💡 Feature Name: Smart Risk Analysis Agent

🎯 Value:

Early detection of pregnancy-related health risks via **proactive**, conversational AI using user symptoms, clinical rules, and medical documents.

🧑‍💻 User Stories

1. As a pregnant user, I want the AI agent to greet me in my preferred language so I feel comfortable and understood.

- **Acceptance Criteria:**
    - The agent starts by asking: "What language would you prefer I use?"
    - Supported: English, Arabic (optionally extendable)
    - The rest of the conversation continues in the selected language.

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2. As a pregnant user, I want the AI agent to ask me 3–5 symptom-related questions proactively, so I can get an accurate risk assessment without needing to know what to report.

- **Acceptance Criteria:**
    - AI agent initiates the conversation with friendly, contextual questions like:
        - "Have you experienced headaches or blurry vision this week?"
        - "Have you noticed swelling in your hands, feet, or face?"
        - "What was your last recorded blood pressure or glucose level?"
    - At least 3 relevant questions per session.
    - Empathetic tone is maintained throughout.

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3. As a pregnant user, I want the AI agent to give me a clear summary of my risk level and a suggestion for next steps.

- **Acceptance Criteria:**

- o   AI provides a response like:

"Based on your responses, your current risk level is **Medium**. I recommend you contact your doctor within the next 2 days to discuss the symptoms you mentioned."

- o   Risk levels: Low / Medium / High

- o   Includes brief explanation of why the risk level was assigned.

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4. As a doctor, I want to receive a weekly risk summary of my patients using this agent so I can track issues early without manual review.

- **Acceptance Criteria:**

   - o   Weekly PDF or dashboard per patient including:

      - ▪   Summary of responses

      - ▪   Risk level trend (compared to last week)

      - ▪   Highlighted red flags

      - ▪   Suggested follow-up actions

   - o   Integrated into EMR dashboard

🔄 **Use Case Example**

Scenario: Nour, 30 weeks pregnant, opens the GraviLog app.

The agent begins:

"Hello! 😊 Before we begin, would you like to continue in English or Arabic?"

Nour selects English.

The AI switches to:

"Hello! I'll ask you a few simple questions to help assess your health condition."

The agent asks:

"Have you experienced headaches or blurry vision recently?"
"Do you have any swelling in your hands or feet?"
"Do you know your last recorded blood pressure reading?"

Nour responds. The RAG + clinical rules analyze her symptoms and previous data.

AI responds:

"Current risk level: High ⚠️
We recommend contacting your doctor immediately. The symptoms may indicate preeclampsia."

The doctor receives the weekly summary:

- **Nour's symptoms + timestamp**

- **Risk: High**

- **Flag: Possible preeclampsia**

- **Suggestion: Immediate OB visit recommended**

Technical Stack

- **Language Model**: Any LLM (e.g., Qwen, MiniMax-M1).

- **RAG Backend**: **LlamaIndex**.

- **Frontend**: Streamlit, Gradio, or simple HTML/JS interface.

- **Deployment**: Use any free platform.