

Setup Guide: AI Chatbot Agent Platform

1. Overview

This document provides the necessary instructions to set up and run the AI Chatbot Agent Platform locally. The project is a full-stack application utilizing **Spring Boot** for the backend, **React.js** for the frontend, and **MySQL** for data persistence.

2. System Requirements

- **Operating System:** Windows/Mac/Linux.
- **Java Development Kit (JDK):** Version 17 or higher.
- **Node.js:** Version 18.0.0 or higher.
- **Build Tool:** Maven 3.6+.
- **Database:** MySQL Server 8.0+.

3. Database Setup

1. Ensure your MySQL server is running.
2. Open preferred MySQL client (Workbench, Command Line, etc.).
3. Execute the following command to create the project database: `CREATE DATABASE chatbot_platform;`
4. The application uses **Hibernate ddl-auto**, so all required tables (Users, Agents, etc.) will be created automatically upon starting the backend.

4. Backend Configuration & Execution (Spring Boot)

1. Navigate to the backend/Chatbot_platform directory.
2. Locate the configuration file: `src/main/resources/application.properties`.
3. **Update the following properties:**
 - `spring.datasource.username:` Your MySQL username.
 - `spring.datasource.password:` Your MySQL password.
 - `api.groq.key:` Your Groq Cloud API Key.
4. Open a terminal in the backend folder and run: `mvn spring-boot:run`
5. The backend server is successfully running when the log shows: Started ChatbotPlatformApplication on port 8080.

5. Frontend Configuration & Execution (React)

1. Open a new terminal window.
2. Navigate to the frontend directory.
3. Install the project dependencies by running: `npm install`
4. Launch the development server: `npm run dev`
5. The frontend will be available at: **`http://localhost:5173`**.

6. Using the Application

1. **Register:** Create a new account via the signup page.
2. **Login:** Enter your credentials to receive a **JWT token** for secure access.
3. **Create Agent:** Click "New Project" and define a **System Prompt** (e.g., "Act as a helpful Python assistant").
4. **Chat:** Select your agent and start a conversation. The AI will respond based on your custom prompt using **Llama 3.1** via Groq.