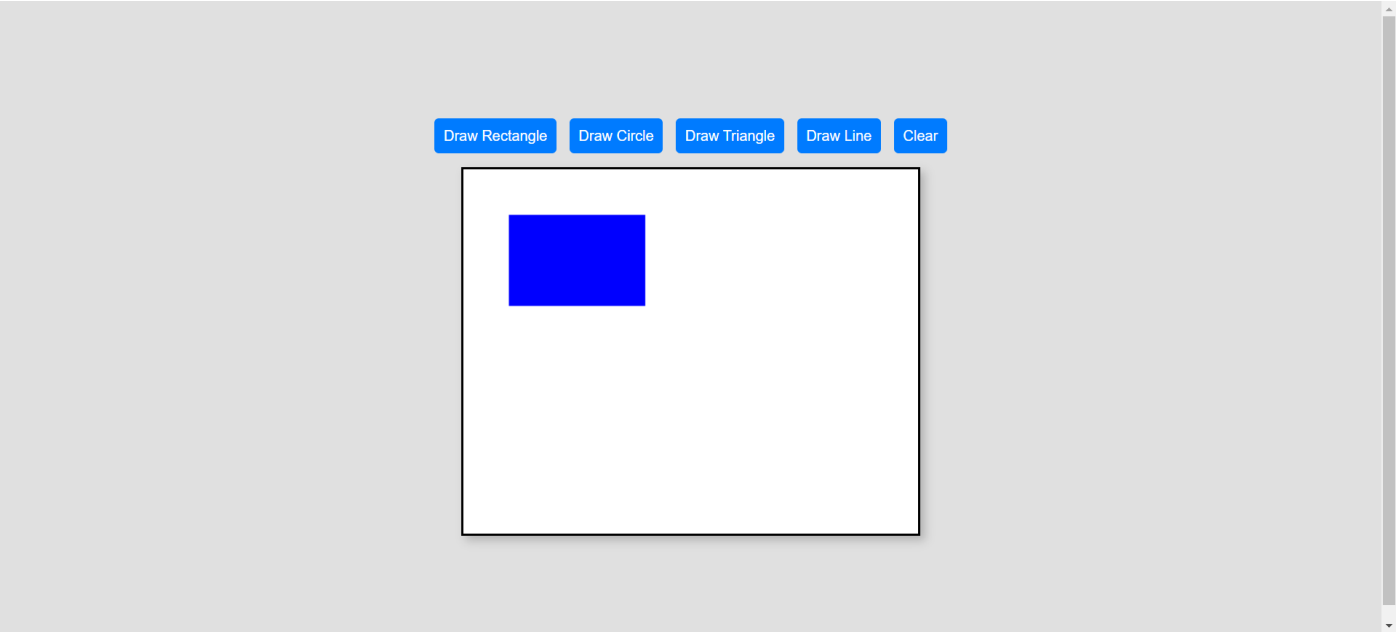
Code:

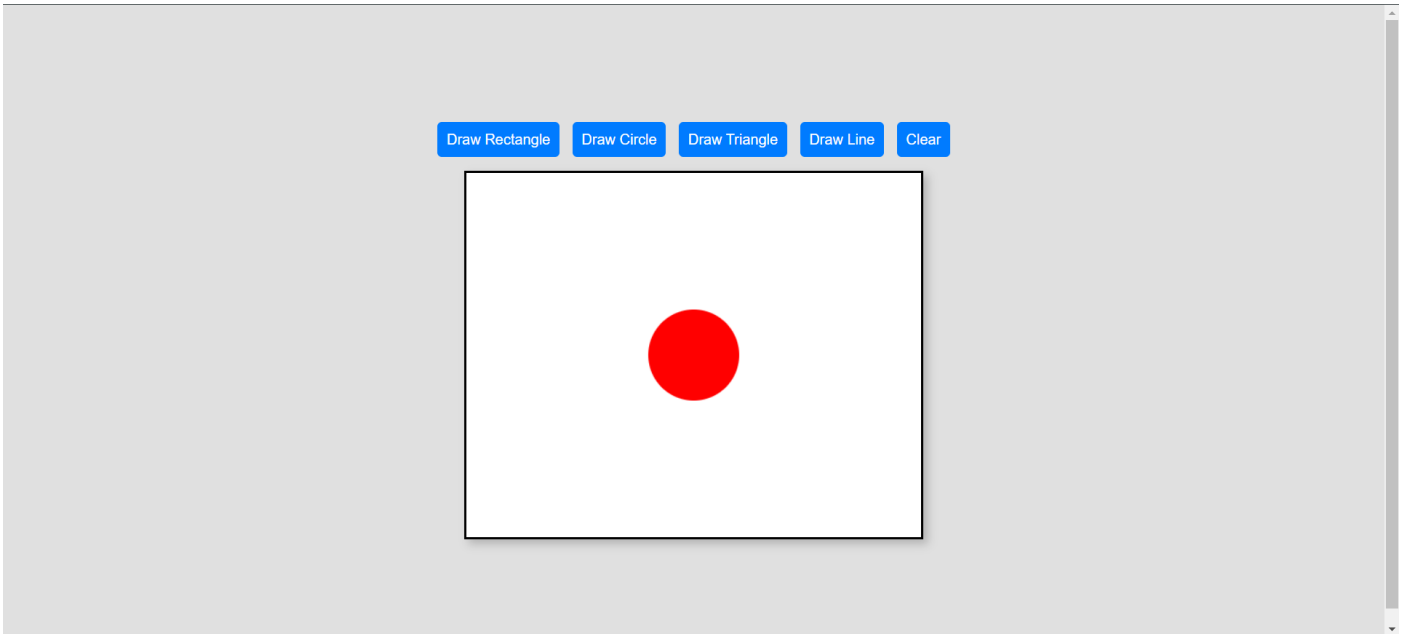
```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Draw Shapes</title>
    <style>
        body {
            display: flex;
            flex-direction: column;
            align-items: center;
            justify-content: center;
            height: 100vh;
            background-color: #e0e0e0;
            font-family: Arial, sans-serif;
        }
        canvas {
            border: 3px solid black;
            background-color: white;
            box-shadow: 5px 5px 10px rgba(0, 0, 0, 0.2);
        }
        .controls {
            margin-bottom: 10px;
        }
        button {
            margin: 5px;
            padding: 10px;
            font-size: 16px;
            border: none;
            cursor: pointer;
            background-color: #007bff;
            color: white;
            border-radius: 5px;
        }
        button:hover {
            background-color: #0056b3;
        }
```

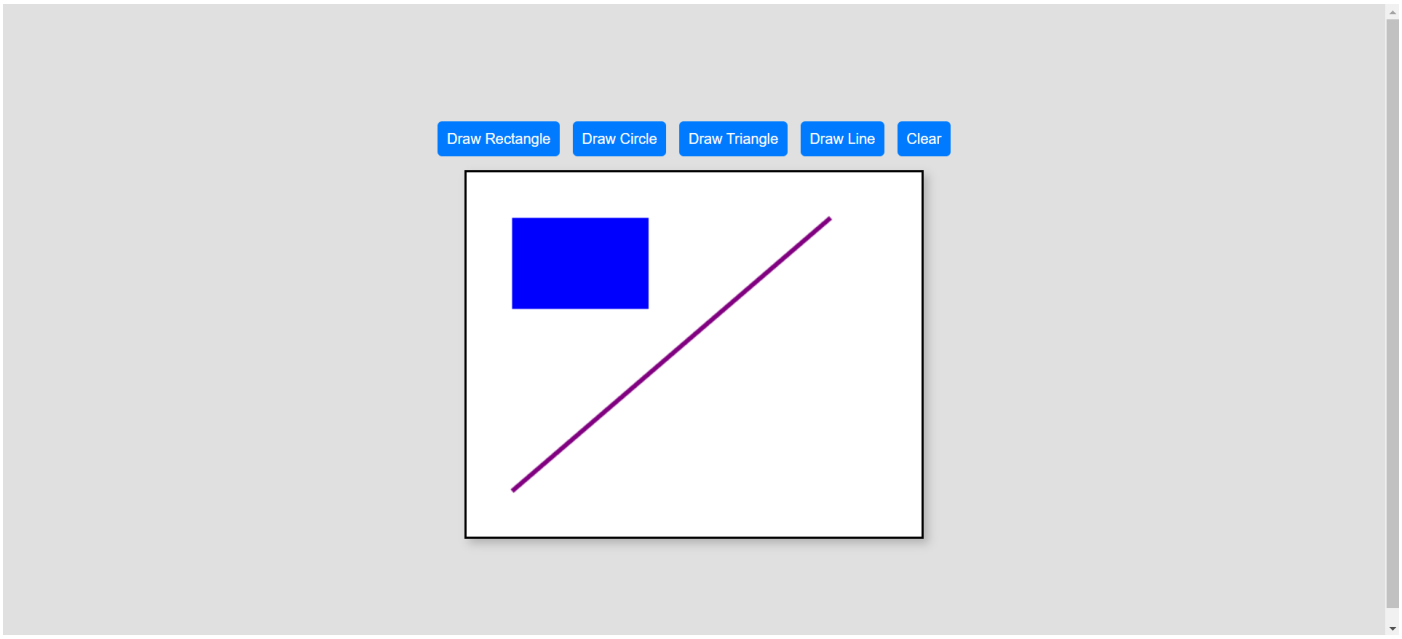
```
    </style>
</head>
<body>
    <div class="controls">
        <button onclick="drawRectangle()">Draw Rectangle</button>
        <button onclick="drawCircle()">Draw Circle</button>
        <button onclick="drawTriangle()">Draw Triangle</button>
        <button onclick="drawLine()">Draw Line</button>
        <button onclick="clearCanvas()">Clear</button>
    </div>
    <canvas id="canvas" width="500" height="400"></canvas>

    <script>
        const canvas = document.getElementById("canvas");
        const ctx = canvas.getContext("2d");

        function drawRectangle() {
            ctx.fillStyle = "blue";
            ctx.fillRect(50, 50, 150, 100);
        }

        function drawCircle() {
            ctx.fillStyle = "red";
            ctx.beginPath();
            ctx.arc(250, 200, 50, 0, Math.PI * 2);
            ctx.fill();
        }
```

```
65
66          function drawTriangle() {
67              ctx.fillStyle = "green";
68              ctx.beginPath();
69              ctx.moveTo(100, 300);
70              ctx.lineTo(200, 100);
71              ctx.lineTo(300, 300);
72              ctx.closePath();
73              ctx.fill();
74          }
75
76          function drawLine() {
77              ctx.strokeStyle = "purple";
78              ctx.lineWidth = 5;
79              ctx.beginPath();
80              ctx.moveTo(50, 350);
81              ctx.lineTo(400, 50);
82              ctx.stroke();
83          }
84
85          function clearCanvas() {
86              ctx.clearRect(0, 0, canvas.width, canvas.height);
87          }
88      </script>
89  </body>
90  </html>
```

Output:




Draw Rectangle
Draw Circle
Draw Triangle
Draw Line
Clear

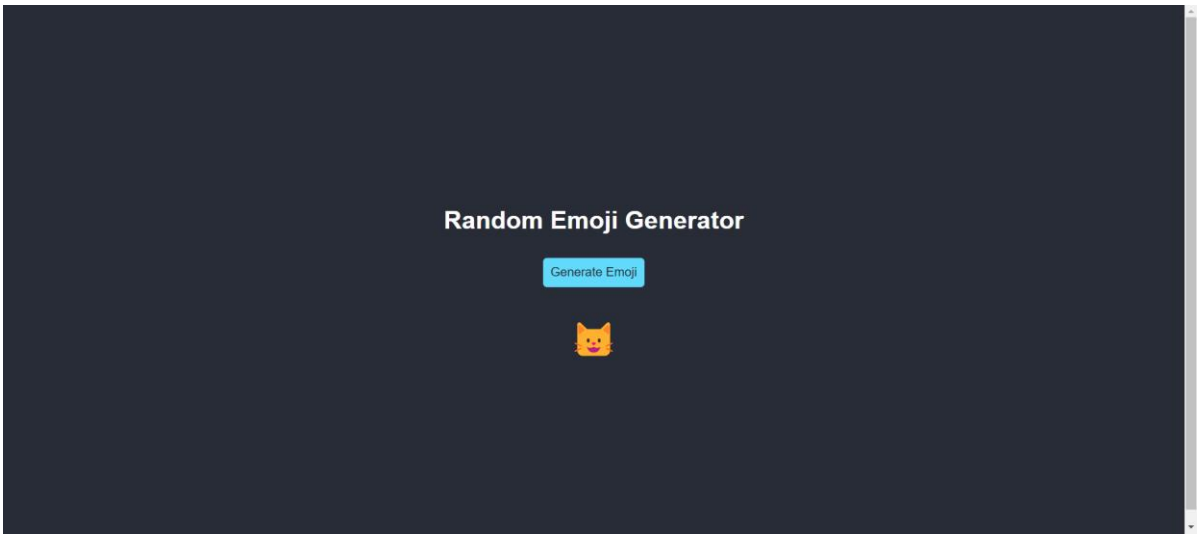

Draw Rectangle
Draw Circle
Draw Triangle
Draw Line
Clear

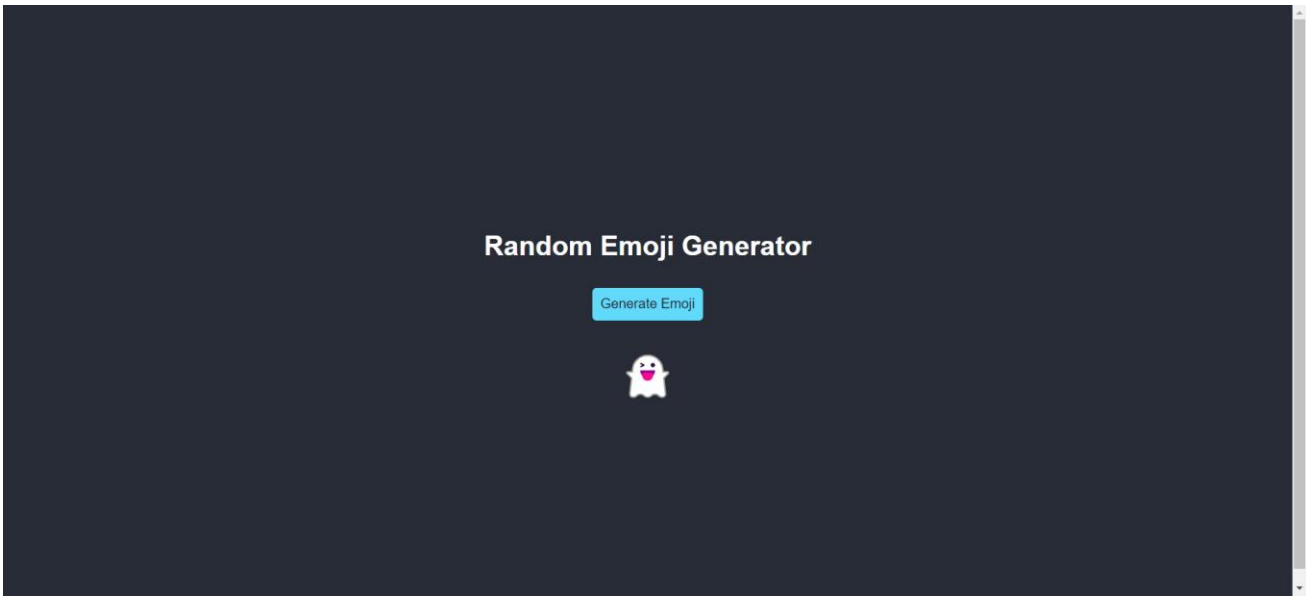
6) Random emoji generator

Code:

```html
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Random Emoji Generator</title>
    <style>
        body {
            display: flex;
            flex-direction: column;
            align-items: center;
            justify-content: center;
            height: 100vh;
            background-color: #282c36;
            font-family: Arial, sans-serif;
            color: white;
        }
        button {
            margin: 10px;
            padding: 10px;
            font-size: 16px;
            border-radius: 5px;
            border: none;
            background-color: #61dafb;
            color: #282c36;
            cursor: pointer;
            transition: background-color 0.3s;
        }
        button:hover {
            background-color: #21a1f1;
        }
        #emoji {
            font-size: 50px;
            margin-top: 20px;
        }
    </style>
</head>
<body>
    <h1>Random Emoji Generator</h1>
    <button onclick="generateEmoji()">Generate Emoji</button>
    <div id="emoji">😊</div>

    <script>
        const emojis = ["😀", "😂", "😍", "😎", "🤩", "🥳", "😜", "🤯", "😡", "👻", "🎃", "🔥", "🌈", "🎉", "🚀", "🐱", "🙀"];

        function generateEmoji() {
            const randomIndex = Math.floor(Math.random() * emojis.length);
            document.getElementById("emoji").innerText = emojis[randomIndex];
        }
    </script>
</body>
</html>
```

Output:


Random Emoji Generator
Generate Emoji


Random Emoji Generator
Generate Emoji

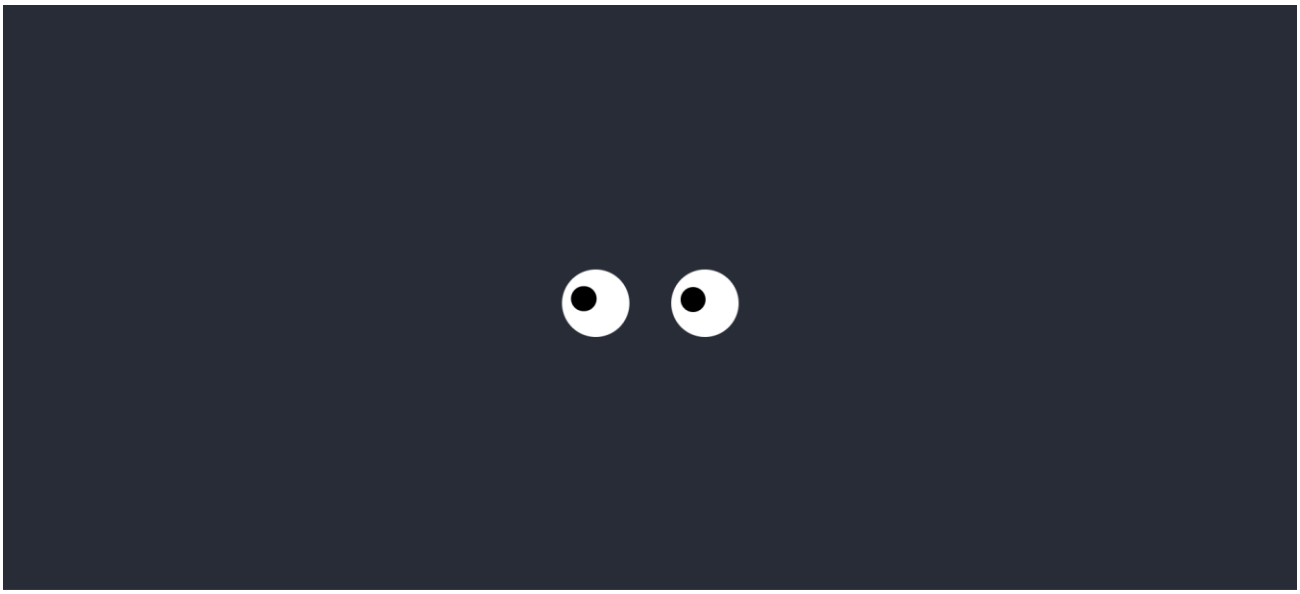
7) Eye tracking

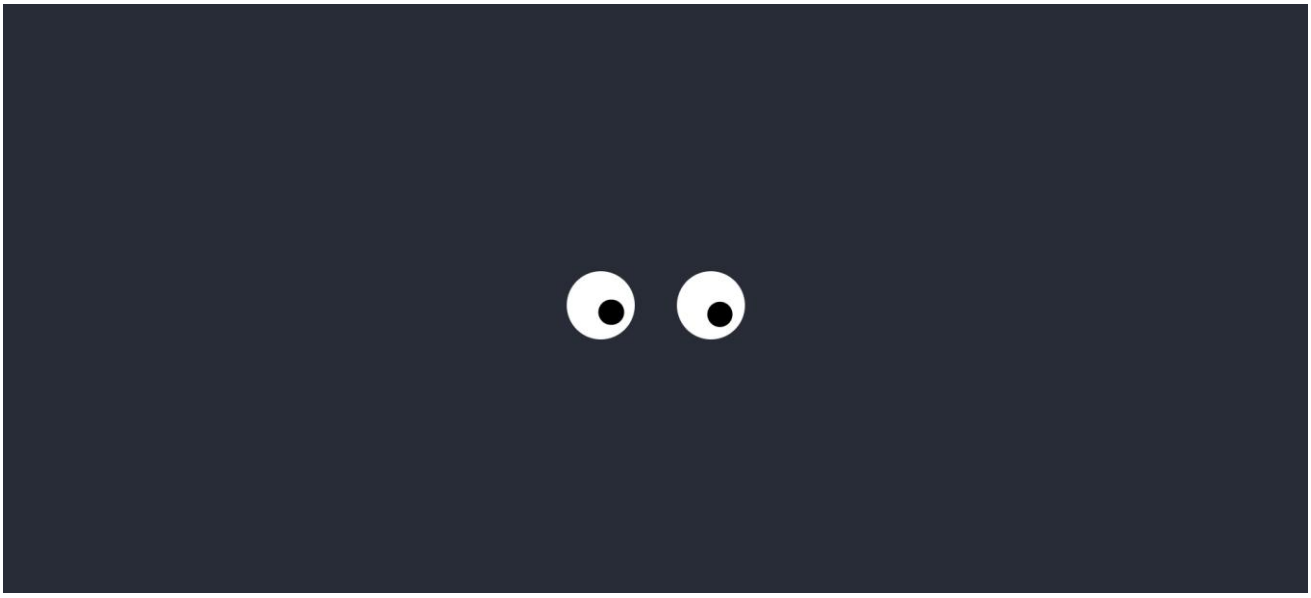
Code:

```html
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Eye Tracking</title>
    <style>
        body {
            display: flex;
            justify-content: center;
            align-items: center;
            height: 100vh;
            background-color: #282c36;
            overflow: hidden;
        }
        .eye-container {
            display: flex;
            gap: 50px;
        }
        .eye {
            width: 80px;
            height: 80px;
            background: white;
            border-radius: 50%;
            display: flex;
            justify-content: center;
            align-items: center;
            position: relative;
        }
        .pupil {
            width: 30px;
            height: 30px;
            background: black;
            border-radius: 50%;
            position: absolute;
            transition: transform 0.05s;
        }
```

```
    </style>
</head>
<body>
    <div class="eye-container">
        <div class="eye"><div class="pupil"></div></div>
        <div class="eye"><div class="pupil"></div></div>
    </div>

    <script>
        document.addEventListener("mousemove", (event) => {
            const eyes = document.querySelectorAll(".eye");
            eyes.forEach(eye => {
                const pupil = eye.querySelector(".pupil");
                const rect = eye.getBoundingClientRect();
                const eyeX = rect.left + rect.width / 2;
                const eyeY = rect.top + rect.height / 2;
                const deltaX = event.clientX - eyeX;
                const deltaY = event.clientY - eyeY;
                const angle = Math.atan2(deltaY, deltaX);
                const distance = Math.min(15, Math.sqrt(deltaX**2 + deltaY**2) / 8);
                pupil.style.transform = `translate(${Math.cos(angle) * distance}px, ${Math.sin(angle) * distance}px)`;
            });
        });
    </script>
</body>
</html>
```

Output:





8) Spotlight effect

Code:

```html
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Spotlight Effect</title>
    <style>
        * {
            margin: 0;
            padding: 0;
            box-sizing: border-box;
        }
        body, html {
            height: 100%;
            width: 100%;
            overflow: hidden;
            background: black;
        }
        .container {
            position: relative;
            height: 100vh;
            width: 100%;
            background-image: url(https://i0.wp.com/nationaltoday.com/wp-content/uploads/2022/09/Virat-Kohli.jpg?strip=all);
            background-size: cover;
            background-position: center;
        }
        .spotlight {
            position: absolute;
            top: 0;
            left: 0;
            width: 100%;
            height: 100%;
            background: radial-gradient(circle 250px at var(--x, 50%) var(--y, 50%), rgba(255,
            255, 255, 0.4) 0%, rgba(0, 0, 0, 0.6) 100%);
            pointer-events: none;
            transition: 0.05s ease-out;
        }
```

```html
    </style>
</head>
<body>
    <div class="container">
    <div class="spotlight"></div>
    </div>
    <script>
        const spotlight = document.querySelector('.spotlight');
        document.addEventListener('mousemove', (e) => {
        requestAnimationFrame(() => {
        spotlight.style.setProperty('--x', `${e.clientX}px`);
        spotlight.style.setProperty('--y', `${e.clientY}px`);
        });
        });
    </script>
</body>
</html>
```

Output:

9) Image Slider

Code:

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Vertical Image Slider</title>
    <style>
        body {
            display: flex;
            justify-content: center;
            align-items: center;
            height: 100vh;
            background-color: #f0f0f0;
            flex-direction: column;
        }
        .slider-container {
            position: relative;
            width: 300px;
            height: 400px;
            overflow: hidden;
        }
        .slider {
            display: flex;
            flex-direction: column;
            transition: transform 0.5s ease-in-out;
        }
        .slider img {
            width: 100%;
            height: 400px;
            object-fit: cover;
        }
        .btn {
            padding: 10px 20px;
            margin: 10px;
            font-size: 18px;
            cursor: pointer;
            background-color: #3498db;
```

```
            color: white;
            border: none;
            border-radius: 5px;
            transition: background 0.3s;
        }
        .btn:hover {
            background-color: #2980b9;
        }
    </style>
</head>
<body>
    <button class="btn" onclick="prevSlide()">Previous</button>
    <div class="slider-container">
        <div class="slider" id="slider">
            <img src="cat1.png" alt="Image 1">
            <img src="cat2.png" alt="Image 2">
            <img src="cat3.png" alt="Image 3">
        </div>
    </div>
    <button class="btn" onclick="nextSlide()">Next</button>

    <script>
        let currentIndex = 0;
        const images = document.querySelectorAll(".slider img");
        const slider = document.getElementById("slider");

        function updateSlider() {
            slider.style.transform = `translateY(-${currentIndex * 400}px)`;
        }

        function nextSlide() {
            if (currentIndex < images.length - 1) {
                currentIndex++;
                updateSlider();
            }
        }

        function prevSlide() {
            if (currentIndex > 0) {
                currentIndex--;
                updateSlider();
            }
        }
    </script>
</body>
</html>
```

Output:

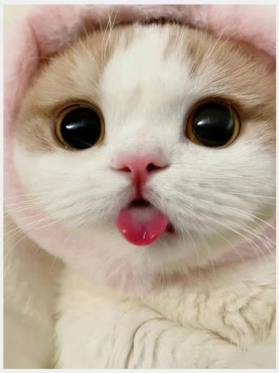
Previous

Next

Previous

Next

Previous



Next