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# Capstone Project Scope

**Sponsor Sign-off**

**Project Title**: Website Integration with AI Chatbot and Keycloak for Lamina Solutions

**Sponsor**: Paul Aiello

**Organization**: Lamina Solutions

**Signature:**

* **Team Members**
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      * 2.Alwin Abraham
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**Description of Existing Project by Lamina Solutions**

Lamina Solutions is developing a healthcare app for pets and their owners. This app will make it easy for pet owners to talk to vets, manage their pets' health info, and get details about medicines. Vets can use the app to check pet medical records, schedule appointments, and communicate with pet owners. Medicine providers can use the app to share information about their products.

**Target Audience**

Pet Owners: They can manage their pets' health, schedule vet visits, talk to vets, and learn about pet care.

Veterinarians: They can access pet medical records, manage their schedules, and communicate with pet owners.

Drug/Medicine Providers: They can upload information about their medicines, like descriptions and dosages.

**Workflow**

Knowledge Base: The app acts as a central place for storing and accessing medicine information.

Document Upload: Medicine providers upload PDFs with details about their products.

Agent Specialization: Agents (parts of the system) are trained to know about specific drugs or types of drugs.

Data Processing: The app breaks down these PDFs into small pieces and stores them in a way that makes searching easy.

Search and Retrieval: When users ask about a drug, the system uses Pinecone Vector to find and provide relevant information.

Chatbot Interaction: If a user types a drug name (like "Tylenol"), the system assigns a knowledgeable agent to provide details such as dosage and usage.

Conversation Archive: All chats are saved for future reference and improvement.

**Technology**

Keycloak: Manages user login and permissions.

MySQL: Stores all data, including pet information and medicine details.

**Deliverables**

Platform for Medicine Providers: A space where they can upload and manage their product information.

Secure Backend: A secure system to store and handle all data, including user, pet, and medicine information.

# Task Assigned to Team SAAS SQUAD by Lamina Solutions.

**Website Integration with AI Chatbot and Keycloak**

Overview

We are tasked with creating a website that integrates an existing AI chatbot and uses Keycloak for user management. The website will serve as the main interface for pet owners, veterinarians, and drug/medicine providers.

**Scope of the Project**

***1.User Management with Keycloak:***

User Authentication: Enable secure user sign-up, login, and logout.

User Authorization: Manage roles and permissions for different user types (pet owners, veterinarians, drug/medicine providers).

Profile Management: Allow users to update their profile information.

**2.AI Chatbot Integration:**

Chatbot Interface: Provide a chat interface for users to interact with the existing AI chatbot.

Chatbot Communication: Integrate the chatbot into the website to handle user queries.

**3.Information Sharing Platform:**

Product Information Upload: Allow drug/medicine providers to upload PDFs with drug details.

Search and Retrieval: Implement a search function for users to easily find specific drug information.

Educational Resources: Provide access to articles and resources about pet care for pet owners.

**4.Secure Data Management:**

Backend System: Implement a secure backend using MySQL to store user data, pet health records, and medication details.

Data Processing: Transform uploaded documents into searchable chunks for efficient information retrieval.

**Steps to Implement the Project**

**1.Set Up Keycloak for User Management:**

* Install and configure Keycloak.
* Set up user roles (pet owners, veterinarians, drug/medicine providers).
* Integrate Keycloak with the website for user authentication and authorization.

**2.Develop the Website:**

**Front-End Development:**

**\***Create a user-friendly interface using React

**\***Implement forms for user registration, login, and profile management.

**\***Design the interface for user interactions to integrate AI chatbot.

**Back-End Development:**

**\***Set up a server using a framework like Node.js (Nest js)

**\***Implement API endpoints for user management, data upload, and retrieval.

**\***Connect the existing AI chatbot to the website backend to handle user queries.

**\***Connect the backend to the MySQL database for data storage.

**3.Integrate the Existing AI Chatbot:**

**\***Ensure the chatbot can communicate effectively with the website interface.

**\***Implement any necessary APIs to facilitate communication between the chatbot and the website.Test the chatbot integration to ensure it responds accurately and efficiently to user queries.

**4.Build the Knowledge Base and Search Functionality:**

**\***Develop a system to upload and process PDF documents from drug/medicine providers.

**\***Use Pinecone Vector or a similar tool for storing and retrieving vectorized document information.

**\***Implement a search feature to allow users to find relevant drug information based on their queries.

**Workflow of the Project**

User Registration: A pet owner signs up on the website, creates an account, and logs in.

Chatbot Interaction: The user interacts with the existing AI chatbot about a specific medication for their pet.

Data Retrieval: The chatbot retrieves information from the knowledge base and provides a detailed response.

**Summary**

We will create a website where users can manage their accounts using Keycloak and interact with an already existing AI chatbot for pet health and medication information. The website will allow drug/medicine providers to upload information, and users can search for and retrieve this information. Keycloak will handle user login and roles, while the chatbot will provide intelligent responses to user queries. All data will be securely stored and managed.