

Sprint 0 Documentation

Project Details

Field	Details
Project Name	License Tracker
Sprint Date	24 October
Scrum Master	Amaan Majid
Product Owner	M. Varun Reddy
Developers	Yasaswini Desai, Rohan Kumar, Rakshit L, Sanjana B

1. Purpose of Sprint 0

Sprint 0 focused on setting up the **foundational architecture** for the *License Tracker* project using **FastAPI (backend)**, **React.js (frontend)**, and **MySQL (database)**. The main goal was to ensure a **stable, scalable, and modular base** so that future sprints can focus on implementing core functionalities without encountering setup or configuration delays.

2. Objectives

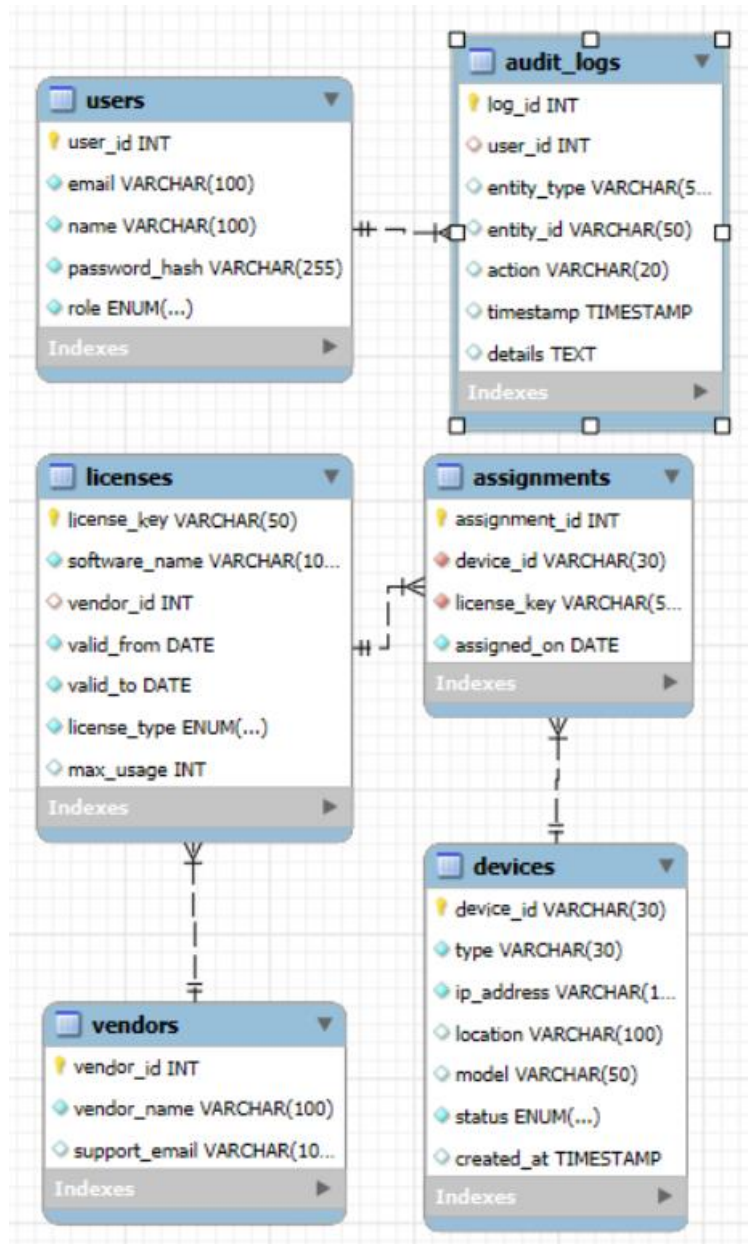
The primary objectives of Sprint 0 were:

1. Finalize the **database schema** and relationships in MySQL.
2. Set up a **modular FastAPI backend** structure.
3. Initialize the **React.js frontend** using Vite.
4. Implement **role-based access control** and **JWT authentication**.
5. Establish **configuration files** and reusable **modules** for backend–frontend integration.

3. Completed Tasks

Task	Description
ER Diagram Finalization	Designed and finalized the Entity-Relationship (ER) diagram for the License Tracker system.
Database Schema Creation (MySQL)	Created normalized tables with proper relationships, constraints, and indexing.
FastAPI Project Setup	Established the backend project structure with organized routes, models, and configurations.
React Frontend Bootstrapping	Initialized React.js using Vite and configured routing for main components.
Role-Based User Model	Defined multiple user roles and access levels to enhance system security.
JWT-Based Login Flow	Implemented secure login and authorization using JSON Web Tokens (JWT).

4. ER diagram for Database:



5. Discussion Summary

During Sprint 0, the team discussed and finalized the following:

- The **overall backend architecture** and **modular folder structure** for FastAPI.
- The **frontend setup** using React and Vite to enable faster development and hot reloading.
- The **database schema** ensuring proper normalization, relationships, and scalability.
- Implementation of **authentication and authorization** mechanisms using JWT.
- A clear **integration plan** for frontend and backend development in the upcoming sprints.

6. Blockers / Challenges

Blocker / Challenge	Resolution / Next Step
MySQL Connection Issues	Faced connection and driver errors during the initial FastAPI setup. Resolved by correcting the connection URL, ensuring proper driver installation, and verifying environment settings.
JWT Token Validation	Encountered issues with expired or invalid tokens during testing. Adjusted token expiry duration, improved error handling, and refined validation logic for stability.