Got it ✅ — here’s a **quick breakdown** of how the Carbon Footprint Calculator code calculates everything (based on the emission factors I added in the JavaScript):

**🔌 1. Home Energy**

* Input: **Electricity use per month (kWh)**
* Formula:
* Electricity CO₂ = kWh × 0.92 kg

(Because **1 kWh ≈ 0.92 kg CO₂** on average grid power).

* Example: 200 kWh → 200 × 0.92 = **184 kg CO₂** / month.

**🚗 2. Travel**

* Inputs:
  + **Car travel (km/week)**
  + **Public transport (km/week)**
* Formulas:
* Car CO₂ = (weekly\_km × 0.21) × 4
* Public Transport CO₂ = (weekly\_km × 0.05) × 4
  + **0.21 kg/km** for petrol/diesel cars.
  + **0.05 kg/km** for buses/trains.
  + Multiply ×4 → approx weeks in a month.
* Example: Car 50 km/week → (50 × 0.21 × 4) = **42 kg CO₂** / month.

**🍽 3. Food Habits**

* User selects one option:
  + Daily meat → +90 kg CO₂ / month
  + Few times meat → +50 kg CO₂ / month
  + Vegetarian → +20 kg CO₂ / month
  + Vegan → +10 kg CO₂ / month
* These are **average lifestyle impact values**, simplified for hackathon.

**🗑 4. Waste**

* Input: Recycles? **Yes / No**
* Formula:
  + Yes → 0 extra
  + No → +20 kg CO₂ / month (penalty for waste going to landfill).

**📊 Total Footprint**

Monthly Total = Energy + Travel + Food + Waste

Yearly Total = Monthly Total × 12

**🧾 Extras**

* Results show both **monthly & yearly CO₂**.
* A **breakdown bar chart** shows share of Energy / Travel / Food / Waste.
* **Tips** are generated depending on which category is highest.

⚡ So in short:

* **Energy = kWh × 0.92**
* **Travel = km × emission factor × 4 weeks**
* **Food = fixed values per lifestyle**
* **Waste = fixed penalty if no recycling**
* **Total = Sum of all categories**

👉 Do you want me to **draw a simple formula diagram/flowchart** so you can explain this visually in your hackathon pitch?

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