Shreddit — System Diagrams

Semester Project SWEN3 — BIF5

Overview

This document provides an overview of all relevant system diagrams for the **Shreddit Document Management System**. It includes:

- Architecture Diagram (System Overview)

- Sequence Diagram (Document Upload Flow)

- Entity–Relationship Diagram (Database Model)

- UML Class Diagram (Backend Components)

All diagrams are now included as rendered images for final documentation.
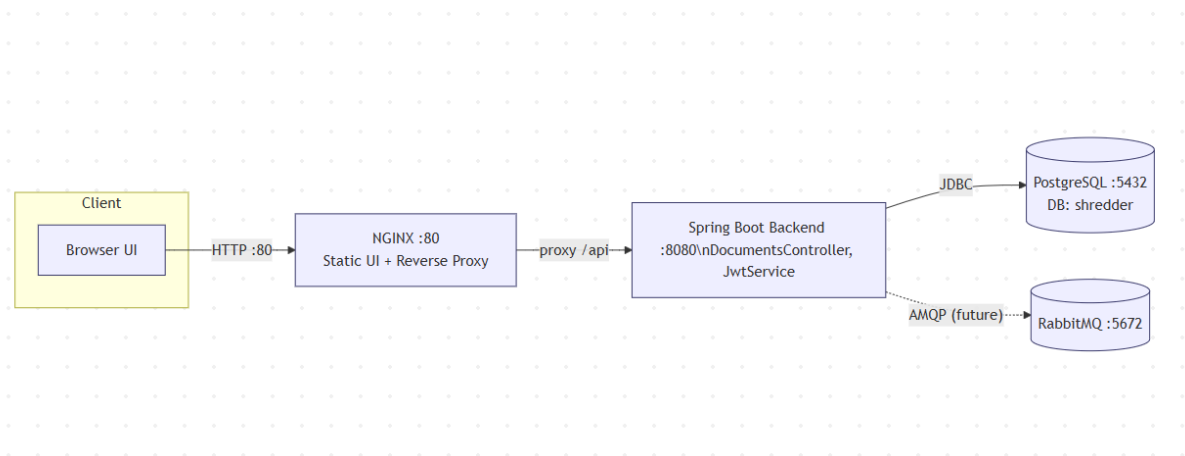
1. Architecture Diagram

Figure 1: System Architecture Diagram

Description: The frontend (NGINX) serves the static UI and proxies all API requests to the backend. The backend connects to PostgreSQL for persistence and can later publish messages to RabbitMQ.

2. Sequence Diagram – Document Upload

Description: Shows the flow from user request through NGINX, backend logic, database write, and potential message queue integration.
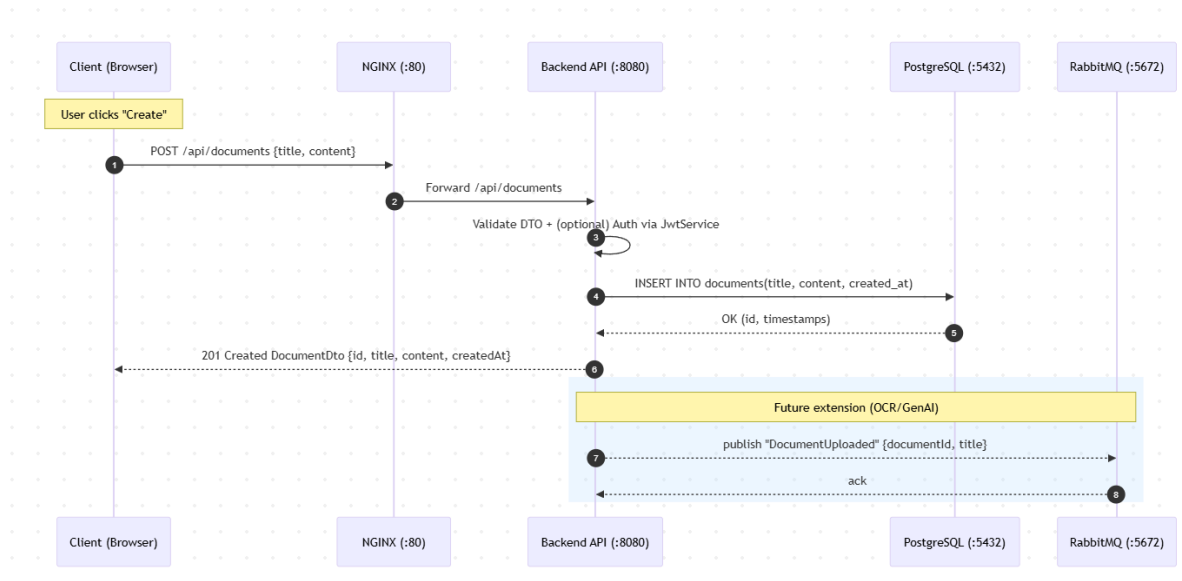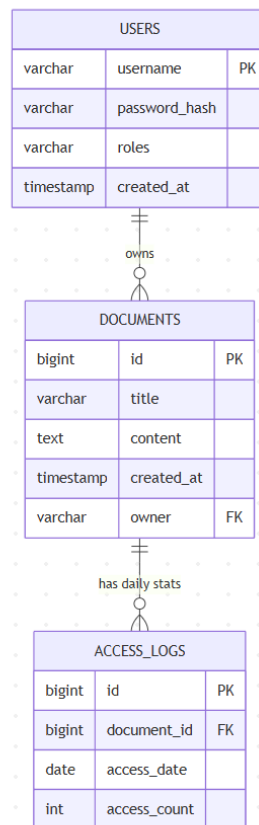
Figure 2: Create Document Sequence

Figure 3: Entity–Relationship Diagram

3. Entity–Relationship Diagram

Description: Each user can own multiple documents. Each document can have many daily access logs (useful for Sprint 7 batch processing).
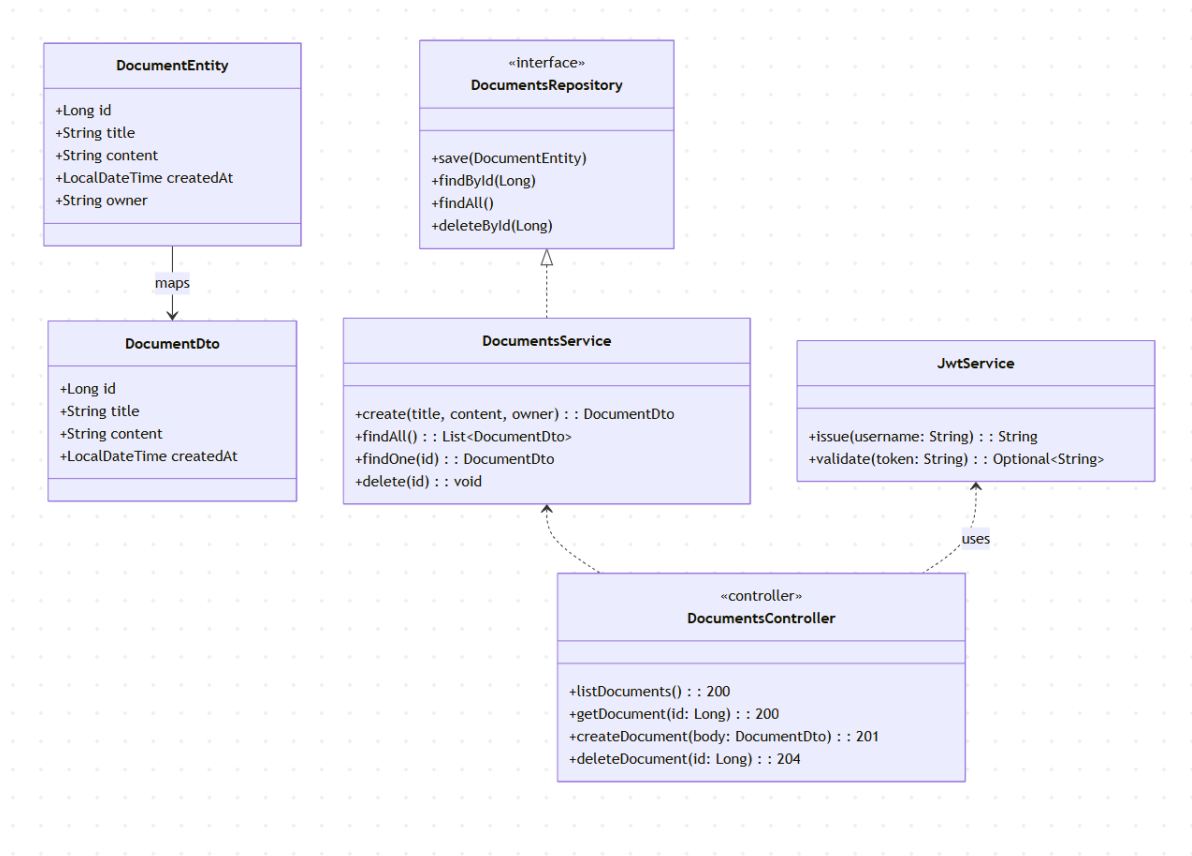
4. UML Class Diagram (Backend)

Figure 4: Core Backend Classes

Description: The diagram shows how layers interact:

- `Controller` handles HTTP endpoints

- `Service` encapsulates logic

- `Repository` persists entities

- `JwtService` manages authentication tokens