**Agent Mira Hackathon Case Study: Real Estate Chatbot**

🚀 **Build a full-stack chatbot that helps users find homes based on their preferences.**  
The chatbot will fetch and merge data from multiple JSON sources, filter properties based on user input, and display relevant results.

**📌 Case Study Requirements**

**💡 Goal**

Develop a **real estate chatbot** using JavaScript, React.js, and Node.js that:  
✅ Accepts user input (budget, location, number of bedrooms, etc.).  
✅ Retrieves and **merges data** from three separate JSON files.  
✅ Filters and displays relevant properties in a user-friendly interface.  
✅ Stores user preferences (saved properties) in MongoDB.  
✅ Deploys the solution on a cloud platform or GitHub Pages.

**📂 Data Structure**

The candidate will work with **three separate JSON files**, simulating real-world multiple data sources.

**1️⃣ Property Basics (property\_basics.json)**

* Contains **ID, title, price, and location**.

**2️⃣ Property Characteristics (property\_characteristics.json)**

* Contains **bedrooms, bathrooms, size, and amenities**.

**3️⃣ Property Images (property\_images.json)**

* Contains **image URLs for each property**.
* **📌 Expected Features**
* **🔹 Core Features**
* ✔️ **User Input Handling** – Users enter location, budget, and preferences.  
  ✔️ **Data Merging** – Join data from all three JSON files using id.  
  ✔️ **Filtering** – Return properties that match user preferences.  
  ✔️ **Chatbot UI** – Display interactive responses using React.js.  
  ✔️ **MongoDB Integration** – Store user’s saved properties.  
  ✔️ **Deployment** – Host on GitHub Pages, Vercel, or another platform.
* **🚀 Bonus Features (Optional)**
* ✨ **Basic NLP** – Use an AI API (e.g., OpenAI) to improve chatbot responses.  
  ✨ **Property Comparison Feature** – Let users compare multiple properties.  
  ✨ **Real-Time Search** – Filter properties dynamically as users type.
* **📌 Submission Requirements**
* 📌 **GitHub repository link** with the code.  
  📌 **Short write-up** (readme) explaining the approach & challenges.