

## **POC Task Document – Multi-Agentic Real Estate Chatbot (Image + Text Based)**

**Deadline:** 48 Hours from the time of receiving this document

**Tools Allowed:** Any **no-code**, **low-code**, or **custom-coded** tools/platforms. Flexibility is encouraged.

**Project Title: Multi-Agent Real Estate Assistant Chatbot (Text + Image Enabled)**

**Objective:** Design a **multi-agentic chatbot system** capable of solving **real estate-related issues** with a specialization split into two distinct virtual agents:

### **Agent 1: Issue Detection & Troubleshooting Agent (Image + Text)**

#### **Responsibilities:**

- Accepts user-uploaded **images of properties**, along with optional textual context.
- **Detects visible issues** in the property (e.g., water damage, mold, cracks, poor lighting, broken fixtures).
- Provides **troubleshooting suggestions**, such as:
  - “You might need to contact a plumber.”
  - “This looks like paint peeling due to moisture—consider using the anti-damp coating.”
- Can ask clarifying follow-up questions to diagnose better.

#### **Example Interaction:**

**User:** “What’s wrong with this wall?” (**User uploads image**)

**Agent 1:** “It appears there is mould growth near the ceiling. This might be due to high humidity or a leak. I recommend checking for water seepage and using a dehumidifier.”

### **Agent 2: Tenancy FAQ Agent (Text-based)**

#### **Responsibilities:**

- Handles **frequently asked questions** related to tenancy laws, agreements, landlord/tenant responsibilities, and rental processes.

- Capable of giving **location-specific** guidance if the user's city or country is provided.
- Can answer common questions like:
  - “How much notice do I need to give before vacating?”
  - “Can my landlord increase rent midway through the contract?”
  - “What to do if the landlord is not returning the deposit?”

### **Example Interaction:**

**User:** “Can my landlord evict me without notice?”

**Agent 2:** “In most jurisdictions, landlords must give written notice before eviction, unless it’s an emergency situation like non-payment or illegal activity. Please let me know your city or region for more accurate info.”

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### **Multi-Agent Architecture (Design Suggestion)**

- **Agent Router/Manager:** Automatically identifies which agent should respond based on:
  - **Text classification** (FAQ vs issue description)
  - **Presence of an image**
- **Fallback:** If unclear, the chatbot should ask a clarifying question to route to the right agent.

### **Tools & Platforms Allowed**

You may use **any combination** of the following:

- No-code tools like **Voiceflow, Landbot, Make, Zapier, and Botpress**
- AI platforms like **OpenAI Assistants, GPTs, Langchain, or HuggingFace**
- Image analysis APIs like **Google Vision API, Azure Cognitive Services, or CLIP / BLIP models**
- Optionally host the agents on **a shared UI or landing page** with switchable modes

## **Deliverables**

1. **Working chatbot demo** (video, screenshots, or live link)
2. **Short README or documentation** (1-2 pages) describing:
  - Which tools/tech were used
  - The logic behind agent switching
  - How image-based issue detection works
  - Use case examples covered
3. **Deadline:** 48 hours after receiving this document
4. When Resending the document - Please SEND THE FOLLOWING INFORMATION
  1. THE TOOL USED
  2. The place where it is deployed:
  3. Steps to view the bot(if there is code):
  4. A small video of how the bot works : (Google DRIVE link): Please make sure to keep it accessible for all.

**Note: if the Interviewer isn't able to access your tool or able to replicate or able to see the video, your submission is not counted.**