**📚 Knowledge for RAG (Eco Lifestyle Agent)**

**1. Sustainable Living Practices**

* Home energy conservation (LED lighting, insulation, energy-efficient appliances).
* Water-saving tips (low-flow fixtures, rainwater harvesting, greywater reuse).
* Plastic reduction methods (reusables, biodegradable alternatives, bulk shopping).
* Waste minimization (composting, upcycling, zero-waste lifestyle).
* Sustainable food habits (plant-based diets, seasonal produce, food waste reduction).

**2. Eco-Friendly Product Databases**

* Certified eco-labels and standards:
  + **Energy Star** (energy-efficient appliances).
  + **Ecolabel (EU)**, **FSC** (sustainable forestry), **USDA Organic**, **Fair Trade**.
  + Recyclable/biodegradable packaging materials.
* Product categories:
  + Household (cleaners, detergents, utensils).
  + Personal care (organic cosmetics, bamboo toothbrushes).
  + Fashion (sustainable fabrics, ethical brands).
  + Electronics (low-energy, recyclable, repair-friendly).

**3. Recycling & Waste Management Guidelines**

* Country- or city-specific recycling rules (what goes into each bin).
* Electronic waste (E-waste collection centers, take-back schemes).
* Hazardous waste (batteries, paints, medical waste).
* Composting (kitchen scraps, garden waste).

**4. Green Transportation**

* Public transit options (metro, bus, train systems).
* Shared mobility (carpooling, bike-sharing, scooter-sharing).
* EV infrastructure (charging station maps, subsidies).
* Low-carbon travel tips (train vs air travel comparisons).

**5. Government & NGO Programs**

* National and local **subsidies, tax credits, or rebates**:
  + Solar panels, home insulation, electric vehicles, green building retrofits.
* **NGO initiatives** (WWF campaigns, Greenpeace guides, local environmental groups).
* UN Sustainable Development Goals (SDGs) aligned programs.

**6. Carbon Footprint Awareness**

* Everyday carbon-saving actions (switching to public transit, eating less meat).
* Carbon calculators (energy use, travel, consumption).
* Case studies: average savings from switching to renewable energy or sustainable diets.

**7. Trusted Sources to Index**

* **Government portals** (EPA, EU Environment, India MoEFCC, etc.).
* **International organizations**: UN Environment Programme, IPCC reports.
* **NGOs**: WWF, Greenpeace, Friends of the Earth.
* **Product certification databases** (EcoLabel, Energy Star, FSC, Fair Trade).
* **Local municipality recycling guides** (city council websites).
* **Sustainability blogs / guides** (practical tips from credible sources).

**🛠 Structuring the RAG Knowledge Base**

* **Documents**: Store as structured chunks (short paragraphs, FAQs, or tables).
* **Metadata**: Tag by category (energy, recycling, food, travel, government policy) + region (global, EU, India, US, local).
* **Updates**: Refresh data regularly to stay current (especially for government schemes and recycling rules).