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Design a webpage. The page contains:

- On Clicking Produce Bill button, alert should be displayed with total amount.

```
<!DOCTYPE html>
<html>
<head>
  <title>Product Bill Generator</title>
  <style>
    body {
      font-family: Arial, sans-serif;
      margin: 20px;
      background-color: #f4f4f4;
    }
    .container {
      background-color: white;
      padding: 30px;
      border-radius: 8px;
      box-shadow: 0 2px 10px rgba(0, 0, 0, 0.1);
      max-width: 500px;
      margin: 0 auto;
    }
    h1 {
      color: #333;
      text-align: center;
    }
    label {
      display: block;
      margin-top: 15px;
      color: #555;
      font-weight: bold;
    }
  
```

```
    select, input[type="text"], input[type="number"] {
      width: 100%;
      padding: 8px;
      margin-top: 5px;
      border: 1px solid #ddd;
      border-radius: 4px;
      box-sizing: border-box;
    }
    .checkbox-group {
      margin-top: 15px;
    }
    .checkbox-group label {
      display: inline-block;
      margin-right: 20px;
      font-weight: normal;
    }
    input[type="checkbox"] {
      margin-right: 5px;
    }
    button {
      width: 100%;
      padding: 12px;
      margin-top: 20px;
      background-color: #4CAF50;
      color: white;
      border: none;
      border-radius: 4px;
      font-size: 16px;
      font-weight: bold;
      cursor: pointer;
      transition: background-color 0.3s;
    }
    button:hover {
      background-color: #45a049;
    }
  </style>
</head>
<body>
  <div class="container">
    <h1>Product Bill Generator</h1>

    <form>
      <label for="brand">Select Brand:</label>
      <select id="brand" name="brand">
        <option value="">-- Select a Brand --</option>
        <option value="HP">HP</option>
        <option value="Nokia">Nokia</option>
        <option value="Samsung">Samsung</option>
        <option value="Motorola">Motorola</option>
        <option value="Apple">Apple</option>
      </select>

      <div class="checkbox-group">
        <label>Device Type:</label>
```

```

        <label>
            <input type="checkbox" name="deviceType" value="Mobile">
Mobile
        </label>
        <label>
            <input type="checkbox" name="deviceType" value="Laptop">
Laptop
        </label>
    </div>

    <label for="quantity">Quantity:</label>
    <input type="number" id="quantity" name="quantity" min="1"
placeholder="Enter quantity">

    <button type="button" onclick="produceBill()">Produce Bill</button>
</form>
</div>

<script>
    const brandPrices = {
        'HP': 45000,
        'Nokia': 25000,
        'Samsung': 55000,
        'Motorola': 35000,
        'Apple': 95000
    };

    function produceBill() {
        const brand = document.getElementById('brand').value;
        const deviceTypes = [];
        const checkboxes =
document.querySelectorAll('input[name="deviceType"]:checked');
        checkboxes.forEach(checkbox => {
            deviceTypes.push(checkbox.value);
        });
        const quantity = document.getElementById('quantity').value;

        if (!brand) {
            alert('Please select a brand');
            return;
        }
        if (deviceTypes.length === 0) {
            alert('Please select at least one device type');
            return;
        }
        if (!quantity || quantity <= 0) {
            alert('Please enter a valid quantity');
            return;
        }

        const unitPrice = brandPrices[brand];
        const totalAmount = unitPrice * quantity;

        const bill = `

```

```
=== BILL ===
Brand: ${brand}
Device Type(s): ${deviceTypes.join(', ')}
Unit Price: ₹${unitPrice}
Quantity: ${quantity}
-----
Total Amount: ₹${totalAmount}
=====

    `;

    alert(bill);
  }
</script>
</body>
</html>
```

Output:

Product Bill Generator

Select Brand:

-- Select a Brand --

Device Type: ☐ Mobile ☐ Laptop

Quantity:

Enter quantity

Produce Bill

Product Bill Generator

Select Brand:

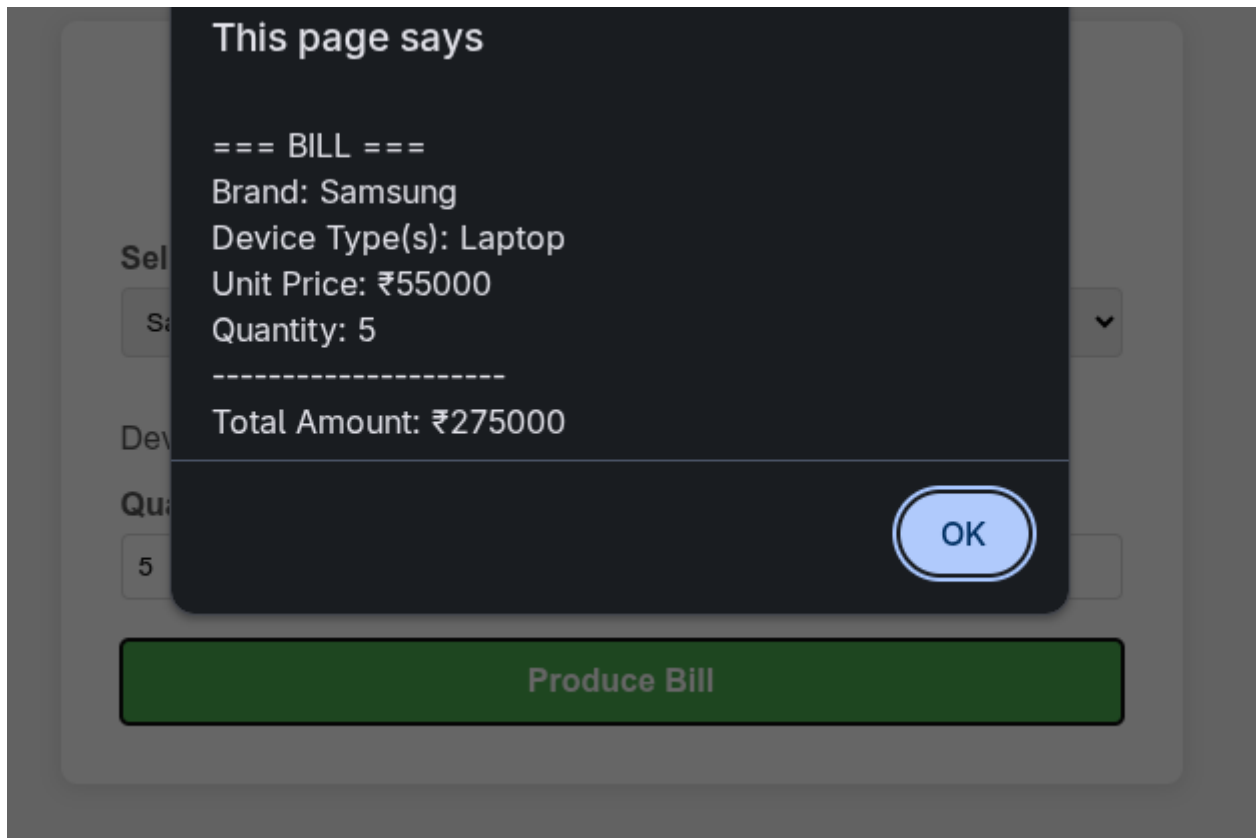
Samsung

Device Type: ☐ Mobile ☒ Laptop

Quantity:

5

Produce Bill



Additional Question 2

Implement the bouncing ball using animate() function.

Code:

```
<!DOCTYPE html>
<html>
<head>
  <title>Bouncing Ball Animation</title>
  <style>
    body {
      font-family: Arial, sans-serif;
      display: flex;
      justify-content: center;
      align-items: center;
      height: 100vh;
      margin: 0;
      background: linear-gradient(135deg, #667eea 0%, #764ba2 100%);
    }
    .container {
      text-align: center;
    }
    h1 {
      color: white;
      margin-bottom: 20px;
    }
    canvas {
```

```
        border: 3px solid white;
        background-color: #1a1a2e;
        border-radius: 10px;
        box-shadow: 0 10px 30px rgba(0, 0, 0, 0.3);
    }
    .controls {
        margin-top: 20px;
    }
    button {
        padding: 10px 20px;
        margin: 5px;
        font-size: 14px;
        background-color: white;
        color: #667eea;
        border: none;
        border-radius: 5px;
        cursor: pointer;
        font-weight: bold;
        transition: transform 0.2s;
    }
    button:hover {
        transform: scale(1.05);
        background-color: #f0f0f0;
    }
</style>
</head>
<body>
    <div class="container">
        <h1>Bouncing Ball Animation</h1>
        <canvas id="canvas" width="800" height="500"></canvas>
        <div class="controls">
            <button onclick="toggleAnimation()">Play/Pause</button>
            <button onclick="resetBall()">Reset</button>
        </div>
    </div>

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

        const ball = {
            x: canvas.width / 2,
            y: canvas.height / 2,
            radius: 15,
            vx: 5,
            vy: 5,
            gravity: 0.3,
            friction: 0.99,
            bounce: 0.8
        };

        let isAnimating = true;

        function drawBall() {
```

```
    ctx.beginPath();
    ctx.arc(ball.x, ball.y, ball.radius, 0, Math.PI * 2);
    ctx.fillStyle = '#FF6B6B';
    ctx.fill();
    ctx.strokeStyle = '#FF0000';
    ctx.lineWidth = 2;
    ctx.stroke();
}

function updateBall() {
    ball.vy += ball.gravity;
    ball.vx *= ball.friction;
    ball.vy *= ball.friction;
    ball.x += ball.vx;
    ball.y += ball.vy;

    if (ball.x - ball.radius < 0) {
        ball.x = ball.radius;
        ball.vx = -ball.vx * ball.bounce;
    } else if (ball.x + ball.radius > canvas.width) {
        ball.x = canvas.width - ball.radius;
        ball.vx = -ball.vx * ball.bounce;
    }

    if (ball.y - ball.radius < 0) {
        ball.y = ball.radius;
        ball.vy = -ball.vy * ball.bounce;
    } else if (ball.y + ball.radius > canvas.height) {
        ball.y = canvas.height - ball.radius;
        ball.vy = -ball.vy * ball.bounce;
    }
}

function animate() {
    ctx.fillStyle = '#1a1a2e';
    ctx.fillRect(0, 0, canvas.width, canvas.height);

    if (isAnimating) {
        updateBall();
    }

    drawBall();
    requestAnimationFrame(animate);
}

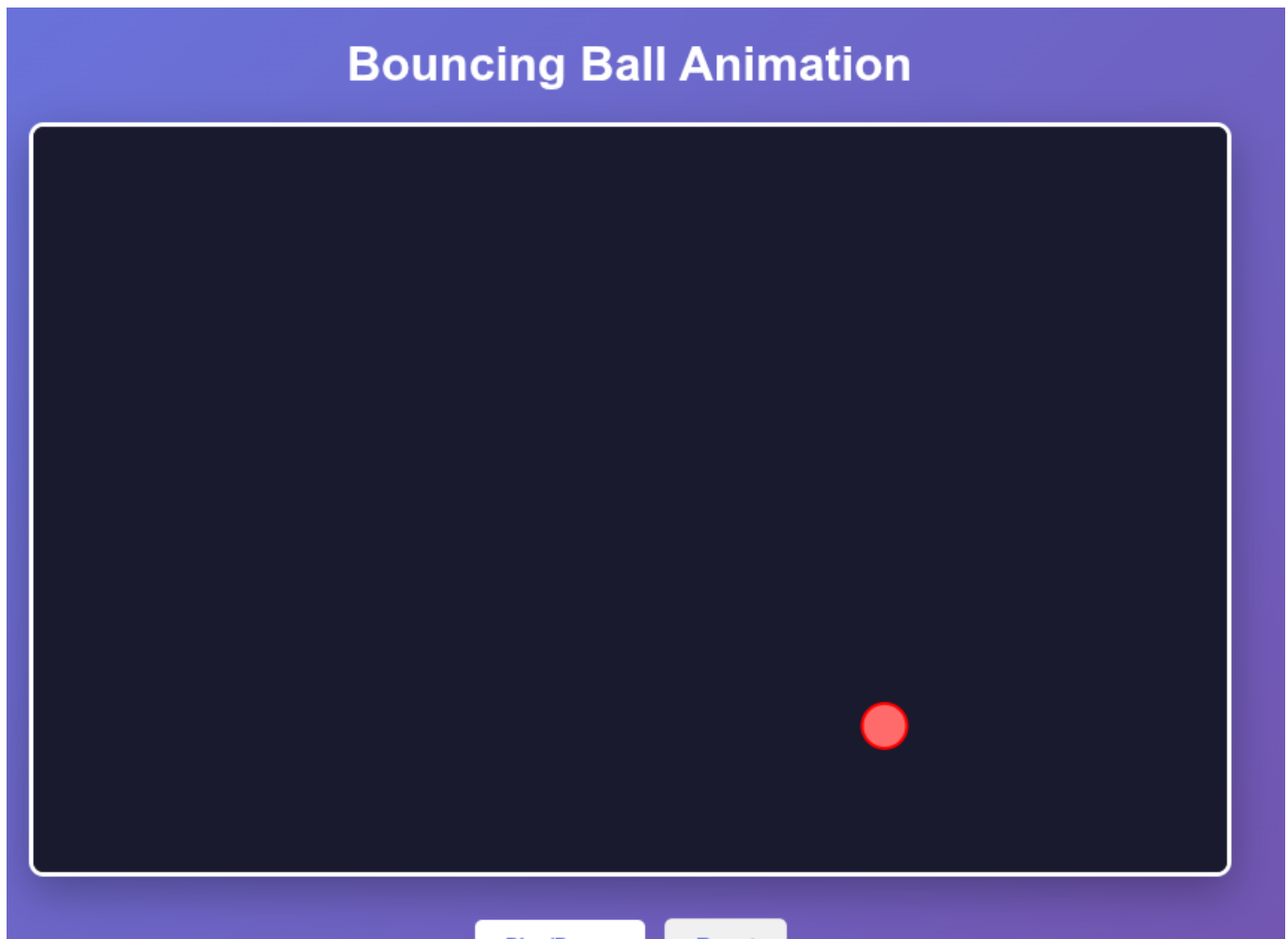
function toggleAnimation() {
    isAnimating = !isAnimating;
}

function resetBall() {
    ball.x = canvas.width / 2;
    ball.y = canvas.height / 2;
    ball.vx = 5;
    ball.vy = 5;
}
```



```
    }  
  
    animate();  
</script>  
</body>  
</html>
```

Output:



Additional Question 3

Write a web page which displays image and show the sliding text on the image.

Code:

```
<!DOCTYPE html>  
<html>  
<head>  
  <title>Image with Sliding Text</title>  
  <style>  
    * {  
      margin: 0;  
      padding: 0;
```

```
    box-sizing: border-box;
  }

  body {
    font-family: Arial, sans-serif;
    display: flex;
    justify-content: center;
    align-items: center;
    min-height: 100vh;
    background-color: #f0f0f0;
    padding: 20px;
  }

  .container {
    position: relative;
    width: 100%;
    max-width: 800px;
    overflow: hidden;
    border-radius: 10px;
    box-shadow: 0 10px 30px rgba(0, 0, 0, 0.3);
  }

  .image-wrapper {
    position: relative;
    width: 100%;
    overflow: hidden;
    background: linear-gradient(135deg, #667eea 0%, #764ba2 100%);
  }

  .image-wrapper img {
    width: 100%;
    height: auto;
    display: block;
  }

  .text-overlay {
    position: absolute;
    top: 0;
    left: 0;
    width: 100%;
    height: 100%;
    display: flex;
    align-items: center;
    justify-content: center;
  }

  .sliding-text {
    position: absolute;
    white-space: nowrap;
    font-size: 32px;
    font-weight: bold;
    color: white;
    text-shadow: 2px 2px 4px rgba(0, 0, 0, 0.7);
    animation: slide 8s infinite linear;
```

```
}

@keyframes slide {
  0% {
    left: -100%;
    opacity: 0;
  }
  10% {
    opacity: 1;
  }
  90% {
    opacity: 1;
  }
  100% {
    left: 100%;
    opacity: 0;
  }
}

.sliding-text:nth-child(1) {
  animation-delay: 0s;
  top: 20%;
  font-size: 28px;
  color: #FFD700;
}

.sliding-text:nth-child(2) {
  animation-delay: 2.5s;
  top: 50%;
  font-size: 32px;
  color: #00FF88;
}

.sliding-text:nth-child(3) {
  animation-delay: 5s;
  top: 80%;
  font-size: 28px;
  color: #FF6B9D;
}

.controls {
  text-align: center;
  margin-top: 30px;
}

button {
  padding: 12px 25px;
  margin: 5px;
  font-size: 14px;
  background-color: #667eea;
  color: white;
  border: none;
  border-radius: 5px;
  cursor: pointer;
}
```

```
        font-weight: bold;
        transition: transform 0.2s, background-color 0.2s;
    }

    button:hover {
        transform: scale(1.05);
        background-color: #764ba2;
    }

    h1 {
        text-align: center;
        color: #333;
        margin-bottom: 20px;
    }
</style>
</head>
<body>
    <div style="width: 100%; max-width: 800px;">
        <h1>Image with Sliding Text</h1>

        <div class="container">
            <div class="image-wrapper">
                

                <div class="text-overlay">
                    <div class="sliding-text">Welcome to Web Page</div>
                    <div class="sliding-text">Sliding Text Animation</div>
                    <div class="sliding-text">Enjoy the Animation!</div>
                </div>
            </div>
        </div>

        <div class="controls">
            <button onclick="pauseAnimation()">Pause Animation</button>
            <button onclick="resumeAnimation()">Resume Animation</button>
        </div>
    </div>

    <script>
        function pauseAnimation() {
            const textElements = document.querySelectorAll('.sliding-text');
            textElements.forEach(element => {
                element.style.animationPlayState = 'paused';
            });
        }

        function resumeAnimation() {
            const textElements = document.querySelectorAll('.sliding-text');
            textElements.forEach(element => {
                element.style.animationPlayState = 'running';
            });
        }
    </script>
```

```
</body>  
</html>
```

Output:

