Summary of Understanding

Objective:

The primary goal of the project is to develop a web application that empowers individuals to reduce their carbon footprint by providing personalized insights and actionable recommendations. The application aims to bridge the gap between general environmental advice and specific, actionable steps tailored to an individual's lifestyle and local environmental conditions.

Key Features:

1. **Daily Carbon Footprint Calculation:**
   - **Inputs:** The application will take into account various aspects of daily life that contribute to carbon emissions:
     - **Vehicle Usage:** This includes fuel type, distance traveled, and vehicle efficiency.
     - **Electricity Consumption:** Household energy usage will be assessed, considering the type of energy source (renewable vs. non-renewable).
     - **Food Consumption:** Dietary choices, such as meat vs. plant-based foods, will be factored in.
     - **Water Consumption:** Daily water usage will be measured, as water treatment and heating contribute to emissions.
     - **Waste Production:** The amount and type of waste generated (recyclable vs. non-recyclable) will be included in the calculation.
   - **Outcome:** The application will provide a precise calculation of the user's daily carbon footprint based on these inputs.
2. **Air Quality Integration:**
   - **User Location Input:** The user's geographical location will be used to retrieve real-time air quality data.
   - **Comparison with Carbon Footprint:** The user's carbon footprint will be compared to the local air quality index, allowing the application to contextualize the user's impact on the environment.
3. **Recommendations and Insights:**
   - **Personalized Suggestions:** Based on the comparison between the user's carbon footprint and the local air quality, the application will generate tailored recommendations to help the user reduce their environmental impact.
   - **Benchmarking:** The application will compare the user's footprint against average usage in their area, providing a clear understanding of how they measure up to others in similar circumstances.

Expected Final Outcome:

- The application will present users with a clear and precise daily carbon footprint calculation.
- Users will be able to see how their carbon footprint compares to both the local air quality and the average carbon usage of others in their area.
- The application will provide a detailed analysis of the user's environmental impact, offering specific recommendations to reduce their footprint and contribute to environmental sustainability.

Long-Term Vision:

This project aims to foster greater environmental awareness by making the impact of everyday actions more tangible to individuals. By offering personalized insights, the application hopes to encourage sustainable lifestyle changes that collectively contribute to mitigating climate change.