

COPD Exacerbation Early Warning and Home Management Chatbot Scenario Package

Scenario Background

In Halifax, Nova Scotia, Chronic Obstructive Pulmonary Disease (COPD) is a common condition that can worsen suddenly with infections or environmental triggers. Early recognition of exacerbation symptoms can reduce hospitalizations. Patients need guidance on recognizing warning signs, adjusting medications, and knowing when to seek medical help. Nova Scotia Health, the Lung Association of Canada, and other organizations provide action plans and patient education materials. This scenario asks students to use the **Ollama + AnythingLLM** stack, combined with locally available, authoritative health education materials, to design a chatbot for **COPD Exacerbation Early Warning and Home Management**.


Scenario Goals

- Help users recognize early signs of a COPD exacerbation
 - Provide evidence-based home management strategies
 - 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:

- Lung Association of Canada – COPD Action Plans
- Nova Scotia Health – Patient Home Care Guides
- Canadian Thoracic Society – Exacerbation Warning Signs
- Environmental Control and Air Quality Tips
- Any relevant local clinic or public health resources

 **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`
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Suggested User Questions for Testing

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

- **Question 1:** "My phlegm turned yellow and increased—should I see a doctor?"
 - **Question 2:** "What can I do at home to help prevent COPD flare-ups?"
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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**