

## **Round 1 Interview (Deadline: 60 hrs)**

Welcome to Round 1 of the Assignment Round

The current assignment consists of two tasks:

1. Technical & Development Task
2. Non-Technical Task (QMS Module)

You are requested to carefully read through the provided document and watch the video instructions for Task 1 (video is applicable only for Task 1) in full before you begin implementing your solutions.

Once you have completed both tasks, please use the submission URL at the end of the Document, which contains the Google Form link, and fill in all the required fields.

### **Task 1: AI-First CRM HCP Module – LogInteractionScreen(Technical)**

***Note: If Langgraph and LLM are not used, the below task will not be accepted.***

Objective: Conceptualize and outline the key components of an AI-first Customer Relationship Management (CRM) system, specifically focusing on the Healthcare Professional (HCP) module. You should approach this task with the mindset of a life science expert designing a tool for field representatives.

Core Requirements & Tech Stack:

- Functionality: Design the "Log Interaction Screen." This screen must be offer users the flexibility to log interactions with HCPs via either a structured form or a conversational chat interface.
- Frontend: **React** UI with **Redux** for state management.
- Backend: **Python** with **FastAPI**.
- AI Agent Framework: **LangGraph**.
- LLMs: Utilize Groq(<https://console.groq.com/docs/models>), specifically **the gemma2-9b-it model** (assume you will create a new API token for this). You may also consider **llama-3.3-70b-versatile** for context.
- Database: MySQL/Postgres SQL
- Font: Google Inter.
- **You may use Gemini 2.5 Pro (1-month free trial) or ChatGPT 5.0 for all coding and research, with zero human-written code.**

**Log HCP Interaction**

**Interaction Details**

|   |                  |
|---|------------------|
| HCP Name  | Interaction Type |
| <input style="width: 100%; height: 25px; border: 1px solid #ccc; padding: 2px; margin-bottom: 5px;" type="text"/> | Meeting          |
| Date  | Time             |
| 19-04-2025  | 19:36            |
| Attendees   |                  |
| <input style="width: 100%; height: 25px; border: 1px solid #ccc; padding: 2px; margin-bottom: 5px;" type="text"/> |                  |
| Topics Discussed  |                  |
| <input style="width: 100%; height: 50px; border: 1px solid #ccc; padding: 2px; margin-bottom: 5px;" type="text"/> |                  |
| <a href="#" style="color: #0070C0;">❖ Summarize from Voice Note (Requires Consent)</a>                            |                  |

**Materials Shared / Samples Distributed**

|                     |  |
|---------------------|--|
| Materials Shared    | <a href="#" style="border: 1px solid #ccc; padding: 2px 10px; border-radius: 5px; color: inherit; text-decoration: none;">Search/Add</a> |
| No materials added. |  |
| Samples Distributed | <a href="#" style="border: 1px solid #ccc; padding: 2px 10px; border-radius: 5px; color: inherit; text-decoration: none;">Add Sample</a> |
| No samples added.   |  |

**Observed/Inferred HCP Sentiment**

|                                |  |
|--------------------------------|--|
| <input type="radio"/> Positive | <input checked="" type="radio"/> Neutral |
| <input type="radio"/> Negative |  |

**Outcomes**

|   |  |
|---|--|
| <input style="width: 100%; height: 25px; border: 1px solid #ccc; padding: 2px; margin-bottom: 5px;" type="text"/> |  |
|---|--|

**Follow-up Actions**

|   |  |
|---|--|
| <input style="width: 100%; height: 25px; border: 1px solid #ccc; padding: 2px; margin-bottom: 5px;" type="text"/> |  |
|---|--|

**AI Suggested Follow-ups:**

- + Schedule follow-up meeting in 2 weeks
- + Send OncoBoost Phase III PDF
- + Add Dr. Sharma to advisory board invite list

**AI Assistant**  
 Log interaction via chat

Log interaction details here (e.g., "Met Dr. Smith, discussed Product X efficacy, positive sentiment, shared brochure") or ask for help.

Describe interaction...
Log

Video URL: [Instructions\(Task 1\).mp4](#)

or use the URL below:

[https://drive.google.com/file/d/1njXfNIWa465MfMYwY7YZvY\\_hGd3fyZX2/view?usp=drive\\_link](https://drive.google.com/file/d/1njXfNIWa465MfMYwY7YZvY_hGd3fyZX2/view?usp=drive_link)

#### LangGraph AI Agent & Tools:

- Describe the role of the LangGraph agent in managing HCP interactions.
- Define a minimum of five (5) specific "tools" that this LangGraph agent would use for sales-related activities. Two tools must be:
  - **Log Interaction:** Detail how this tool captures interaction data (potentially using the LLM for summarization, entity extraction, etc.).
  - **Edit Interaction:** How this tool allows modification of logged data.

# Output Deliverables (Task 1)

## 1. GitHub Submission

- Upload **both frontend and backend code** to a single GitHub repository.
- Ensure the repository contains a clear and detailed **README.md** file.
- Submit the **GitHub URL** using the submission link provided at the end of this document.

## 2. Video Recording

Create a **10–15 minute** video that includes:

- A walkthrough of your **frontend URL**.
- Demonstration of **all 5 LangGraph tools** functioning correctly.
- A clear explanation of your **code flow and architecture**.
- A summary of what **you personally understood** from Task 1.

## Task 2: Understanding QMS Modules in Supply Chain OS (Life Sciences) (Non-technical)

**Note: You will be evaluated on your understanding of the QMS module in Life science, only a PPT or a document will not be sufficient**

**Objective:** This task evaluates your understanding, learning ability, and clarity of explanation about real-world business workflows in the Life Sciences Supply Chain domain.

We want to see how effectively you can **analyze, structure, and communicate** what you learn — a key skill for developers who build systems they truly understand.

### Access Details

**Platform URL:** <http://216.48.184.249:5274/quality>

**Login Credentials:**

- **Username:** testing@aivoa.net
- **Password:** password123

## Task Context

You will explore the **Quality Management System (QMS)** module in our Supply Chain OS platform. The system focuses on **APIs (Active Pharmaceutical Ingredients)** and **Raw Materials** used by Life Science manufacturers.

The QMS module includes:

### 1. In-Process Quality

- Deviation Management
- CAPA (Corrective and Preventive Actions)

### 2. In-Product Quality

- Product Complaints
- Recall Management
- Adverse Event Reporting

### 3. QMS Management

- Supplier Management

## Your Task

You are required to:

1. Explore the above QMS modules.
2. Explain the **end-to-end flow** for each module, covering how it works and its purpose.
3. Take:
  - **Example related to API**, and
  - **Examples related to Raw Materials**.

4. Explain **roles in SMEs (Small & Medium Enterprises)**, such as explain as per their perspective :
  - o Quality Executive / QA Officer
  - o Production Manager
5. Support your explanation using **flowcharts or simple visuals, or a PPT**(hand-drawn or digital, not an AI-generated one).

## Deliverables (Submit Separately)

You must submit items separately using the Google Form link provided at the end of the Document.

### 1. Video Recording

- Duration: 10–15 minutes
- Format: MP4 or MOV
- File name: **YourName\_QMS\_Assignment\_Video**

### Video Recording Instructions (Mandatory)

#### 1. Duration

- Minimum: 10 minutes
- Maximum: 25 minutes
- **⚠️ Videos shorter than 10 minutes will not be accepted.**

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#### 2. Recording Format

- You may use a phone or a laptop.
- Ensure clear audio and that your face is visible throughout the recording.

 **Submission Link**

**Submit both files separately using this Google Form:**

<https://forms.gle/xRqpWCrLCiDH33Xa9>

(Please make sure to upload both the videos and the required files in their respective fields.  
Incomplete submissions will not be reviewed.)