Air Quality Health Advisory and Prevention Guidance Chatbot Scenario Package

Scenario Background

In Halifax, Nova Scotia, air quality can fluctuate due to wildfires, pollution, or weather patterns. Poor air quality affects people with respiratory conditions, older adults, and children more severely. Residents need up-to-date Air Quality Health Index (AQHI) information and clear advice on minimizing exposure risks. Nova Scotia Environment, Environment Canada, and local health authorities publish real-time AQHI data and prevention tips. This scenario asks students to use the **Ollama + AnythingLLM** stack, combined with locally available, authoritative health education materials, to design a chatbot for **Air Quality Health Advisory and Prevention Guidance**.

Scenario Goals

- Help users check local AQHI levels and understand risk categories
- Provide prevention strategies to reduce exposure during poor air quality days
- Clearly communicate that the chatbot does **not** provide professional medical diagnoses

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Recommended Knowledge Base Materials

Students should collect and organize **retrievable, structured** local health education materials to serve as their RAG knowledge base. Recommended sources include:

- Environment Canada – AQHI Levels and Health Messages
- Nova Scotia Environment – Air Quality Alerts and Guidelines
- Nova Scotia Health – Protecting Health During Poor Air Quality
- Canadian Lung Association – Advice for Sensitive Populations
- Any relevant local public health or government updates

> 📌 **Requirement:** Upload as PDF, Markdown, or plain text, using general, consistent file names such as:
>
> - `knowledge_document_1.pdf`
> - `knowledge_document_2.md`
> - `knowledge_document_3.txt`

Suggested User Questions for Testing

Your final system must be able to answer these scenario questions using your uploaded knowledge base materials:

- **Question 1:** "Today the AQHI is 7—should I avoid outdoor exercise?"
- **Question 2:** "What can I do at home to reduce my exposure to air pollution?"

Suggested GitHub Repository Structure

All project deliverables must be **uploaded to a GitHub Repository**. Recommended folder structure:

```
/cold-flu-chatbot
├─ knowledge_base/
│  ├─ knowledge_document_1.pdf
│  ├─ knowledge_document_2.md
│  └─ knowledge_document_3.txt
├─ prompt/
│  └─ system_prompt.txt
├─ documentation/
│  └─ scenario_pack.md (Provided)
│  └─ use_case_description.md
├─ demo/
│  ├─ demo_video.mp4
│  └─ chat_transcript.txt
└─ README.md
```

Deliverables

- **Knowledge Base**
  - Include all documents actually used in AnythingLLM
  - Must be clearly structured and named using the general format above
- **System Prompt**
  - Defines the chatbot role, tone, scope, and ethical disclaimers
- **Use Case Description**
  - A clear document that identifies user pain points and success criteria.
- **Demo Materials**
  - Screen recording or video showing chatbot responses to the core scenario questions
  - Chat transcript
- **README.md**
  - Brief project overview
  - Local deployment/testing instructions
  - Author(s) and date

⚠ Important Notes

- All materials must be uploaded to a **public or private GitHub Repository** for review
- The project is for **educational research use only** and must not be used for real diagnosis or treatment

- The chatbot README.md file must **prominently display a "Not Medical Diagnosis" disclaimer**