WEB TECHNOLOGIES LAB
ASSIGNMENT – 4

Joe Marian A
22011102034

1) Build a responsive web application for shopping cart with registration, login, catalog and cart pages using CSS features, flex and grid.

2) Use JavaScript for doing client – side validation of the pages implemented in the experiment

3) Explore the features of ES6 like arrow functions, callbacks, promises, async/await. Implement an application for reading the weather information from openweathermap.org and display the information in the form of a graph on the web page.

1.

AIM:

To create a responsive website for shopping cart

ALGORITHM:

1. Create a respective HTML files.
2. Add necessary libraries.
3. Add the CSS file.
4. Add JS file.
5. Include the functions.
6. Run the index.html file.

CODE:

Index.html

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Shopping Cart</title>
    <link rel="stylesheet" href="css/styles.css">
</head>
<body>

    <nav class="navbar">
        <div class="logo">Targeto!</div>
```

```
        <ul class="nav-links">
            <li><a href="index.html">Home</a></li>
            <li><a href="catalog.html">Catalog</a></li>
            <li><a href="cart.html">Cart</a></li>
            <li><a href="login.html">Login</a></li>
            <li><a href="register.html">Register</a></li>
        </ul>
    </nav>

       <section class="hero">
        <div class="hero-content">

            <img src="assets/catalog.jpeg" alt="Catalog Logo" class="hero-logo">
            <h1>Welcome to the Shopping Cart</h1>
            <a href="catalog.html" class="cta-btn">Shop Now</a>
        </div>
    </section>


    <footer>
        <p>&copy; 2024 Shopping Cart App. All rights reserved.</p>
    </footer>
    <script src="js/scripts.js"></script>
</body>
</html>
```

Login.html

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Login</title>
    <link rel="stylesheet" href="css/styles.css">
</head>
<body>
    <nav class="navbar">
        <div class="logo">ShopLogo</div>
        <ul class="nav-links">
            <li><a href="index.html">Home</a></li>
            <li><a href="catalog.html">Catalog</a></li>
            <li><a href="cart.html">Cart</a></li>
            <li><a href="login.html">Login</a></li>
            <li><a href="register.html">Register</a></li>
        </ul>
    </nav>

    <div class="form-container">
        <div class="form-box">
```

```
            <h2>Login</h2>
            <form action="#" method="post">
                <input type="email" placeholder="Email" required>
                <input type="password" placeholder="Password" required>
                <input type="submit" value="Login">
            </form>
        </div>
    </div>

    <footer>
        <p>&copy; 2024 Shopping Cart App. All rights reserved.</p>
    </footer>
    <script src="js/scripts.js"></script>
</body>
</html>
```

Register.html

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Register</title>
    <link rel="stylesheet" href="css/styles.css">
</head>
<body>
    <nav class="navbar">
        <div class="logo">ShopLogo</div>
        <ul class="nav-links">
            <li><a href="index.html">Home</a></li>
            <li><a href="catalog.html">Catalog</a></li>
            <li><a href="cart.html">Cart</a></li>
            <li><a href="login.html">Login</a></li>
            <li><a href="register.html">Register</a></li>
        </ul>
    </nav>

    <div class="form-container">
        <div class="form-box">
            <h2>Register</h2>
            <form action="#" method="post">
                <input type="text" placeholder="Name" required>
                <input type="email" placeholder="Email" required>
                <input type="password" placeholder="Password" required>
                <input type="submit" value="Register">
            </form>
        </div>
    </div>
```

```
    <footer>
        <p>&copy; 2024 Shopping Cart App. All rights reserved.</p>
    </footer>
    <script src="js/scripts.js"></script>
</body>
</html>
```

Catalog.html

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Catalog</title>
    <link rel="stylesheet" href="css/styles.css">
</head>
<body>
    <nav class="navbar">
        <div class="logo">ShopLogo</div>
        <ul class="nav-links">
            <li><a href="index.html">Home</a></li>
            <li><a href="catalog.html">Catalog</a></li>
            <li><a href="cart.html">Cart</a></li>
            <li><a href="login.html">Login</a></li>
            <li><a href="register.html">Register</a></li>
        </ul>
    </nav>

    <section class="catalog">
        <div class="product">
            <img src="assets/product1.jpg" alt="Product 1">
            <h2>Product 1</h2>
            <p>$10.00</p>
            <button onclick="addToCart(1)">Add to Cart</button>
        </div>
        <div class="product">
            <img src="assets/product2.jpg" alt="Product 2">
            <h2>Product 2</h2>
            <p>$15.00</p>
            <button onclick="addToCart(2)">Add to Cart</button>
        </div>
        <div class="product">
            <img src="assets/product3.jpg" alt="Product 3">
            <h2>Product 3</h2>
            <p>$20.00</p>
            <button onclick="addToCart(3)">Add to Cart</button>
        </div>
    </section>
```

```
    <footer>
        <p>&copy; 2024 Shopping Cart App. All rights reserved.</p>
    </footer>
    <script src="js/scripts.js"></script>
</body>
</html>
```

Cart.html

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Cart</title>
    <link rel="stylesheet" href="css/styles.css">
</head>
<body>

    <nav class="navbar">
        <div class="logo">ShopLogo</div>
        <ul class="nav-links">
            <li><a href="index.html">Home</a></li>
            <li><a href="catalog.html">Catalog</a></li>
            <li><a href="cart.html">Cart</a></li>
            <li><a href="login.html">Login</a></li>
            <li><a href="register.html">Register</a></li>
        </ul>
    </nav>

    <section class="cart">
        <h2>Your Cart</h2>
        <p>Product 1 added to cart</p>
        <div id="cart-items"></div>
        <button id="checkout-btn">Proceed to Checkout</button>
    </section>

    <footer>
        <p>&copy; 2024 Shopping Cart App. All rights reserved.</p>
    </footer>

    <script>
        function loadCartItems() {

            let cartItems = JSON.parse(localStorage.getItem('cart')) || [];
            const cartContainer = document.getElementById('cart-items');

            if (cartItems.length > 0) {
                cartItems.forEach(item => {
                    const cartItem = document.createElement('div');
```

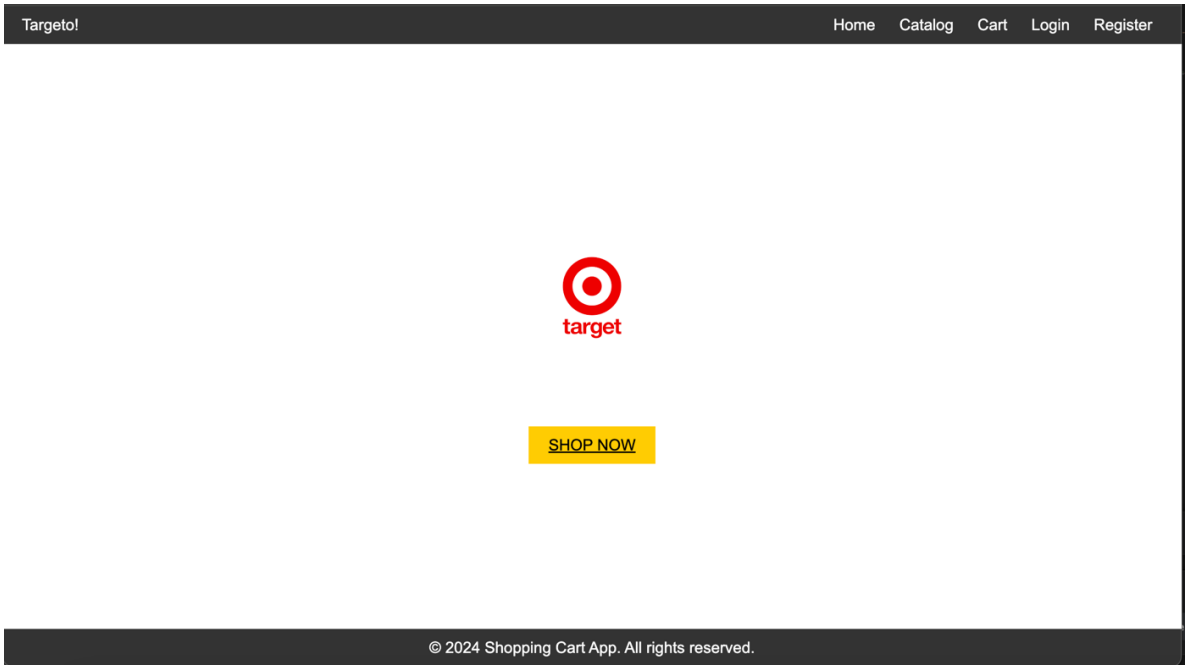
```
                    cartItem.innerHTML = `<p>${item.name} -
$${item.price.toFixed(2)}</p>`;
                    cartContainer.appendChild(cartItem);
                });
            } else {
                cartContainer.innerHTML = '<p>Your cart is empty</p>';
            }
        }

        document.addEventListener('DOMContentLoaded', loadCartItems);
    </script>
</body>
</html>
```

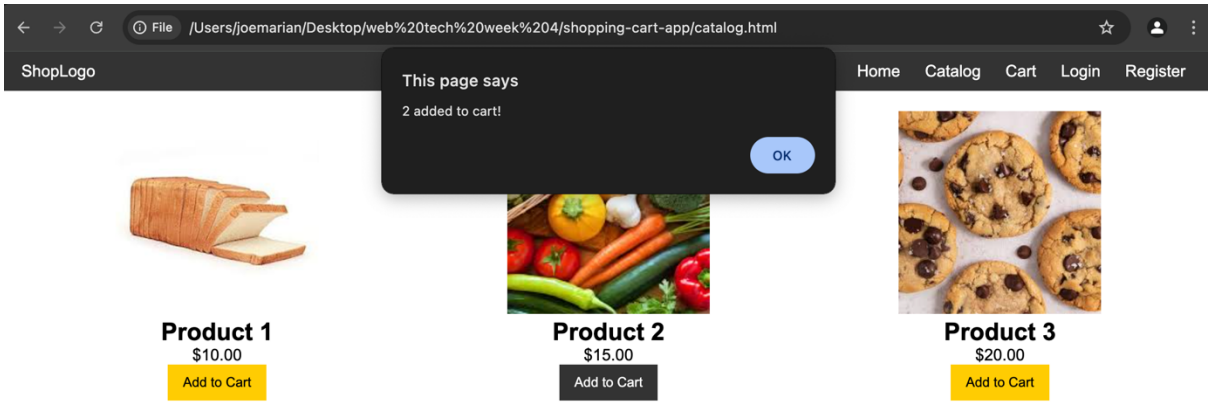
Scripts.js

```
function addToCart(productName, productPrice) {
    let cartItems = JSON.parse(localStorage.getItem('cart')) || [];

    cartItems.push({ name: productName, price: productPrice });

    localStorage.setItem('cart', JSON.stringify(cartItems));

    alert(productName + " added to cart!");
}

function loadCartItems() {
    let cartItems = JSON.parse(localStorage.getItem('cart')) || [];

    const cartContainer = document.getElementById('cart-items');

    if (cartItems.length > 0) {
        cartItems.forEach(item => {
            const cartItem = document.createElement('div');

            cartItem.innerHTML = `<p>${item.name} - $${item.price.toFixed(2)}</p>`;

            cartContainer.appendChild(cartItem);
        });
    } else {
        cartContainer.innerHTML = '<p>Your cart is empty</p>';
    }
}

function clearCart() {
    localStorage.removeItem('cart');

    loadCartItems();
}
```

```
document.addEventListener('DOMContentLoaded', function () {
    if (document.getElementById('cart-items')) {
        loadCartItems();
    }
});
```

OUTPUT:





ShopLogo Home Catalog Cart Login Register

Your Cart

Product 1 added to cart

Proceed to Checkout

ShopLogo Home Catalog Cart Login Register

Product 1
$10.00
Add to Cart

Product 2
$15.00
Add to Cart

Product 3
$20.00
Add to Cart

Home Catalog Cart Login Register

Login

sample joe@gmail.com

•••••

Login

Home Catalog Cart Login Register

Register

Joe

samplejoe@gmail.com

••••

Register

2) Use JavaScript for doing client – side validation of the pages implemented in the experiment.

AIM:

To perform client side validation of pages for register and login files.

ALGORITHM:

1. Create the html file.
2. Make the JS file.
3. Perform the validation function.
4. Add the function.
5. Run the html home.html file.

CODE:

Home.html

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Home - Register or Login</title>
    <link rel="stylesheet" href="style.css">
</head>
<body>
    <div class="container">
        <h2>Home Page - Login/Register</h2>
        <div class="form-container">
            <a href="register.html"><button id="register-btn">Register</button></a>
            <a href="login.html"><button id="login-btn">Login</button></a>
        </div>
    </div>
</body>
</html>
```

Login.html

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Login</title>
    <link rel="stylesheet" href="style.css">
</head>
<body>
    <div class="container">
```

```
        <h3>Login</h3>
        <form id="login-form">
            <label for="login-username">Username:</label>
            <input type="text" id="login-username" name="login-username" required>

            <label for="login-password">Password:</label>
            <input type="password" id="login-password" name="login-password"
required>

            <button type="submit">Login</button>
        </form>
    </div>
</body>
</html>
```

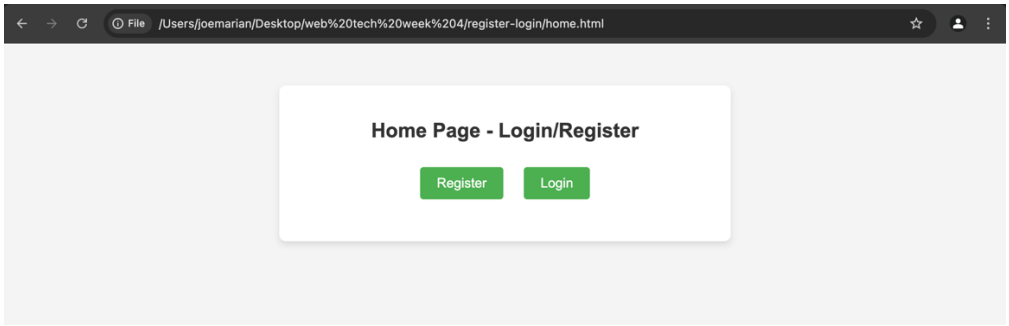
Register.html

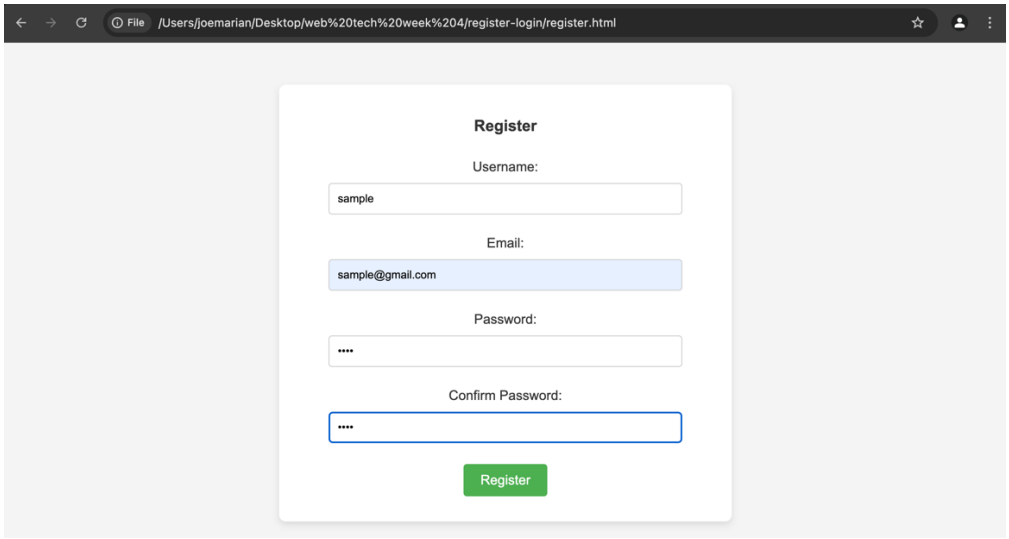
```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Register</title>
    <link rel="stylesheet" href="style.css">
</head>
<body>
    <div class="container">
        <h3>Register</h3>
        <form id="register-form">
            <label for="username">Username:</label>
            <input type="text" id="username" name="username" required>

            <label for="email">Email:</label>
            <input type="email" id="email" name="email" required>

            <label for="password">Password:</label>
            <input type="password" id="password" name="password" required>

            <label for="confirm-password">Confirm Password:</label>
            <input type="password" id="confirm-password" name="confirm-password"
required>

            <button type="submit">Register</button>
        </form>
    </div>
</body>
</html>
```

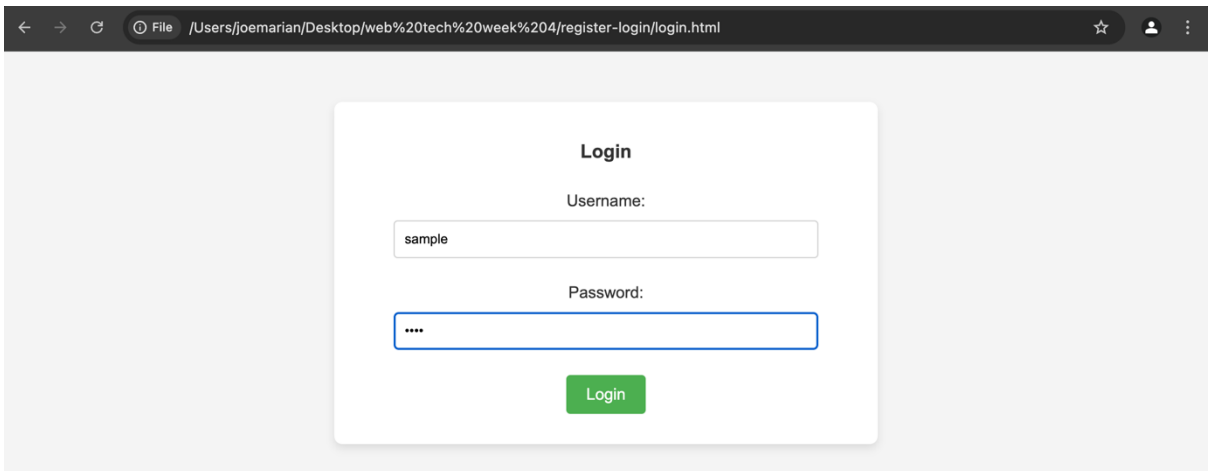
Script.js

```
const registerForm = document.getElementById('register-form');
if (registerForm) {
    registerForm.addEventListener('submit', function(e) {
        const username = document.getElementById('username').value;
        const email = document.getElementById('email').value;
        const password = document.getElementById('password').value;
        const confirmPassword = document.getElementById('confirm-password').value;

        if (username === '' || email === '' || password === '' || confirmPassword
=== '') {
            alert("All fields are required.");
            e.preventDefault();
        } else if (password !== confirmPassword) {
            alert("Passwords do not match.");
            e.preventDefault();
        } else if (password.length < 6) {
            alert("Password should be at least 6 characters.");
            e.preventDefault();
        } else {
            alert("Registration successful!");
        }
    });
}

const loginForm = document.getElementById('login-form');
if (loginForm) {
    loginForm.addEventListener('submit', function(e) {
        const username = document.getElementById('login-username').value;
        const password = document.getElementById('login-password').value;

        if (username === '' || password === '') {
            alert("Username and Password are required.");
            e.preventDefault();
        } else {
            alert("Login successful!");
        }
    });
}
```

OUTPUT:







---

3) Explore the features of ES6 like arrow functions, callbacks, promises, async/await. Implement an application for reading the weather information from openweathermap.org and display the information in the form of a graph on the web page.

AIM:

To perform ES6 features.

ALGORITHM:

1. Create the html file.
2. Create the CSS file.
3. Create the JS file.
4. Make the url function in JS.
5. Run the html code.

CODE:

Index.html

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Weather Information</title>
  <script src="https://cdn.jsdelivr.net/npm/chart.js"></script>
</head>
<body>
  <h1>Weather Information</h1>
  <input type="text" id="city" placeholder="Enter city name">
  <button id="getWeatherBtn">Get Weather</button>

  <canvas id="weatherChart" width="400" height="200"></canvas>

  <script src="script.js"></script>
</body>
</html>
```

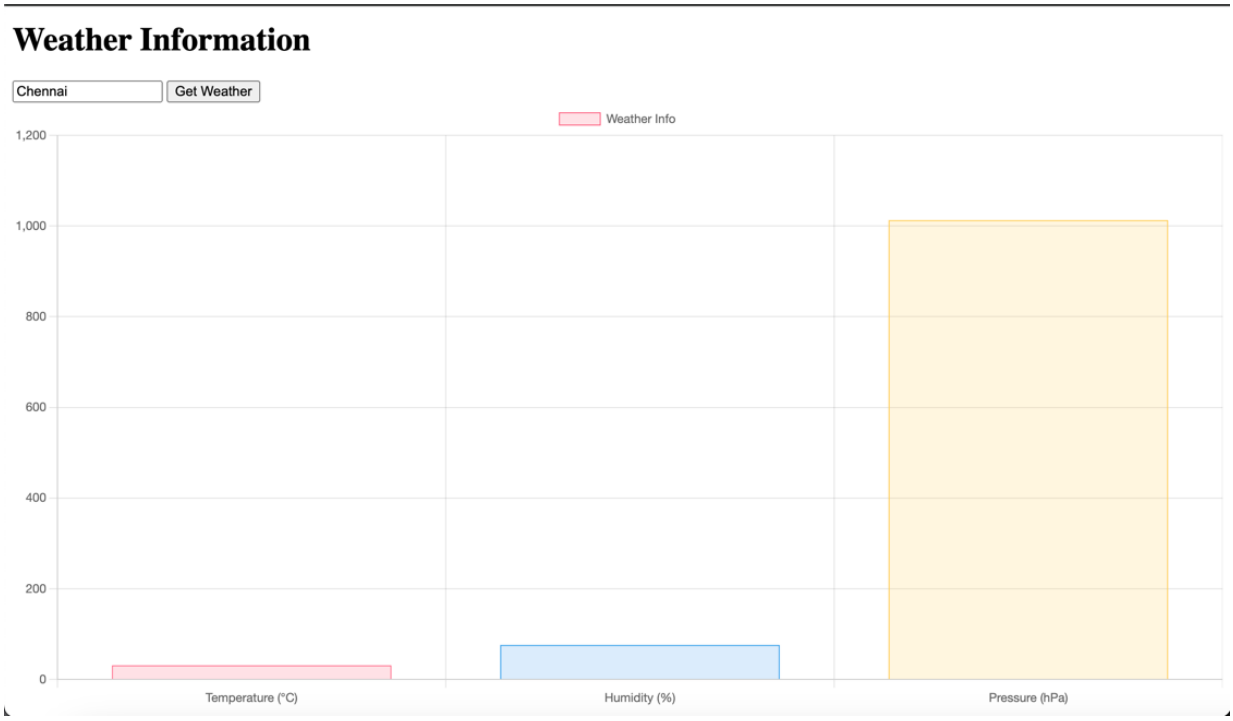
Script.js

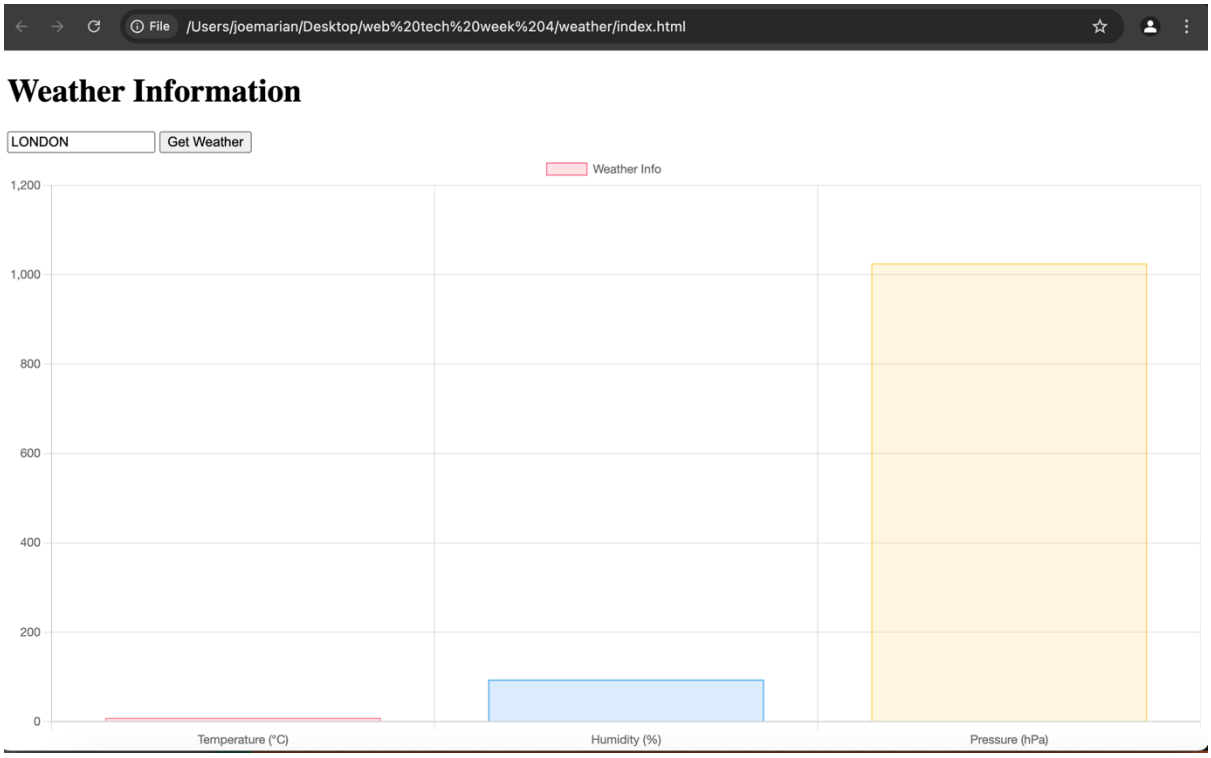
```
const apiKey = '20d2ab56da06e22a01cc315273368da4';

document.getElementById('getWeatherBtn').addEventListener('click', () => {
    getWeather();
});

const getWeather = async () => {
    const city = document.getElementById('city').value.trim();

    if (!city) {
        alert("Please enter a city name.");
        return;
    }

    try {
```

```
        const response = await
fetch(`https://api.openweathermap.org/data/2.5/weather?q=${city}&appid=${apiKey}&un
its=metric`);

        if (!response.ok) {
            const errorData = await response.json();
            throw new Error(`City not found: ${errorData.message}`);
        }

        const data = await response.json();

        const weatherData = {
            temperature: data.main.temp,
            humidity: data.main.humidity,
            pressure: data.main.pressure
        };

        displayChart(weatherData);
    } catch (error) {
        alert(error.message);
    }
};

const displayChart = (weatherData) => {
    const ctx = document.getElementById('weatherChart').getContext('2d');

    if (window.myChart) {
        window.myChart.destroy();
    }

    window.myChart = new Chart(ctx, {
        type: 'bar',
        data: {
            labels: ['Temperature (°C)', 'Humidity (%)', 'Pressure (hPa)'],
            datasets: [{
                label: 'Weather Info',
                data: [weatherData.temperature, weatherData.humidity,
weatherData.pressure],
                backgroundColor: [
                    'rgba(255, 99, 132, 0.2)',
                    'rgba(54, 162, 235, 0.2)',
                    'rgba(255, 206, 86, 0.2)'
                ],
                borderColor: [
                    'rgba(255, 99, 132, 1)',
                    'rgba(54, 162, 235, 1)',
                    'rgba(255, 206, 86, 1)'
                ],
                borderWidth: 1
            }]
        },
```

```
        options: {
            scales: {
                y: {
                    beginAtZero: true
                }
            }
        }
    });
};
```

OUTPUT:





RESULT:

All the programs have been executed and output is verified.