index.html

<!DOCTYPE html>

<html lang="en">

<head>

    <meta charset="UTF-8">

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

    <title>Electricity Unit Calculator</title>

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

    <!-- Firebase Scripts -->

    <script src="https://www.gstatic.com/firebasejs/9.6.3/firebase-app.js"></script>

    <script src="https://www.gstatic.com/firebasejs/9.6.3/firebase-messaging.js"></script>

</head>

<body>

    <div class="container">

        <header>

            <h1>Electricity Unit Calculator</h1>

        </header>

        <main>

            <section class="family">

                <h2>Family 1</h2>

                <form id="family1Form">

                    <label for="refrigerator1">Refrigerator (kWh)</label>

                    <input type="number" id="refrigerator1" name="refrigerator1" step="0.01" required>

                    <label for="television1">Television (kWh)</label>

                    <input type="number" id="television1" name="television1" step="0.01" required>

                    <label for="fan1">Fan (kWh)</label>

                    <input type="number" id="fan1" name="fan1" step="0.01" required>

                    <label for="microwave1">Microwave Oven (kWh)</label>

                    <input type="number" id="microwave1" name="microwave1" step="0.01" required>

                    <label for="waterHeater1">Water Heater (kWh)</label>

                    <input type="number" id="waterHeater1" name="waterHeater1" step="0.01" required>

                    <label for="kettle1">Kettle (kWh)</label>

                    <input type="number" id="kettle1" name="kettle1" step="0.01" required>

                    <label for="iron1">Iron (kWh)</label>

                    <input type="number" id="iron1" name="iron1" step="0.01" required>

                    <label for="stove1">Stove (kWh)</label>

                    <input type="number" id="stove1" name="stove1" step="0.01" required>

                    <label for="lights1">Lights (kWh)</label>

                    <input type="number" id="lights1" name="lights1" step="0.01" required>

                    <label for="washing\_machine1">Washing machine (kWh)</label>

                    <input type="number" id="washing\_machine1" name="washing\_machine1" step="0.01" required>

                    <label for="peakHours1">Peak Hours (kWh)</label>

                    <input type="number" id="peakHours1" name="peakHours1" step="0.01" required>

                    <label for="nonPeakHours1">Non-Peak Hours (kWh)</label>

                    <input type="number" id="nonPeakHours1" name="nonPeakHours1" step="0.01" required>

                    <label for="guest1">Guest staying?</label>

                    <select id="guest1" name="guest1" onchange="toggleGuestField('guest1', 'guestUsage1')">

                        <option value="no">No</option>

                        <option value="yes">Yes</option>

                    </select>

                    <div id="guestUsage1" style="display: none;">

                        <label for="guestRefrigerator1">Refrigerator for Guest (kWh)</label>

                        <input type="number" id="guestRefrigerator1" name="guestRefrigerator1" step="0.01" required>

                        <label for="guestTelevision1">Television for Guest (kWh)</label>

                        <input type="number" id="guestTelevision1" name="guestTelevision1" step="0.01" required>

                        <label for="guestFan1">Fan for Guest (kWh)</label>

                        <input type="number" id="guestFan1" name="guestFan1" step="0.01" required>

                        <label for="guestMicrowave1">Microwave for Guest (kWh)</label>

                        <input type="number" id="guestMicrowave1" name="guestMicrowave1" step="0.01" required>

                        <label for="guestWaterHeater1">Water Heater for Guest (kWh)</label>

                        <input type="number" id="guestWaterHeater1" name="guestWaterHeater1" step="0.01" required>

                        <label for="guestKettle1">Kettle for Guest (kWh)</label>

                        <input type="number" id="guestKettle1" name="guestKettle1" step="0.01" required>

                        <label for="guestIron1">Iron for Guest (kWh)</label>

                        <input type="number" id="guestIron1" name="guestIron1" step="0.01" required>

                        <label for="guestStove1">Stove for Guest (kWh)</label>

                        <input type="number" id="guestStove1" name="guestStove1" step="0.01" required>

                        <label for="guestLights1">Lights for Guest (kWh)</label>

                        <input type="number" id="guestLights1" name="guestLights1" step="0.01" required>

                        <label for="guestWashing\_machine1">Washing machine for Guest (kWh)</label>

                        <input type="number" id="guestWashing\_machine1" name="guestWashing\_machine1" step="0.01" required>

                        <label for="guestPeakHours1">Peak Hours for Guest (kWh)</label>

                        <input type="number" id="guestPeakHours1" name="guestPeakHours1" step="0.01" required>

                        <label for="guestNonPeakHours1">Non-Peak Hours for Guest (kWh)</label>

                        <input type="number" id="guestNonPeakHours1" name="guestNonPeakHours1" step="0.01" required>

                    </div>

                    <button type="button" onclick="calculateFamily1()">Calculate</button>

                </form>

                <div id="result1" class="result">

                    <!-- Results will be displayed here -->

                </div>

            </section>

            <section class="family">

                <h2>Family 2</h2>

                <form id="family2Form">

                    <label for="refrigerator2">Refrigerator (kWh)</label>

                    <input type="number" id="refrigerator2" name="refrigerator2" step="0.01" required>

                    <label for="television2">Television (kWh)</label>

                    <input type="number" id="television2" name="television2" step="0.01" required>

                    <label for="fan2">Fan (kWh)</label>

                    <input type="number" id="fan2" name="fan2" step="0.01" required>

                    <label for="microwave2">Microwave Oven (kWh)</label>

                    <input type="number" id="microwave2" name="microwave2" step="0.01" required>

                    <label for="waterHeater2">Water Heater (kWh)</label>

                    <input type="number" id="waterHeater2" name="waterHeater2" step="0.01" required>

                    <label for="kettle2">Kettle (kWh)</label>

                    <input type="number" id="kettle2" name="kettle2" step="0.01" required>

                    <label for="iron2">Iron (kWh)</label>

                    <input type="number" id="iron2" name="iron2" step="0.01" required>

                    <label for="stove2">Stove (kWh)</label>

                    <input type="number" id="stove2" name="stove2" step="0.01" required>

                    <label for="lights2">Lights (kWh)</label>

                    <input type="number" id="lights2" name="lights2" step="0.01" required>

                    <label for="washing\_machine2">Washing machine (kWh)</label>

                    <input type="number" id="washing\_machine2" name="washing\_machine2" step="0.01" required>

                    <label for="peakHours2">Peak Hours (kWh)</label>

                    <input type="number" id="peakHours2" name="peakHours2" step="0.01" required>

                    <label for="nonPeakHours2">Non-Peak Hours (kWh)</label>

                    <input type="number" id="nonPeakHours2" name="nonPeakHours2" step="0.01" required>

                    <label for="guest2">Guest staying?</label>

                    <select id="guest2" name="guest2" onchange="toggleGuestField('guest2', 'guestUsage2')">

                        <option value="no">No</option>

                        <option value="yes">Yes</option>

                    </select>

                    <div id="guestUsage2" style="display: none;">

                        <label for="guestRefrigerator2">Refrigerator for Guest (kWh)</label>

                        <input type="number" id="guestRefrigerator2" name="guestRefrigerator2" step="0.01" required>

                        <label for="guestTelevision2">Television for Guest (kWh)</label>

                        <input type="number" id="guestTelevision2" name="guestTelevision2" step="0.01" required>

                        <label for="guestFan2">Fan for Guest (kWh)</label>

                        <input type="number" id="guestFan2" name="guestFan2" step="0.01" required>

                        <label for="guestMicrowave2">Microwave for Guest (kWh)</label>

                        <input type="number" id="guestMicrowave2" name="guestMicrowave2" step="0.01" required>

                        <label for="guestWaterHeater2">Water Heater for Guest (kWh)</label>

                        <input type="number" id="guestWaterHeater2" name="guestWaterHeater2" step="0.01" required>

                        <label for="guestKettle2">Kettle for Guest (kWh)</label>

                        <input type="number" id="guestKettle2" name="guestKettle2" step="0.01" required>

                        <label for="guestIron2">Iron for Guest (kWh)</label>

                        <input type="number" id="guestIron2" name="guestIron2" step="0.01" required>

                        <label for="guestStove2">Stove for Guest (kWh)</label>

                        <input type="number" id="guestStove2" name="guestStove2" step="0.01" required>

                        <label for="guestLights2">Lights for Guest (kWh)</label>

                        <input type="number" id="guestLights2" name="guestLights2" step="0.01" required>

                        <label for="guestWashing\_machine2">Washing machine for Guest (kWh)</label>

                        <input type="number" id="guestWashing\_machine2" name="guestWashing\_machine2" step="0.01" required>

                        <label for="guestPeakHours2">Peak Hours for Guest (kWh)</label>

                        <input type="number" id="guestPeakHours2" name="guestPeakHours2" step="0.01" required>

                        <label for="guestNonPeakHours2">Non-Peak Hours for Guest (kWh)</label>

                        <input type="number" id="guestNonPeakHours2" name="guestNonPeakHours2" step="0.01" required>

                    </div>

                    <button type="button" onclick="calculateFamily2()">Calculate</button>

                </form>

                <div id="result2" class="result">

                    <!-- Results will be displayed here -->

                </div>

            </section>

        </main>

    </div>

    <script src="script.js"></script>

    <script>

        function toggleGuestField(guestSelectId, guestFieldId) {

            const guestSelect = document.getElementById(guestSelectId);

            const guestField = document.getElementById(guestFieldId);

            if (guestSelect.value === 'yes') {

                guestField.style.display = 'block';

            } else {

                guestField.style.display = 'none';

            }

        }

            </script>

</body>

</html>

styles.css

/\* Reset some default styles \*/

\* {

    margin: 0;

    padding: 0;

    box-sizing: border-box;

}

/\* Basic styling for the body \*/

body {

    font-family: Arial, sans-serif;

    line-height: 1.6;

    background-color: #f0f0f0;

    padding: 20px;

}

.container {

    max-width: 800px;

    margin: 0 auto;

    background-color: #fff;

    padding: 20px;

    border-radius: 8px;

    box-shadow: 0 0 10px rgba(0, 0, 0, 0.1);

}

header {

    text-align: center;

    margin-bottom: 20px;

}

header h1 {

    font-size: 2.5em;

    color: #333;

}

main {

    display: flex;

    justify-content: space-between;

}

.family {

    flex-basis: 48%;

    background-color: #f9f9f9;

    padding: 20px;

    border-radius: 8px;

    box-shadow: 0 0 5px rgba(0, 0, 0, 0.1);

    margin-bottom: 20px;

}

.family h2 {

    font-size: 1.8em;

    color: #555;

    margin-bottom: 10px;

    text-align: center;

}

form {

    margin-bottom: 20px;

}

form label {

    display: block;

    margin-bottom: 5px;

    font-size: 1.2em;

    color: #333;

}

form input[type="number"] {

    width: 100%;

    padding: 8px;

    font-size: 1em;

    border: 1px solid #ccc;

    border-radius: 4px;

    margin-bottom: 10px;

}

form button {

    background-color: #4CAF50;

    color: white;

    padding: 10px 20px;

    border: none;

    border-radius: 4px;

    cursor: pointer;

    font-size: 1em;

}

form button:hover {

    background-color: #45a049;

}

.result {

    padding: 10px;

    background-color: #e9e9e9;

    border-radius: 4px;

}

.result p {

    font-size: 1.2em;

    color: #333;

    margin-bottom: 5px;

}

script.js

function calculateFamily1() {

    let totalUnits = 0;

    let peakHours = parseFloat(document.getElementById('peakHours1').value) || 0;

    let nonPeakHours = parseFloat(document.getElementById('nonPeakHours1').value) || 0;

    const appliances = [

        'refrigerator1', 'television1', 'fan1', 'microwave1',

        'waterHeater1', 'kettle1', 'iron1', 'stove1', 'lights1', 'washing\_machine1'

    ];

    for (let appliance of appliances) {

        let value = parseFloat(document.getElementById(appliance).value);

        if (!isNaN(value)) {

            totalUnits += value;

        }

    }

    totalUnits += peakHours + nonPeakHours;

    const totalUnitsPerMember = totalUnits / 4;

    // Display total units consumed in an alert box

    alert(`Family 1\nTotal Units Consumed: ${totalUnits.toFixed(2)} kWh\nTotal Units Per Member: ${totalUnitsPerMember.toFixed(2)} kWh`);

}

function calculateFamily2() {

    let totalUnits = 0;

    let peakHours = parseFloat(document.getElementById('peakHours2').value) || 0;

    let nonPeakHours = parseFloat(document.getElementById('nonPeakHours2').value) || 0;

    const appliances = [

        'refrigerator2', 'television2', 'fan2', 'microwave2',

        'waterHeater2', 'kettle2', 'iron2', 'stove2', 'lights2', 'washing\_machine2'

    ];

    for (let appliance of appliances) {

        let value = parseFloat(document.getElementById(appliance).value);

        if (!isNaN(value)) {

            totalUnits += value;

        }

    }

    totalUnits += peakHours + nonPeakHours;

    const totalUnitsPerMember = totalUnits / 4;

    // Display total units consumed in an alert box

    alert(`Family 2\nTotal Units Consumed: ${totalUnits.toFixed(2)} kWh\nTotal Units Per Member: ${totalUnitsPerMember.toFixed(2)} kWh`);

}