Day 9 Report: Backend Setup and PostgreSQL Integration

Date: April 17, 2025

# Title: Full Backend Setup & PostgreSQL Integration for LMS

## Overview:

On Day 9, the backend development of the LMS platform took center stage, with a focus on transitioning from XAMPP/MySQL to PostgreSQL and completing essential configurations. This marked a critical milestone in aligning the project with scalable and production-ready technologies.

## Tasks Completed:

* • Installed PostgreSQL version 16 with full pgAdmin 4 support.
* • Configured PostgreSQL database settings, including data directory, admin credentials, and default port (5432).
* • Installed required Python dependencies: django, djoser, djangorestframework, simplejwt, python-dotenv, and django-filter.
* • Updated settings.py to use PostgreSQL engine and connected it successfully to Django.
* • Ran makemigrations and migrate commands successfully to apply schema changes.
* • Created and registered a Django superuser (GASAdmin).
* • Successfully launched Django development server and accessed the admin dashboard.

## Challenges & Resolutions:

• PowerShell Execution Policy Block: Encountered errors while activating the virtual environment and running scripts. Resolved by temporarily bypassing PowerShell execution policy using -ExecutionPolicy Bypass.

• Python Not Found Error: The system failed to locate Python via terminal. Resolved by directly invoking Python using its full installation path.

• Missing Django Modules: Faced errors due to missing modules like djoser, django-filter, and dotenv. Resolved by installing required packages via pip.

• PostgreSQL Driver Error: Encountered psycopg2 missing error. Fixed by installing psycopg2-binary.

• Database Connection Refused: Initially failed to connect to PostgreSQL from Django. Resolved by ensuring PostgreSQL service was running and configuration matched.

## Conclusion:

Day 9 concluded with the LMS backend running seamlessly on PostgreSQL. All essential Django migrations were successfully applied, and the admin panel was accessed with the superuser credentials. This backend setup establishes a solid foundation for building out core LMS functionalities such as user registration, authentication, and course management in the coming days.