

HTML Code:

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Client Side Form Validation</title>
  <link rel="stylesheet" href="style.css">
</head>
<body>
  <div class="container">
    <h2>Client Side Form Validation</h2>
    <div id="connectionStatus" class="status disconnected">Disconnected</div>
    <form id="userForm">
      <label>Name:</label>
      <input type="text" id="name" placeholder="Enter your name" required>
      <small class="error" id="nameError"></small>

      <label>Email:</label>
      <input type="email" id="email" placeholder="Enter your email" required>
      <small class="error" id="emailError"></small>

      <label>Password:</label>
      <input type="password" id="password" placeholder="Enter password" required>
      <small class="error" id="passwordError"></small>

      <button type="submit">Validate</button>
    </form>
    <canvas id="successCanvas" width="300" height="150"></canvas>
    <div id="output"></div>
  </div>
  <script src="script.js"></script>
</body>
</html>
```

CSS Code:

```
body {
  font-family: 'Poppins', sans-serif;
  background: #eef1f5;
  display: flex;
  justify-content: center;
  align-items: center;
  height: 100vh;
}

.container {

  background: #fff;
  padding: 25px 35px;
  border-radius: 12px;
  box-shadow: 0 4px 10px rgba(0,0,0,0.2);
  width: 350px;
}

h2 {
  text-align: center;
  color: #333;
}

label {
  display: block;
  margin-top: 15px;
  color: #555;
}

input {
  width: 100%;
  padding: 10px;
  border: 1px solid #ccc;
  border-radius: 6px;
  margin-top: 5px;
}

button {
  width: 100%;
  padding: 10px;
  background: #007bff;
  border: none;
  border-radius: 6px;
  color: white;
  font-weight: bold;
  margin-top: 15px;
  cursor: pointer;
}

button:hover {
  background: #0056b3;
}

.error {
  color: red;
  font-size: 0.8em;
}

#connectionStatus {
  text-align: center;
  padding: 5px;
  margin-bottom: 10px;
  border-radius: 6px;
  font-weight: bold;
}

.connected {
  background: #28a745;
  color: white;
}

.disconnected {
  background: #dc3545;
  color: white;
}

#output {
  margin-top: 20px;
  text-align: center;
  color: green;
  font-weight: bold;
}
```


JavaScript Code:

```
// WebSocket simulation
const statusDiv = document.getElementById('connectionStatus');

setInterval(() => {
  const connected = Math.random() > 0.5;
  statusDiv.textContent = connected ? "Connected" : "Disconnected";
  statusDiv.className = connected ? "status connected" : "status disconnected";
}, 2000);

// Validation
const form = document.getElementById('userForm');
const nameInput = document.getElementById('name');
const emailInput = document.getElementById('email');
const passwordInput = document.getElementById('password');
const output = document.getElementById('output');
const canvas = document.getElementById('successCanvas');
const ctx = canvas.getContext('2d');

form.addEventListener('submit', (e) => {
  e.preventDefault();
  let valid = true;

  if (nameInput.value.trim().length < 3) {
    document.getElementById('nameError').textContent = "Name must be at least 3 characters.";
    valid = false;
  } else {
    document.getElementById('nameError').textContent = "";
  }

  const emailPattern = /^[^ ]+@[^ ]+\.[a-z]{2,3}$/;
  if (!emailInput.value.match(emailPattern)) {
    document.getElementById('emailError').textContent = "Enter a valid email.";
    valid = false;
  } else {
    document.getElementById('emailError').textContent = "";
  }

  if (passwordInput.value.length < 6) {
    document.getElementById('passwordError').textContent = "Password must be at least 6 characters.";
    valid = false;
  } else {
    document.getElementById('passwordError').textContent = "";
  }

  if (valid) {
    drawSuccessAnimation();
    output.textContent = `Validation successful! Welcome, ${nameInput.value}`;
  } else {
    output.textContent = "";
    clearCanvas();
  }
});

function drawSuccessAnimation() {
  clearCanvas();
  let x = 0;
  const interval = setInterval(() => {
    ctx.fillStyle = "#28a745";
    ctx.fillRect(x, 60, 10, 10);
    x += 10;
    if (x > 300) clearInterval(interval);
  }, 50);
}

function clearCanvas() {
  ctx.clearRect(0, 0, canvas.width, canvas.height);
}
```